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SUPPLEMENT

15TH EUROPEAN PUBLIC HEALTH CONFERENCE

Strengthening health systems: improving population health and being prepared for the unexpected
Berlin, Germany
9–12 November 2022

ABSTRACT SUPPLEMENT

Guest editors: Reinhard Busse, Verena Vogt, Dineke Zeegers Paget

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1. INTRODUCTION

After two years of virtual-only conferences, we are very pleased that Berlin 2022 will be in person again. That our network has a high interest in meeting in person to intensify the networking was clearly reflected in the new record of abstract and workshop submissions. Our dedicated International Scientific Committee had the difficult job of scoring all the submissions and we are—as always—very grateful for their work, as their work ensures the high scientific quality of the conference programme.

This supplement to the European Journal of Public Health contains the abstracts of presentations at the 15th European Public Health (EPH) Conference, held in Berlin from 9-12 November and includes abstracts for presentations for the main part of the conference (plenary sessions, oral presentations, workshops and poster displays).

For the EPH Conference 2022, we received a record 2.371 abstracts including 186 workshops. All abstracts were scored by the members of the International Scientific Committee (ISC) of the EPH Conference. The ISC 2022 consisted of 132 public health experts from 31 countries and was chaired by Prof Verena Vogt. To ensure scientific quality without bias, each abstract was scored by on average 3,81 reviewers, each workshop by 3,95. We are extremely grateful to the ISC members who scored in 2022. These members are listed below.

International Scientific Committee, 2022, active

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- Prof Róza Ádány, Hungary
- Dr Nina Adelberger, Germany
- Prof Charles Agyemang, Netherlands
- Prof Kristina Alexanderson, Sweden
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- Prof Paolo Villari, Italy
- Prof Anne Vuillemin, France
- Dr Georgina Warner, Sweden
- Mr Greg Williams, United Kingdom
- Prof Silviya Yankulovska, Bulgaria
- Dr Dineke Zeegers Paget

The abstracts were scored on a scale of 0–7. The average score of the single abstracts was 4.517 (Virtual 2021–4.381). The highest score was 6.667 and the lowest 1.000. The average score of workshops was 4.546 (Virtual 2021–5.050). The highest score was 6.667 and the lowest 2.000. Only the highest scoring abstracts are accepted for the EPH Conference. The rejection rate for the single abstracts was 30% and for workshops, the rejection rate was 35%. The EPH Conference Executive Board decided on 10 June 2022 on cut-off points for workshops, oral presentations and poster presentations, resulting in an excellent selection of workshops and presentations, as showcased in this abstract supplement.

Workshops	average score of 4.333 or higher were accepted
Oral presentations (8-minute presentation)	average score of 5.750 or higher were accepted
Pitch presentations (5-minute presentation)	average score of 5.333 or higher were accepted
E-Poster walks (3-minute presentation)	average score of 5.100 or higher were accepted
E-Poster displays (throughout the programme)	average score of 4.200 or higher were accepted

Following these decisions, abstracts were grouped in sessions, sessions in tracks and tracks were linked to the contents of the plenary programme. The programme for EPH Conference 2022 is organised in 16 thematic tracks, that mix workshops and oral sessions.

The 16 thematic tracks are:

A. Strengthening health systems: improving population health
B. Preparing for the unexpected: lessons learned from Covid-19
C. European public health/Food and nutrition
D. Chronic diseases
E. Environment, climate and health
F. Digital health and communication
G. Health data, information and assessments
H. Health determinants and health inequalities
I. Health services and welfare systems
J. Health promotion, health literacy, behavioural insights
K. Health workforce, training and practice
L. Infectious diseases, preparedness and vaccines
M. Maternal, child and adolescent public health
N. Mental health/Migration and minority health/LGBTQI+ health
O. Policy, politics and public health
P. Public health monitoring, reporting and foresight

The posters are on display throughout the whole conference.

As always, the International Scientific Committee members greatly enjoyed reading the submissions, many of them stating that it is a great exercise to learn about new developments in their field of expertise. We hope that you will find this volume equally interesting, and even more so the actual presentations, which promise to be of high quality yet again.

Looking forward to welcoming you all in Berlin,

Prof Reinhard Busse, Chair of the 15th European Public Health Conference
Prof Verena Vogt, Chair of the International Scientific Committee
Dr Dineke Zeegers Paget, Strategic advisor EUPHA

Plenary Sessions

PLENARY 1

Abstract citation ID: ckac128.001

Can people afford to pay for health care? Evidence on inequity in financial protection in Europe

Organised by: WHO Europe
Moderator: Natasha Azzopardi Muscat (WHO Europe)

Governments have repeatedly affirmed their commitment to meeting the goals of universal health coverage (UHC) – to ensure that everyone can use the quality health services they need without experiencing financial hardship. In spite of strong political commitment to UHC, research from the WHO Regional Office for Europe shows that:

- gaps in health coverage lead to unmet need for health care and financial hardship among people using health services
- these negative outcomes are heavily concentrated among people in poverty and those with multiple chronic conditions
- countries can reduce unmet need and financial hardship by re-designing coverage policy (the way in which health coverage is designed and implemented)

This session aims to raise awareness about the most prevalent gaps in coverage in European health systems, the policies that cause them and what countries can do to address them. It will draw on findings from an updated version of the WHO study 'Can people afford to pay for health care? New evidence on financial protection in Europe', which covers over 35 countries in Europe, including all EU member states and many middle-income countries
The session will highlight common gaps in coverage that systematically harm people with low incomes:

- the basis for population entitlement to publicly financed health services: exclusion of undocumented migrants; linking entitlement to employment or payment of contributions
- the scope and quality of publicly financed health services: poor coverage of medicines and dental care for adults; unreasonable waiting times leading to use of private services or non-covered medicines and unmet need
- user charges (co-payments): the absence of exemptions for people with low incomes; the absence of annual caps on all user charges; heavy reliance on percentage co-payments

The session will focus on how to make progress by:

- drawing attention to key principles for re-designing coverage policy, especially for people who are 'left behind' (adopting progressive universalism)
- showing how countries in Europe have done this, using examples of good practice

Keynote speaker:
Charles Normand
Trinity College Dublin, Dublin, Ireland

Panellists:
Sarah Thomson
WHO Europe

Kaisa Immonen
European Patients' Forum (EPF)

PLENARY 2

Abstract citation ID: ckac128.002

Plenary 2 Benefits and challenges of the European Health Data Space

Organised by: EUPHA, European Commission
Moderators: Iveta Nagyova (EUPHA), Isabel de la Mata (European Commission)

The creation of a European Health Data Space (EHDS) is one of the key components of a strong European Health Union. The objectives of the EHDS are: i) Empower individuals through better digital access to their personal health data; support free movement by ensuring that health data follow people; ii) Unleash the data economy by fostering a genuine single market for digital health services and products; and iii) Set up strict rules for the use of individual's non-identifiable health data for research, innovation, policy-making and regulatory activities. As such, the EHDS aims to improve and support healthcare delivery within Europe by allowing public health data to be accessible throughout Europe. The EHDS also aims to promote better access and exchange of different types of health data for research and policy purposes. The aim is to have the EHDS up and running in 2025.

The EHDS is expected to bring great benefit, but it also brings challenges related to technology, governance and privacy. The exchange of data at European level means that health data from different sources need to be able to talk to each other. Making the data Findable, Accessible, Interoperable, and Re-usable is key to the success of the EHDS. Moreover, the diversity of Europe's health information systems need to be taken in account. The EHDS will also have to be transparent to ensure privacy of personal information included in the EHDS.

Speakers:
Fulvia Raffaelli
European Commission, Brussels, Belgium

Petronille Bogaert
Sciensano, Brussels, Belgium

Irene Schlünder
TMF, Germany

Emmanuel Bacry
Health Data Hub, France

PLENARY 3

Abstract citation ID: ckac128.003

Plenary 3 Health Systems Performance Assessment for Policy: Uses and Abuses

Organised by: European Observatory on Health Systems and Policies, European Commission
Moderators: Isabel de la Mata (European Commission), Dimitra Panteli (European Observatory on Health Systems and Policies)

The COVID-19 pandemic constitutes a powerful reminder of the importance of health systems strengthening in protecting and improving the health of our populations. For policy makers 'to build back better' systems to face future shocks, they will need to be able to determine which areas work best (in terms of providing access, quality, population health, responsiveness or efficiency) to prioritize and direct resources towards. More than ever, we need now to count with strong health systems monitoring, appraisal and assessment to draw practical policy implications.

This plenary will look at the effective application of Health Systems Performance Assessment (HSPA) to health systems' improvement as we face key challenges in the sustainability of our health systems. Too often the results of HSPA exercises, particularly when benchmarking is involved, are not well interpreted, and understood. When translating HSPA results into policy changes, we need to address a series of questions not only about the quality and validity of the indicators but, importantly, about the causal attribution and accountability implications and about the kinds of policy interventions required to address the performance failures.

Following an introductory keynote providing practical illustrations of those issues and drawing policy lessons, the panelists will focus on three key HSPA questions particularly relevant in the current policy context. First, how to interpret and attribute overall health system performance outcomes to individual health system functions and strategies in need of reform. Second, how best to benchmark and compare performance between European countries to identify and learn from best practices. Finally, how to measure resilience as core component of systems performance and draw lessons to prepare for future shocks.

Introductory keynote speaker:
Reinhard Busse
European Observatory on Health Systems and Policies and Technical University Berlin, Germany

Panellists:
Kenneth Grech
EU Expert Group Health Systems Performance Assessment & Ministry of Health Malta, Malta

Irini Papanicolas
Department of Health Policy, London School of Economics and Political Science, UK

Marina Karanikolos
Research Fellow, European Observatory on Health Systems and Policies; London School of Economics and Political Science, UK

PLENARY 4

Abstract citation ID: ckac128.004

Plenary 4 Reorienting health services: the transformational potential of health promotion

Organised by: EuroHealthNet
Moderators: Martin Dietrich (EuroHealthNet), Caroline Costongs (EuroHealthNet)

Over the past decades, in Europe, the nature of our disease burden has shifted from more communicable and acute to chronic diseases such as cardiovascular diseases, diabetes, cancer and mental ill health. These diseases usually manifest themselves later in life, but they are not necessarily related to biological ageing. They mostly result from an accumulation of unhealthy living patterns since childhood and across the life course. Consumption of processed foods high in fat, salt, and sugar, smoking, excessive alcohol use, too little physical activity and too much stress all contribute to the growing and worsening burden of chronic diseases. These behaviours in turn are shaped by the social, environmental, cultural and economic conditions in which we live, grow, work and age.

Once they have developed, chronic diseases can be difficult, or even impossible to cure. Our health services, with a traditional curative approach, are not equipped for this chronic epidemic. There is an urgent need to shift our health services away from the predominant focus on cure and towards prevention, and for policy makers to invest in ensuring healthy living environments and societies. Health promotion and enabling people and population groups to increase control over their health, particularly those facing disadvantage, has the potential to transform our health services, and is critical to ensuring their resilience and sustainability.

Despite a growing awareness of the need for change, reorienting structures and systems in practice is challenging, as people can be resistant to change. Siloed approaches within the health sector, but also between social, health, and education sectors continue to prevail, and it is not always easy to find the right levers for change and to build bridges across administrations. This is compounded by a lack of infrastructure, organizational and workforce capacity for health promotion, and sustainable financing mechanisms. Much innovative work is however taking place, which we can learn from and scale up.

This plenary session will provide examples of different ways in which health-promoting approaches can reorient health services, strengthen health-promoting and community oriented primary care and prevent chronic diseases. It will highlight what we can learn from behavioural and cultural insights and social prescribing, as well as integrated community initiatives to further support people, across the social gradient, to lead and to maintain healthy lives. It will discuss target setting for further advocacy among policy makers.

Speakers:
Rüdiger Krech
WHO, Geneva, Switzerland

Susan Michie
University College London, UCL Centre for Behaviour Change, London, UK

Jan De Maeseneer
European Commission Expert Panel on Effective Ways of Investing in Health and Ghent University, Belgium

Jet Bussemaker
Council of Public Health & Society, Netherlands, Leiden University Medical Center, Leiden, Netherlands

Cristiano Figueiredo
USF da Baixa, Central Lisbon Health Centre Cluster, National School of Public Health, NOVA University Lisbon, Portugal

PLENARY 5

Abstract citation ID: ckac128.005

Plenary 5 Sustaining high quality care: interprofessional training for our clinical and public health workforce

Organised by: ASPHER, EHMA
Moderators: John Middleton (ASPHER), Tara Chen (ASPHER)

The plenary session will align with the main conference theme ‘Strengthening health systems: improving population health and being prepared for the unexpected’ and providing a balanced perspective on public health and healthcare interprofessional linkages for training of the two workforces integral for a well-functioning, responsive and robust health system.

Natasha Azzopardi-Muscat, WHO Regional Office for Europe who will set the scene for the first Keynote with the WHO Athens Office work on European Programme of Work (EPW) 2020–2025 – ‘United Action for Better Health in Europe’ reflecting on the coherence of policies, structures and resources for quality of health care and implications for policy dialogue, policy formulation and technical assistance at the regional, sub-regional and country levels. She will also speak to the WHO/EURO Regional HRH Report presented in September 2022 and the WHO-ASPHER Roadmap to Professionalization launched in February 2022 offering pragmatic recommendations for action to professionalize the public health workforce as a response to growing public health needs.

EHMA Director George Valiotis will follow with a Keynote speaking to the key EU agenda on skills for health, with the EHMA led BeWell (2022-2025) project: Investing in the upskilling and reskilling of the European health workforce. The multi-partner consortium aims to build a movement of healthcare stakeholders which support and contribute to the development, implementation, and upscaling of a strategy on the upskilling and reskilling of the European health workforce addressing the skills needed to support the digital and green transition within the health ecosystem enabling all health professionals to be better prepared to face future challenges and adapt to ever-evolving societal contexts.

Fatai Ogunlayi, UK Public Health Specialty Registrar will speak to the global level agenda with focus on the WHO Roadmap: ‘‘Building the Public Health and Emergency Workforce’. The roadmap is designed to provide countries with a differentiated and progressive approach to acknowledge varying capacities and contexts with provision of guidance and tools; and support progress to full implementation towards a strengthened public health workforce delivering all essential public health functions for universal health coverage, health security and improved health and wellbeing.

Laurent Chambaud, Dean, EHESP School of Public Health, will provide a country perspective with discussion of work toward official agreements on the One Health approach, which recognizes that the health of people is closely connected to the health of animals and our shared environment, and the interprofessional context and training required to achieve it.

Keynote speaker:
Natasha Azzopardi Muscat
WHO Europe

George Valiotis
European Health Management Association, Brussels, Belgium

Speakers/Panellists:
Fatai Ogunlayi
UK Public Health Specialty Registrar, UK

Laurent Chambaud
Andrija Stampar Medallist 2022, France

Anett Ruszanov
Director of Policy and Programmes, EHMA

Parallel Programme

1.A. Workshop: EU nutrition policies: from rhetoric to practice

Abstract citation ID: ckac129.001

Organised by: EUPHA-LAW, EUPHA-FN, University of Essex (UK), University of Liverpool Law & NCD Unit (UK), European Public Health Alliance
Chair persons: Giuseppe Grosso (EUPHA-FN)
Contact: nikhil.gokani@essex.ac.uk

Unhealthy diets result in over a million deaths each year in Europe, and over half the EU adult population is overweight or obese. Since it took office, the von der Leyen Commission published major policy documents which, amongst others, seek to tackle poor nutrition. The 2020 Farm to Fork Strategy claims that ''European food is already a global standard for food that is safe, plentiful, nutritious and of high quality''. However, it also acknowledges that the European diet is typically high in fat, sugar, salt and calories and red and processed meat, but low in fruit, vegetables, wholegrains, legumes and nuts. The Strategy notes that the transition to a healthy, sustainable food system - and the concomitant health, economic, societal and environmental benefits this will bring - requires that the food environment should make healthy food easier to choose. Similarly, the 2022 Europe's Beating Cancer Plan accepts that about 40% of cancers in the EU are preventable and, prevention being more effective than any cure, places great emphasis on the promotion of healthier consumption. This workshop will consider two policy interventions that the WHO has recognised as key to the promotion of healthier food environments and that have been at the heart of the EU's strategic documents on nutrition and obesity prevention for now well over 15 years: food labelling and food marketing. This workshop will seek to contextualise the Commission's current proposals on food labelling, and its lack of robust proposals on food marketing, with a view to discussing the extent to which its actions are aligned with its rhetoric. It will also discuss how the Commission can move in the right direction to bring real improvements in these fields in practice. EUPHA-LAW has been supporting the development of effective EU policies on food labelling and food marketing through a number of initiatives. In relation to food labelling, EUPHA-LAW responded to three Commission consultations, members of the Steering Committee held a meeting with the Commissioner's team on the new proposals, co-hosted a major conference on regulating FoPNL with almost 300 attendees from over 39 countries, and participated in workshops specifically intended to inform the impact assessment accompanying the forthcoming proposals. In relation to food marketing, EUPHA-LAW is closely involved in the Food Marketing Initiative supported by over 20 pan-EU federations of public health, consumer and children's rights organisations. This Initiative has called on the EU to adopt a directive imposing EU-wide legally binding restrictions on the cross-border marketing of unhealthy food to children. This would allow the EU to go further than it has to date and therefore align the EU regulatory framework with international recommendations and adopt a children's rights-based approach to such marketing.

Key messages:

- The Commission has recognised that front-of-pack nutrition labelling and food marketing are two necessary policy interventions to promote healthier food environments.
- However, the EU's actions in this field highlight a significant gap between rhetoric and practice which needs to be addressed through the adoption of rights-based approaches.

Abstract citation ID: ckac129.002
Food labelling

Nikhil Gokani

N Gokani[1]
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Contact: nikhil.gokani@essex.ac.uk

The Commission has undertaken to regulate the information provided to consumers on food. In particular, it intends to propose mandatory front-of-pack nutrition labelling (FoPNL) for food by the end of 2022. Even though nutrition labelling has been regulated by the EU since 1990, the tactics of industry, with the support of a minority of Member States, have prevented, so far, the adoption of a single, EU-wide, mandatory FoPNL scheme. Questions therefore arise regarding the extent to which the EU may secure agreement for the adoption of an EU-wide scheme which could effectively contribute to a high level of public health protection.

Abstract citation ID: ckac129.003
Food marketing

Amandine Garde

A Garde[1]
[1]School of Law and Social Justice, University of Liverpool, Liverpool, UK
Contact: amandine.garde@liverpool.ac.uk

The Commission has established a joint action with Member States through the Best ReMaP joint action (2020-2023) to facilitate the effective implementation of the Audiovisual Media Services Directive which, in its revised version, calls on Member States to ensure that codes of conduct protect children from exposure to unhealthy food marketing. This provision itself highlights the tension between, on the one hand, the desire to limit the exposure of children to harmful food marketing and, on the other, the likelihood of achieving this objective through the implementation of codes of conduct.

Speakers/Panellists:
Nikolai Pushkarev
Healthy Environments & EPHA Policy, European Public Health Alliance, Brussels, Belgium
Contact: nikolai.pushkarev@epha.org
EPHA will present the perspective of the public health advocacy community, and discuss some of the initiatives civil society are engaged in to help the EU move from rhetoric to practice.

1.B. Workshop: Adaptations in a time of crisis – public health practice in Sweden during the COVID-19 pandemic

Abstract citation ID: ckac129.004

Organised by: The Public Health Agency of Sweden
Chair persons: Anna Månsdotter (Sweden), Karin Guldbrandsson (Sweden)
Contact: karin.guldbrandsson@fohm.se

Background:
The Public Health Agency of Sweden has assessed the consequences of the COVID-19-pandemic in relation to the Swedish public health goals, aiming at good and equitable health. This assessment indicated 1) that preconditions for good and equitable health have changed during the pandemic, 2) that groups with higher risk of ill-health before the pandemic were more severely affected, 3) that the general health of the population remains good although some groups appear to have suffered from increased minor mental health problems, 4) that physical activity has decreased and sedentary behaviour has increased, and 5) that many activities of relevance for public health, such as prevention of alcohol, drugs, and tobacco (ADT) at the local and regional levels were paused or were replaced with other, often digital, alternatives.
Objectives:
The objective of this workshop is to present and discuss the results of four projects studying the consequences of the COVID-19-pandemic for public health practice in Sweden. Special attention is paid to ADT-prevention at the local and regional levels, focusing on how such work has developed digitally during the pandemic. Potential implications will be discussed with the audience. The added value of organizing this workshop: This workshop will contribute to an improved understanding of how public health practice, particularly ADT prevention, has navigated through a time of a crisis (i.e. a pandemic) in order to provide important lessons for the future. The presentations in this workshop will lay the foundation for discussing with the audience what might happen within the arena of health promotion and disease prevention as a result of a pandemic as well as ways to cope with the consequences of such a pandemic at the local and regional levels. The coherence between the presentations and the topic of the workshop: There is an obvious logic between the main topic of the workshop and the four presentations. In different ways, they all discuss consequences of the COVID-19-pandemic on public health practice in Sweden.
The format of the workshop:
The workshop will start with a brief introduction, aiming to give a short background and set the scene. Four presentations will then follow, with time allocated for questions after each presentation. The presentations will contain descriptions of each subproject, including the background, methods, results, and conclusions. Finally, the moderator will lead a discussion with the audience and the presenters.
Key messages:
- The pandemic forced public health practice to adapt its ways of working.
- When challenged, public health practice can operate in new ways, although with some regional differences.

Abstract citation ID: ckac129.005
Public health in Sweden during the COVID-19 pandemic

Anna Månsdotter

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[2]Department of Epidemiology and Global Health, Umeå University, Umeå, Sweden
Contact: anna.mansdotter@folkhalsomyndigheten.se

Background and objectives:
The COVID 19 pandemic has highlighted how public health is dependent on many areas of society, and several aspects of public health can be affected. We have evaluated how the COVID-19 pandemic and the measures taken to reduce its spread have impacted public health in Sweden during 2020.
Methods:
We systematically compiled international research on the pandemic's impact on public health, we examined living conditions of groups at a particularly increased risk of ill health, and we collected and analysed Swedish data on lifestyles, health, injury, and illness during the pandemic compared to previous years.
Results:
Most people have, in one way or another, been affected by the pandemic and by societýs preventive measures. However, some groups have suffered more than others. Groups who were already at an increased risk of ill health before the pandemic have been most affected, e.g. in schools, on the labour market, and in society in general. There is a risk of increased health inequality, not only related to morbidity and mortality of COVID-19 during 2020, but also when it comes to the effects on living conditions.
Conclusions:
The consequences of the COVID-19 pandemic pose major challenges for public health, and the measures taken to limit its spread inter-relate with social and economic conditions. In Sweden, health inequalities have remained the same or increased over the years. Our study suggests that the consequences of the pandemic will reinforce health inequalities. It is too early to determine what the pandemic's full impact on public health will be. Nevertheless, health promotion and preventive measures need to be strengthened and prioritized in order to maintain good public health and reduce inequalities.

Abstract citation ID: ckac129.006
Public health work in Sweden during the COVID-19 pandemic

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Background and objectives:
This study examines the consequences of the COVID-19 pandemic for public health practice carried out at local and regional levels in Sweden. The work includes, for example, interventions in health care, schools and preschools, social services, and non-profit organisations.
Methods:
By means of written questions and interviews in municipalities, regions, county administrative boards, networks, and organisations, we investigated whether public health-related interventions had decreased, increased, or changed as a result of the COVID-19 pandemic. Data were analysed by content analysis.

Results:

The results show that a large number of interventions from a variety of local and regional actors aimed at broad target groups were cancelled or paused during the time of our survey. Eventually, many, but not all of the cancelled interventions were replaced with other options, most of which are included in the following themes:

- Digital solutions and support over the phone instead of physical meetings.
- Outdoor activities instead of indoor activities.
- Organisational adaptations, for example, from drop-in visits to booked appointments and from open activities to scheduled visits.

The interviews also revealed that public health issues had been highlighted and that existing collaboration structures were a success factor in managing the consequences of the COVID-19 pandemic. The risk of and concern for the spread of infection and compliance with the authorities' recommendations were stated to be the main reasons why public health-related interventions had decreased, increased, or changed.

Conclusions:

Both general public health practice and targeted interventions in health care and municipal activities have been cancelled or rescheduled according to our survey. Because many public health-related interventions have an equalising effect on health, this can be of great importance for groups that are socially, economically, or health-relatedly vulnerable.

Abstract citation ID: ckac129.007
Prevention of alcohol, drugs and tobacco during the COVID-19-pandemic – consequences and inequalities in Swedish municipalities

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Background and objectives:

The COVID-19 pandemic and measures to prevent the spread of the virus challenged public health practice at the local and regional level in Sweden. The objective of this study was to follow-up how local preventive ADT prevention (alcohol, drugs, and tobacco) in Sweden was affected during 2020-2021.

Methods:

All Swedish municipalities (N = 290) were included in surveys on how the pandemic affected local ADT prevention. Response rates ranged between 82 and 91 percent. Quantitative data were analysed with reference to socioeconomic and demographic conditions. Qualitative data were analysed thematically.

Results:

A majority of the municipalities reported a decrease in ADT prevention, especially aimed at groups such as parents, children, and young people. There was no correlation between the decrease in municipal ADT prevention and sociodemographic conditions. A majority of the municipalities reported that activities were adapted, often with a digital approach. Adaptation of ADT prevention was less common in smaller municipalities and municipalities where residents had lower levels of education and lower incomes. An increase in activities, as a consequence of measures to prevent the spread of the virus, was more common in larger municipalities and municipalities with a greater proportion of residents with higher educational backgrounds and higher incomes.

Conclusions:

ADT prevention carried out by municipalities in Sweden was initially deeply affected by the COVID-19 pandemic and by measures to prevent the spread of the virus. However, activities were adapted over time, mainly with a digital approach. The ability to adapt differed depending on the sociodemographic conditions of the municipalities. Follow-up studies on ADT prevention and the consequences of the digital approach during 2021 will be presented at the conference.

Abstract citation ID: ckac129.008
Digitalisation in the area of alcohol, drug, and tobacco during the COVID-19-pandemic: supporting the drive towards an equitable health?

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Background and objectives:

The COVID-19 pandemic has posed challenges for traditional public health practice. In the area of alcohol, drugs, and tobacco, local and regional actors have largely moved from physical to digital solutions to handle the barriers imposed by the pandemic. To strengthen the knowledge base in the area, this project aimed to explore how the local transition to, and management of, digital solutions within alcohol, drugs, and tobacco prevention might support the policy drive in Sweden towards equity in health.

Methods:

This was a qualitative study where 13 local coordinators from 7 municipalities participated. Data were collected through 9 individual and 2 group interviews (semi-structured). The analysis was inductive and followed a thematic analysis approach to identify, analyse, and present patterns (themes) in the data.

Results:

Three themes were developed illustrating how the local implementation of digital solutions in the area of alcohol, drugs, doping, and tobacco prevention might support the transition towards equity in health by 'making time and resources available for development and innovation', 'improving the ability to reach and engage with vulnerable groups', and '(re)shape initiatives to act inclusively'.

Conclusions:

As illustrated by experiences of the local coordinators, the municipalities seemed to have managed the challenges of the pandemic in a good way. To a large extent, they appeared to have adapted their work to remain operational by transitioning into digital solutions. Considering that the pandemic has been challenging in various ways, the finding of ensuring operations were running should not be underestimated. However, besides being able to largely maintain a ''status quo'' in a time when traditional modes of working were inadequate or inappropriate, the results illustrated how the municipalities have added numerous (digital) tools to their toolbox for use in the continuing drive towards good and equitable health.

1.C. Workshop: What has the EU ever done for my health system? Using EU tools effectively for health system change

Abstract citation ID: ckac129.009

Organised by: European Observatory on Health Systems and Policies
Chair persons: Dimitra Panteli (Belgium), Nick Fahy (UK)
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Health systems face a broad range of evolving challenges: from infectious cross-border threats to climate change, potential backlogs caused by the pandemic and the concurrent burden of non-communicable diseases growing worldwide. They need to be dynamic to respond in ways that help them achieve their goals and adapt to an ever-changing landscape of health system stressors. While improving health and care systems is primarily the responsibility of Member States within the European Union (EU), the EU has a wide range of instruments that can potentially provide support. However, they are scattered across different policy areas and, for most of them, health systems strengthening is not among the principal objectives. This can make it challenging for Member States to identify, combine and make best use of the different support options in an effective way. The objective of this workshop will be to provide an overview of the different types of available EU instruments, while also delineating a range of practical examples of how countries have used them to address health system challenges and implement large-scale change. The European Observatory on Health Systems and Policies will kick off the workshop with a keynote presentation of its policy brief ''EU support for improving health and care systems'', conceived in cooperation with the 2021 Slovenian Presidency of the EU Council as a toolbox for policy makers trying to navigate and maximise the potential of EU support tools. Beyond having to identify the best possible tools for health system transformation, policy makers must pave the way for system change and propel the implementation of innovative solutions at national, regional, and local levels. The new European Partnership on ''Transforming Health and Care Systems'' under Horizon Europe will join the workshop to discuss how to best support policy makers in bringing about organisational change and ensure European populations get access to innovative, sustainable, and high-quality health care. In addition, the workshop will give voice to insights from other relevant stakeholders, including a country-level perspective from Slovenia, an EU Member State which has successfully leveraged EU support to strengthen its health system in the past. This viewpoint will be complemented by an outlook from the European Commission into current priorities and upcoming opportunities under the most relevant EU support instruments for health systems, including EU4Health and Horizon Europe. Finally, the presenters and panellists will engage in an interactive discussion with the audience to help participants consider the possibilities and challenges of using EU tools for health system strengthening and to support them in designing their own initiatives.

Key messages:

- Reaping maximal benefits of EU support requires combining various instruments.
- Health system transformation is a context-specific process, yet it can greatly benefit from cross-country learning.

Abstract citation ID: ckac129.010
What are the tools provided by the EU to support health and care improvement?

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Improving health and care systems is primarily the responsibility of Member States within the EU. Nevertheless, the EU provides a lot of potential support to Member States that can help to improve health systems. However, the range of EU tools that can help to strengthen health systems has grown up over decades across different policy fields, and most potential EU support is incorporated within instruments that have wider objectives. This can make it challenging to identify and optimise the use of the different instruments, as well as to create synergies across tools as part of an overall process of improving a health system. For example, the EU's wide-ranging support across diverse instruments and policy areas has contributed towards improving the prevention, monitoring, and management of cancer, as well as modernising dedicated health infrastructure and developing common cancer policy guidance in Europe over several decades. This presentation will help with understanding what different tools can be used for, showcasing content from the policy brief and how it can be helpful with addressing the challenges faced by health policy makers. Using concrete case studies, it will illustrate how different instruments might be combined in pursuit of a specific process of health system strengthening and transformation.

Abstract citation ID: ckac129.011
The Transforming Health Care Systems Partnership – collaboration for improvement post-pandemic

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Building on the experience and results of important European initiatives like the TO-REACH Action, the new European Partnership on Transforming Health and Care Systems aims to accelerate the sustainable transformation of European health systems. By means of multidisciplinary research with a focus on improving the uptake of innovative solutions by health system actors, including organisational, service, and overarching policy innovations, the partnership plans to achieve access to high quality, sustainable and innovative health care for European populations. This presentation will explore current and upcoming plans for the Partnership, as well as discuss some of the lessons learnt from past initiatives and how these, combined with the experiences from the pandemic, have contributed to shaping the new Partnership's agenda. Inputs from stakeholders in the audience will be collected to inform the Partnership's ongoing learning process.

A country perspective from Slovenia
Vesna-Kestrin Petric
Slovenian Ministry of Health, Ljubljana, Slovenia

Health system strengthening and transformation – Current priorities of the European Commission
Isabel de La Mata
DG SANTE, European Commission, Brussels, Belgium

1.D. Oral presentations: Chronic diseases determinants and interventions

Abstract citation ID: ckac129.012

Incremental net benefit of wearable devices for home monitoring of chronically ill patients

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Background:

Hospital overcrowding is a growing problem worldwide. Studies demonstrated that up to 40% to 67% of hospitalizations of residents in nursing homes may be avoidable, causing health and economic damages. Furthermore, research shows that for non-critical patients there are arguably no differences between home and hospital recovery in terms of health outcomes, with a preference for home settings in most patients. During COVID-19 pandemic, telemedicine and homecare increased its range of possible intervention, allowing efficient and cost-effective processes of care. Transdermal sensors are indeed a cheap and easy to use alternative to conventional instruments, allowing a continuously operative and ready-to-use tool to care providers. This systematic review aims to map the application fields of these technologies, demonstrating their accuracy and assessing their cost-effectiveness in chronically ill home-assisted patients.

Methods:

Articles were retrieved from Scopus, Web of Science, and PubMed. The dominance ranking matrix (DRM) tool was applied to allow a qualitative synthesis of the studies. Incremental net benefits (INBs) were estimated and meta-analysis was implemented to pool INBs across studies. A comparison between wearables and conventional tools accuracy was simultaneously carried out through a literature review.

Results:

The database search identified 1156 publications of which six articles were considered eligible for the meta-analysis. According to DRM, 80% of evaluated studies showed the cost-effectiveness of wearable devices. The pooled INB of wearables over conventional measurement was estimated at US$1280 (95% CI US$952 - US$2849). In 85% of evaluated wearables the accuracy resulted comparable to conventional measurement tools.

Conclusions:

Wearables performances resulted as accurate as conventional methods and their application cost-effective. A continuous measurement of parameters may relate to a better process of care for chronically ill outpatients.

Key messages:

- Wearables are a cheap and accurate alternative to conventional life parameters measurement tools.
- Technology evolution might soon reduce the pressure on hospitals, changing the care process of chronically ill outpatients allowing continuous evaluation of their health status.

Abstract citation ID: ckac129.013

Artificial sweeteners and risk of cardiovascular diseases in the prospective NutriNet-Santé cohort

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Background:

Artificial sweeteners are widely used today by the food industry as sugar alternatives. Potential adverse effects of these food additives on cardiovascular disease (CVD) have been suggested in experimental studies, but data from studies involving humans remain very limited. Previous cohorts have focused on artificially sweetened beverages. Our objective was to study the associations between artificial sweeteners from all dietary sources, overall and by molecule (aspartame, acesulfame-potassium and sucralose), and risk of CVDs (overall, coronary heart and cerebrovascular).

Methods:

The study included 103,388 participants of the web-based NutriNet-Santé cohort (2009-2021). Artificial sweetener intakes were assessed using repeated 24h dietary records including names and brands of industrial products consumed. Multi-adjusted Cox proportional hazard models were performed. Exposure to artificial sweeteners were coded as 3-category variables: non-consumers, lower consumers (artificial sweetener intake below the sex-specific median) and higher consumers (above the sex-specific median).

Results:

Compared to non-consumers, higher consumers of total artificial sweeteners had increased risk for CVD (n = 1502 incident cases, HR = 1.17 [1.01-1.35], P-trend = 0.04) and more specifically cerebrovascular diseases (n = 777, HR = 1.34 [1.10-1.62], P = 0.004). Higher consumption of aspartame was associated with increased cerebrovascular diseases (HR = 1.29 [1.03-1.60], P = 0.01). Higher consumption of acesulfame-K was associated with a higher risk of CVD (HR = 1.24 [1.04-1.47], P = 0.02) and cerebrovascular diseases (HR = 1.29 [1.02-1.64], P = 0.1). No association was detected for coronary heart diseases (n = 730 incident cases).

Conclusions:

These findings suggest a direct association between higher artificial sweetener consumption and increased CVD risk, in particular cerebrovascular. These results provide key novel information for the ongoing re-evaluation of sweeteners by the European Food Safety Authority.

Key messages:

- In this large-scale prospective cohort (n = 103,388), artificial sweeteners (especially aspartame and acesulfame-K) were associated with increased risks of cardiovascular and cerebrovascular diseases.
- These results provide key insights to feed EFSA's expertise for the ongoing risk assessment of artificial sweeteners.

Abstract citation ID: ckac129.014
Incidence and predictors of frailty in Latin America and China: evidence from 10/66 cohort studies

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Introduction:
Evidence on the incidence and risk factors of frailty in low- and middle-income countries is very limited. We aimed to compare the incidence of frailty and explore its determinants in rural and urban areas in six Latin American countries and China.

Methods:
The 10/66 is a multi-site cohort study in older adults. We conducted baseline and follow-up surveys in 2003-2006, and 2007-2010. We assessed frailty using a modified Fried frailty phenotype criterion, and adjudicated frailty (yes/no) when two or more of the following indicators were present: exhaustion, low physical activity, slow gait speed, and weight loss. We excluded frail participants at baseline and calculated person-years as the time interval between baseline and follow-up for frailty-free people who were survived and reinterviewed or the midpoint of it for incident frailty cases. We used Poisson and Cox regressions to model the incidence of frailty and its risk factors.

Results:
We included 9,747 participants ($\geq$65 years) for the analysis of frailty risk factors. Of whom, 8,212 were reinterviewed with an average of 4.0 years of follow-up, the incidence of frailty was lowest in Venezuela (21.9 per 1000 person-years) and rural Peru (24.3 per 1000 person-years), highest in rural Mexico (110.5 per 1000 person-years) and urban Peru (84.0 per 1000 person-years). In the overall Cox regression, we found significant prospective associations of incident frailty with living in rural areas (HR: 1.97, 95% CI: 1.69, 2.29), dementia (HR: 1.76, 95% CI: 1.42, 2.18), depression (HR: 1.69, 95% CI: 1.49, 1.93), comorbidity, female gender, older age, disability, hearing, and vision problems. Higher arm circumference was associated with a lower frailty risk (HR: 0.97, 95% CI: 0.96, 0.98).

Conclusions:
The incidence of frailty varied substantially in Latin America and China, and between urban and rural areas. The identified risk factors could be potential intervention targets to decrease the global burden of frailty.

Key messages:
- In Latin America and China, the incidence of frailty varied from 21.9 to 110.5 cases per 1000 person-years.
- We identified 9 risk factors and 1 protective factor for developing frailty, and the most relevant risk factors were living in the rural area, dementia, and depression.

Abstract citation ID: ckac129.015
Food additive emulsifiers and cancer risk: results from the French prospective NutriNet-Santé cohort

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Background:
Food additive emulsifiers are found in thousands of industrial foods and may exert deleterious effects on gut microbiota and carcinogenesis according to experimental studies. However, their associations with cancer risk has not been investigated yet. This study aimed to investigate these associations in a large population-based prospective cohort.

Methods:
This study included 102,485 French adults from the NutriNet-Santé cohort (42.1y [14.5], 78.8% female, 2009-2021). Food additive emulsifier intakes were estimated using repeated 24h dietary records linked to brand-specific food composition databases on food additives. Associations with incident cancer risk were assessed using Multivariable Cox models.

Results:
3,511 incident cancer cases were diagnosed during follow-up (1,026 breast, 431 prostate, and 279 colorectal cancers). Intakes of sodium citrate (E331, HR = 1.12 [1.02-1.23], p-trend = 0.009), xanthan gum (E415, HR = 1.11 [1.02-1.21], p-trend = 0.02), and mono- and diglycerides of fatty acids (E471, HR = 1.17 [1.06-1.28], p-trend = 0.001 and total: E471, E472a-b-c-e, HR = 1.11, [1.02-1.22], p-trend = 0.02) were associated with increased overall cancer risk. Higher intakes of E331 (p-trend = 0.046), sodium stearoyl-2-lactylate (E481, p-trend = 0.01), total lactylates (E481-482, p-trend = 0.01), total celluloses (E460-468, p-trend = 0.03), carob bean gum (E410, p-trend = 0.01), and E471 (p-trend = 0.006) were associated with increased overall breast cancer risk. Higher intakes of carrageenan (E407, p-trend = 0.04), E415 (p-trend = 0.02), and triphosphates (E451, p-trend = 0.03) were associated with increased post-menopausal breast cancer risk.

Conclusions:
These results are the first to investigate and report direct associations between cancer risk and exposures to seven individual and three groups of food additive emulsifiers. If replicated, they may have an important public health impact, considering the omnipresence of these additives in industrial foods globally.

Key messages:
- This study is the first to precisely assess exposures to food additive emulsifiers in a population-based study.
- Intakes of food additive emulsifiers were associated with increased risk of cancer.

1.E. Workshop: Accelerating the action on SDGs applying a One Health approach

Abstract citation ID: ckac129.016

Organised by: Instituto Universitário Egas Moniz, NOVA National School of Public Health (Portugal)
Chair persons: Ricardo Assunção (Portugal), Susana Viegas (Portugal)
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In the sequence of a pandemic, with a tremendous impact in our lives, more than never the challenges for humankind are enormous. Despite the future is impossible to predict, there are some certain trends that could compromise the health of humans, living systems and Earth. Environmental degradation and climate change, poverty and inequalities, demography, shocks and crises, constitute some of the core dares that should be seriously considered. Recognizing the importance of tackling the challenges posed to humankind, world's governments signed an agreement to eradicate poverty, improve the living standards and well-being of all people, promote peace and more inclusive societies, and reverse the trend of environmental degradation, in a document called 2030 Agenda for Sustainable Development. This document contains the 17 Sustainable Development Goals (SDGs), promoting the development in a balanced way, leaving no one behind. After this historic initiative, several strategies, debates and efforts have been advanced, tried and implemented to tackle these challenges. However, sophisticated policy responses of preparedness, investment and cooperation are still needed. One Health is considered an approach to designing and implementing programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes. The current challenges identified, e.g. infectious diseases, climate change, the sustainability of food systems, the destruction of biodiversity, could affect transversally health, are related differently with several SDGs, and demand for a holistic approach that should be efficient enough to tackle these threats. Through presenting some case studies, this workshop aims to promote the discussion regarding the implementation of a One Health approach to accelerate the action targeting SDGs accomplishment, focusing particularly on actions that can have an impact on Health in a broader sense, i.e. human, animal and environment health. Each presentation will emphasize specific examples (air pollution, food systems and climate change, intensive animal production, biodiversity), relating the concept of One Health and the linked SDGs that could be faced through this approach. Altogether, these presentations will highlight the need for a multi- and trans-sectorial intervention, using the concept of One Health to maximize the co-benefits within the three domains, human, animal, and environmental health. The challenges are enormous, but as Nelson Mandela said, "It always seems impossible until it's done".

Key messages:

- The importance of the One Health approach to tackle the goals on sustainable development, health and wellbeing.
- The One Health approach brings more easily co-benefits in different sectors that result in more relevant gains in Health in the three domains (human, animal and environment health).

Abstract citation ID: ckac129.017
One Health approach for the SDGs achievement

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One Health is an approach characterized by the integration of human and animal health, plants, and ecosystems and encourages multisectoral and multidisciplinary efforts to achieve optimal levels of health and collaboration among different sectors and scientific areas to address challenging health problems. Through this approach is possible to obtained better results since the actions taken are normally focused to obtained co-benefits in several of the Sustainable Development Goals, including health for all and cost savings. The dissemination of One Health research and experiences is important to raise awareness for this approach. In this workshop, this will be done with the presentation and discussion of several themes where the One Health approach is of most relevance allowing to identify the most relevant barriers and opportunities for integrating One Health more widely.

Abstract citation ID: ckac129.018
Air pollution and health – the importance of air monitoring and burden of disease for attaining SDGs

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Pollution is the worldwide largest environmental cause of disease and premature death, being also considered a risk for planetary health, a cause of ecosystems destruction and intimately linked to global climate change. Pollution is considered costly, with attributable diseases resulting in health-care costs that are responsible for 1.7% of annual health spending in high-income countries. Moreover, in utero and early childhood exposures are responsible for health effects in children. The importance of air pollution as a cause of disease is well reflected in the Sustainable Development Goals (SDG), mainly in the SDG 3, SDG 11, and SDG 15, but indirectly in all the SDGs. To tackle this issue, an integrative and holistic approach linking human and environmental health such as One Health is needed, to provide evidence-based data to support the establishment of reduced air pollutants' maximum admissible levels. A case-study developed in Portugal in the scope of PMCardImpact project, regarding the exposure of population to particulate matter with a diameter of 2.5 μm or less (PM2.5) and the associated number of cases of cardiovascular diseases will be presented herewith. Four scenarios of exposure will be considered for presenting the results: current scenario of exposure, new WHO Air Quality guidelines, European Commission Air Quality Directive and lastly, a worst-case scenario. This assessment is the starting point for calculation of the burden of disease of CVD that exposure to PM2.5 represent in Portugal. With a view to promote the science to policy interface, PMCardImpact project will make available to policy makers the needed supporting information to act, including actionable knowledge on air pollution trends and related health effects, to implement reducing air pollution policies.

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Abstract citation ID: ckac129.019
Impact of climate change on food systems – the One Health approach

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In recent decades, changes in climate have caused impacts on natural and human systems on all continents and across the oceans. Climate change has become one of the most critical issues for the sustainable development of human societies and the functioning of ecosystems on Earth. In one hand, climate change threatens our ability to ensure global food security, eradicate poverty and achieve sustainable development. Agriculture and animal production are affected by changing rainfall patterns, drought, flooding and the geographical redistribution of pests and diseases, with consequent implications in the food availability, a key requirement for food security. On the other hand, despite less debated, climate change could also affect food safety, impacting the occurrence of food safety hazards at various stages of food chain, from ''farm to fork''. The tendency to increase the use of agrochemicals to balance the effects of more frequent extreme weather events and water scarcity in some regions could become more frequent. In addition to pesticide residues, both chemical and microbiological risks are expected to impair food and feed safety as a consequence of climate change: in particular mycotoxins, marine biotoxins (phycotoxins), trace metals, among others. Humans, animals and the environment are/will be affected by the consequences of climate change, with an expected impact on the food systems. Thus, a One Health perspective, representing a holistic view of the problems, defining and establishing adequate strategies to tackle these challenges, is more than needed. On this presentation, main issues relating the impact of climate change on health of humans, animals and environment and how a One Health perspective, as a holistic approach, represent a key contribution to the definition of proper policies to ensure the public health will be approached and debated.

Abstract citation ID: ckac129.020
Intensive animal production as driver of biodiversity loss and pandemics

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Pandemics have their origin in diverse microbes carried by animal hosts, but their emergence is entirely driven by human activities. These include deforestation, land- and sea-use change, agricultural expansion and intensification, and wildlife trade and consumption. These activities bring wildlife, livestock, and people into closer contact, allowing animal microbes to spillover into people and causing infections, sometimes outbreaks, and more rarely epidemics and pandemics. Domestic animals and peri-domestic wildlife also have a role in creating bridges for the emergence of human diseases, since this can happen in an evolutionary sense, or the animal could serve as a physical transmitter. The most important reservoirs of pathogens with pandemic potential are mammals (in particular bats, rodents and primates) and some birds, as well as livestock (e.g. pigs, mink, poultry). In fact, intensive animal production is also considered one of the drivers for biodiversity loss and potentially for future pandemics. As an example, intensive poultry farming not only poses a significant risk to workers, but can also act as a potential public health menace evidencing the One health approach to tackle all the menaces in this particular setting.

Abstract citation ID: ckac129.021
Biodiversity and Health

Susana Viegas

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Biodiversity underpins all life on Earth, and refers to biological variety in all its forms, from the genetic makeup of plants and animals to cultural diversity. Human health depends upon ecosystem products and services (e.g. availability of fresh water, food and fuel sources) which are requisite for human and animal health. Biodiversity loss can have significant direct human health impacts if ecosystem services are degraded and not able to guarantee social needs. The ecosystems also control disease and stabilize the climate. However, biodiversity loss is occurring at unprecedented rates, impacting human health worldwide, according to the report jointly published by the Convention on Biological Diversity (CBD) and the World Health Organization (WHO). In this report, awareness is provided to the need to promote integrated approaches to biodiversity and health by highlighting that biodiversity contributes to human health and wellbeing, and emphasizing also that biodiversity needs protection for development to be sustainable. Indirectly, changes in ecosystem services affect livelihoods, income, local migration and, on occasion, may even cause or exacerbate political conflict. Some features will be presented and discussed to describe in detail the most relevant impact that biodiversity has in human health and wellbeing and how the loss of biodiversity can imply risk for animal and human health.

1.F. Skills building seminar: Podcast 101 - Lessons learnt and how you can create your own unique experience

Abstract citation ID: ckac129.022

Organised by: EUPHA-DH
Chair persons: Stefan Buttigieg (EUPHA-DH), Brian Li Han Wong (UK)
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Podcasts are one of the fastest growing communication channels globally with more than 850,000 podcasts available globally through all the different podcast distributors. Furthermore, Health-related podcasts are gathering steam on their own front and herein lies the opportunity for public health and digital health professionals to embrace this channel and develop the necessary skills to start communicating their visions in a world that is plagued by misinformation and disinformation. This skills building workshop intends to cover the experience of three public health professionals in their involvement as co-hosts of three different podcasts that have their own voice with differences in their setup and availability of resources. Furthermore, the authors intend to cover the following aspects:

Getting started with your own podcasts
The typical setup for Podcast Recording
Promoting and growing your podcasts
Ensuring sustainability and consistency in your approach
Tips and Tricks for Podcast Success

Key messages:

- Podcasts are a unique opportunity to create a meaningful connection with a wide audience in a world plagued by misinformation and disinformation.
- Setting up a Podcast has gotten much less complicated and this workshop will provide the basic knowledge to get you started with tools that you already own.

Abstract citation ID: ckac129.023
Getting started with Podcasts

Stefan Buttigieg

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There are a world of opportunities waiting for public health professionals to get started with a regular audio-visual communication channel. The barrier of entry to start creating your very own podcast has been reduced to a bare minimum. This presentation intends to cover the basics to get started with your own podcast and intends to share the lessons from the author's involvement as a co-host of ''The Digital Health Voice'' podcast.

Abstract citation ID: ckac129.024
Promoting and growing your podcasts and ensuring sustainability and consistency in your approach

Juan Rachadell

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The main challenges after getting started with a podcast will be growth and sustainability. This presentation will focus on promotion tactics for digital health podcasts, including the pros and cons of different hosting platforms and the use of social and academic networks for promotion. The importance of sustainability and consistency for growth will also be discussed, including some practical tips on productivity and team management for content producers.

1.G. Workshop: The German National Cohort (NAKO): Design, current state, and first results

Abstract citation ID: ckac129.025

Organised by: NAKO e.V. (Germany)
Chair persons: Tobias Pischon (Germany), Lilian Krist (Germany)
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This workshop aims to give an overview of design, methods and first results of the largest cohort study in Germany: the German National Cohort (NAKO).This organized session will consist of one overview presentation and three presentations on selected topics: mental disorders, COVID-19, and Magnetic Resonance Imaging (MRI) in the NAKO. NAKO is a multidisciplinary, population-based cohort study that provides a central resource for population-based epidemiologic research. NAKO aims to investigate the development and aetiology of diseases, identify risk factors and enhance early detection and prevention of diseases with a focus on diabetes, cancer, cardiovascular, pulmonary, neurological, psychiatric, and infectious diseases. Between 2014 and 2019, overall 205,415 persons aged 20-74 years were recruited and examined at 18 study centres across Germany. During their visit to the study centre, they participated in a face-to-face interview, completed self-administered, computer-based questionnaires, underwent a battery of biomedical examinations, and provided various biosamples. In addition, whole-body Magnet Resonance Imaging (MRI) was performed on 30,861 participants using dedicated 3 Tesla MRI scanners at 5 study centres. The whole-body MRI protocol focuses on brain and cardiac structures, musculoskeletal system and body fat distribution. In 4-5 year intervals, all study participants are re-invited for examinations at the study centres. The programme for the first re-examination (including MRI scanning) was similar to the baseline programme. Thereby, longitudinal information on changes in risk factor profiles and in vascular, cardiac, metabolic, neurocognitive, pulmonary and sensory function is collected. Since October 2018, 77,896 participants have been re-examined, including 11,382 with additional MRI examination. A supplemental COVID-19 questionnaire collected data on 161,849 participants of NAKO during the first COVID-19-related lockdown in Spring 2020. This survey started on 30 April 2020 and ended on 30 June 2020. The questionnaire included questions on general state of health, Sars-CoV-2 symptoms and test results, and on changes in behavioural, psychosocial and socioeconomic factors as well as social contacts and occupational situation during the pandemic. Thus, psychological and socioeconomic effects of the pandemic situation can be addressed. Moreover, questions on pandemic-related aspects including the history of infection, severity and long-term health impacts of COVID-19 were added to the regular study programme in the study centres as of July 2021. The longitudinal design of NAKO provides the unique opportunity to compare the participants' situation before and during the pandemic. The presentations describe the main design of the NAKO and exemplary results of main research questions, e. g., on mental health, association of occupational factors with COVID-19, and MRI findings.

Key messages:

- The workshop introduces the design and collected data of the NAKO to foster collaboration between scientists, enabling further harmonization of data collection between large cohort studies.
- The workshop aims to facilitate (future) joint scientific exploitation of this unique epidemiological resource of population-based data.

Abstract citation ID: ckac129.026
The German National Cohort (NAKO): Overview and Current State

Karin Halina Greiser

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The presentation aims to give an overview of design, methods and first results of the German National Cohort (NAKO), the largest cohort study in Germany. NAKO is a multidisciplinary, population-based cohort study that provides a central resource for population-based epidemiologic research. NAKO aims to investigate the development and aetiology of diseases, identify risk factors and enhance early detection and prevention of diseases with a focus on diabetes, cancer, cardiovascular, pulmonary, neuropsychiatric and infectious diseases. Between 2014 and 2019, a total of 205,415 persons aged 20 - 74 years were recruited and examined at 18 study centres across Germany. The participants were invited to their local study centre to participate in a face-to-face interview, complete self-administered computer-based questionnaires, undergo a battery of biomedical examinations, and provide various biosamples. In addition, whole-body Magnet Resonance Imaging (MRI) was performed in 30,861 participants on dedicated 3 Tesla MRI scanners at 5 study centres. In 4-5 year intervals, all study participants are re-invited for examinations at the study centres. The programme for the first re-examination (including MRI scanning) was similar to the baseline programme. Thereby, longitudinal information on changes in risk factor profiles and in vascular, cardiac, metabolic, neurocognitive, pulmonary and sensory function is collected. During the COVID-19 pandemic, questions on pandemic-related aspects including the history of infection, severity and long-term health impacts of COVID-19 were added to the examination programme. Since October 2018, 77,896 participants have been re-examined, including 11,382 with additional MRI examination. A supplemental COVID-19 questionnaire was completed by 161,849 participants of NAKO during the first COVID-19-related lockdown in Spring 2020.

Abstract citation ID: ckac129.027
Depression Assessment in the German National Cohort (NAKO)

Klaus Berger

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Background:

The mental health status of populations (public mental health) and its effect on societies has gained considerable attention in recent years, especially during the current pandemic. The measurement of depressive symptoms is at core of the assessment of mental health. The detailedness of this assessment defines the range of public mental health problems that can be answered.

Methods:

Between 2014 and 2019 the German National Cohort (NAKO) recruited 205,000 participants aged 20-70 years into the baseline examination in 18 study centers. Depression and depressive symptoms were assessed by different instruments including a lifetime diagnosis of depression and current treatment, the Major Depressive Disorder (MDD) section of the Mini-International-Neuropsychiatric-Interview (M.I.N.I. 5.0) and the depression scale of the Patient Health Questionnaire (PHQ-9). These instruments include different time periods and interpretations. Associations between these depression outcomes and age, gender and education are analysed in linear and logistic regression models.

Results:

A lifetime physician's diagnosis of depression was reported by 14.7% of participants with considerable regional variation and almost 50% of this group received treatment within the last 12 months. Based on PHQ-9 7.9% of the participants were classified as depressive according to the dimensional assessment (score$\geq$10) and 3% of them as having a major depression subtype. In contrast 32.8% screened positive based on the MINI and 15.4% of those receiving the full MINI had a diagnosis MDD. Associations with important socioeconomic determinants for these different depression outcomes will be reported.

Conclusions:

The large NAKO sample size and the detailed assessment of depression symptoms and status enables the analysis of a broad range of public mental health questions. The analysis of depression frequencies and the distribution of depressive symptoms allow the establishment of population references.

Abstract citation ID: ckac129.028
Increase in Mental Disorders During the COVID-19 Pandemic - Role of Occupational & Financial Strains

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Background:

Numerous studies reported an increase in mental disorders during the COVID-19 pandemic, but the specific causes for this increase are unclear. We therefore investigate whether pandemic-related occupational and financial changes (e.g., reduced working hours, working from home, financial losses) were associated with increased symptoms of depression and anxiety compared with the situation before the pandemic.

Methods:

We analyzed data from the German National Cohort Study (NAKO). Between May and November 2020, 161,849 participants answered questions on their mental state and social circumstances. Responses were compared with data from the baseline survey before the pandemic (2014-2019). Linear fixed-effects models were used to determine whether individual changes in the symptoms of depression (PHQ-9) or anxiety (GAD-7) were associated with occupational/financial changes (controlling for covariates).

Results:

A pronounced increase in symptoms was observed among those who became unemployed during the pandemic (+ 1.16 points on the depression scale, 95% confidence interval [0.91; 1.41], range 0-27). Increases were also seen for reduced working hours without short-term working allowance, increased working hours, working from home, insecurity regarding employment, and financial strain. The deterioration in mental health was largely statistically explained by the occupational and financial changes investigated in the model.

Conclusions:

Depressive symptoms and anxiety disorders increased in the study population during the first year of the COVID-19 pandemic and occupational and financial difficulties were an essential contributory factor. These strains should be taken into account both in the care of individual patients and in the

planning of targeted prevention measures. Results suggest that welfare state benefits such as short-time allowance in times of crises may reduce mental load in affected populations.

Abstract citation ID: ckac129.029
Whole-body Magnetic Resonance Imaging in the German National Cohort (NAKO): Design & Current Status

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Background:
Whole-body magnetic resonance imaging (MRI) permits non-invasive, non-ionizing phenotyping of the human body and ideally complements the epidemiological assessment of the NAKO participants. As such, it allows for the detection of morphologic or functional predisposition, early disease stages prior to overt clinical events as well as evident pathological changes. The assessment of progression and regression of imaging phenotypes over time will provide the basis to identify and understand the relevance of imaging-based risk factor profiles for disease development.

Methods:
Integrated in the general NAKO study program and managed by a central Imaging Core, study participants underwent whole-body imaging at five dedicated MR imaging sites. Imaging was performed on five identical 3 Tesla scanners (Magnetom Skyra, Siemens Healthineers, Erlangen, Germany) applying a one hour protocol, including sequences for the brain, the cardiovascular and musculoskeletal system as well as for the thorax and abdomen. Comprehensive measures to assure high image quality and management of incidental findings were established.

Results:
As part of the baseline examination program, a total of 30,861 participants successfully underwent the MR imaging program. All measures of quality assurance and incidental findings management were successfully employed throughout the study period and obtained image quality and completeness of all MR sequences was excellent (>94.2% completeness). While MR imaging as part of the first re-examination is ongoing, baseline MRI data is currently accessible for scientific analyses.

Conclusions:
The MRI-Study of the NAKO will provide a comprehensive imaging phenotypic biobank covering different organ systems with highest morphological and functional detail. MRI data analysis will gain novel insights into the natural history of disease development, the role of subclinical disease burden, and revolutionize our understanding of imaging biomarkers of risk.

1.H. Oral presentations: Measuring health inequalities

Abstract citation ID: ckac129.030
Reducing health inequalities through general practice in the UK: a realist review (EQUALISE)

Anna Gkiouleka

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Background:
In the UK, chronic conditions such as cancer, heart disease, stroke, and chronic obstructive pulmonary disease are driving health inequalities in life expectancy and were responsible for two-thirds of premature mortality in 2017. Voices that stress the importance of primary care in reducing health inequalities have been strengthening during the last decade. However, defining the most effective strategies to reduce health inequalities through general practice remains a challenge.

Aims:
This study examines the evidence on interventions in primary care that are likely to decrease inequalities in NCDs and especially cancer, diabetes, cardiovascular and chronic obstructive pulmonary disease and will provide healthcare organisations with guiding principles on what should be commissioned.

Methods:
The study is a realist review following Pawson's model. Based on a programme theory, we screened systematic reviews of interventions delivered in primary care and through their references, we identified primary studies reporting on inequalities across PROGRESS-Plus criteria. The data were analysed in light of the initial program theory and organised in a model informed by Collins' Domains of Power framework.

Results:
Out of 251 included reviews we retrieved 6,555 primary studies which resulted in 333 studies for data extraction. We found that there are five guiding principles operating simultaneously across four different domains which can reduce health inequalities in General Practice. The principles include flexibility, continuity, inclusivity, intersectionality, and community and operate simultaneously across the domains of structures and policies; narratives and ideas; rules and practices; and relationships and experience.

Conclusions:
Flexibility, continuity, inclusivity, intersectionality, and community are the five principles which should guide the design and delivery of General Practice for the reduction of health inequalities.

Key messages:
- Flexibility, continuity, inclusivity, intersectionality, and community are the five principles which should guide the design and delivery of General Practice for the reduction of health inequalities.
- Action to reduce health inequalities should be taken simultaneously across the domains of structures and policies; narratives and ideas; rules and practices; and relationships and experience.

Abstract citation ID: ckac129.031

The Berlin index of health and social deprivation: a data based tool to tackle health inequality

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Background:

Reducing socially induced health inequalities is a key task of urban and regional public health authorities. The Berlin index of health and social deprivation (BIHSD) 2022 aims to show regional differences in health and social situation in sub-areas of the city, to observe developments over time and to identify socially deprived sub-areas of the city.

Methods:

The BIHSD 2022 is based on 20 indicators, most of which come from official statistics. Principal component analyses were applied to calculate subindices for the dimensions employment (e.g. unemployment rate), social conditions (e.g. risk-of-poverty rate) and health (e.g. premature mortality). Based on these subindices the final health and social index was derived. The (sub)indices are available on different spatial levels. Relative changes compared to the BIHSD 2013 were calculated to identify regional trends in the transitions in the social structure and health of the city over time.

Results:

Besides improvements for most indicators over time in most regions of Berlin, there is still significant evidence for health and social inequality across the city. For example, long-term unemployment rate varies between 0.5% and 40.4% on the lowest spatial level. Following a secular trend, there are substantial improvements in former deprived areas in the inner city while in many peripheral residential areas with an average social structure in the past a downwards trend was observed.

Conclusions:

Deprivation indices are helpful tools for research and health reporting in providing evidence for regional inequality. Additionally, they can be used to tailor health promotion strategies and to promote a targeted allocation of financial resources. For example, results of the BIHSD 2022 are being used in epidemiological analyses (e.g. regional inequalities in the risk of SARS-CoV-2 infection) and for (health) policy planning (e.g. needs- and demand-based planning of healthcare).

Key messages:

- The Berlin index of health and social deprivation 2022 show regional differences in health and social situation in sub-areas of the city and documents developments over time.
- The index is being used in epidemiological analyses, to tailor health promotion strategies, and to promote a targeted allocation of financial resources.

Abstract citation ID: ckac129.032

Health inequalities in very old age: Continuity, accumulation or convergence?

Judith Wenner

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Background:

Health inequalities are well documented empirically. However, it is unclear whether health inequalities persist in very old age (continuity), whether they accumulate steadily (accumulation), or whether they even attenuate in old age (convergence) - not least because of social inequalities in life expectancy, which make it less likely for individuals with lower social status to reach old age at all. The aim of this study is to empirically test these three hypotheses.

Methods:

The analyses are based on representative cross-sectional data from 1,863 very old people and panel data from 912 participants in the 1st and 2nd wave (W1, W2) living in North Rhine-Westphalia the largest federal state in Germany (NRW80+ study). Health outcomes of the analyses are subjective health, multimorbidity and need for long-term care. Indicators of socioeconomic status (SES) are education, occupational status, and net equivalent income. Regression models (linear, logistic, ordinal) are used to analyze cross-sectional and longitudinal data. Panel selectivity is also considered by means of a failure model.

Results:

Cross-sectional findings show health inequalities for all SES variables: persons with low education and low income have poorer subjective health and higher need for care. Low status is associated with higher need for care. Preliminary results from longitudinal analyses show a slight increase in health inequality: low income and low status are associated with higher multimorbidity and low education with higher dependency on long-term care at W2.

Conclusions:

Despite the socially conditioned unequal chances of reaching old age, health inequality is still present in very old age and even increases slightly over time. The results argue against the convergence hypothesis and in favor of the continuity or even the accumulation hypothesis. A better understanding of the mechanisms leading to the persistent inequality is needed to development targeted interventions also in old age.

Key messages:

- Health inequalities persist and even increase in very old age (80+).
- It is imperative that the oldest old – an increasingly large population group – be considered when designing strategies to reduce health inequalities.

1.J. Round table: Research Methods for Public Health Oriented Health Services Research – what works where and for what?

Abstract citation ID: ckac129.033

Organised by: EUPHA-HSR, EUPHA-HIA, EUPHA-HTA, EUPHA-EPI, EUPHA-ECO, EUPHA-PHPP, German Public Health Association Section Research, German Network Health Service Research WG IHSR, Charité Institute for General Practice WG HPSRI
Chair persons: Lorena Dini (EUPHA-HSR), Johan Hansen (EUPHA-HSR)
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This workshop will present the different methodological approaches relevant to the field of public health. This includes approaches of health systems and health policy research, epidemiology, health technology assessment, health impact assessment, health systems performance and economic evaluations. Presentations will be hold by presidents and vice-presidents of the EUPHA Sections in the form of a panel, presenting the overview of each methodology and providing case examples. All organizers might invite special contributions from their members and students to share innovations of case examples from their counties. During the first half of the workshop the EUPHA Sections will provide input on traditional and innovative methods the following topics:

1. Health Policy and Systems Research (HPSR) applied to Primary Care.
2. The use of traditional and innovative epidemiological study designs for public health relevant inferences.
3. Overview of methods used for the quantification of health impacts, both following a risk assessment approach or an epidemiological approach.
4. Methodologies and techniques applied in Health Technology Assessment (HTA) and how their contribute to decision-making and evidence-informed policymaking.
5. Health Systems Performance Assessment (HSPA) and Economic evaluations.
6. Research methods from the public health policy and politics perspective.

In the second half of the workshop we will discuss and share examples on innovation in research methods and seek to find an answer to the question: what is being done in the countries? Input from DGPH-FO, DNVF-IHRS, Charité WG HPSRI and from all participants will be welcome. Target audience: young and old professionals interested in updating their methods skills and sharing their own experiences on innovation in methods for a stronger public health research.

Key messages:

- There are no better or worse research methods; they are just a tool, that when applied properly support evidence and action for a stronger public health.
- As knowledge on research methods evolve, sharing knowledge amongst different fields is key to contribute to a stronger health system, better health policy decisions and a better health for all.

Speakers/Panellists:

Lorena Dini
Charité Univesitätsmedizin Berlin, Berlin, Germany

Piedad Martin-Olmedo
Escuela Andaluza de Salud Pública, Granada, Spain

Stefania Boccia
Italian Society of Hygiene, Preventive Medicine and Public Health, Rome, Italy

Chiara de Waure
University of Perugia, Perugia, Italy

João Vasco Santos
Faculty of Medicine, University of Porto, CINTESIS, Porto, Portugal

1.K. Oral presentations: E-cigarettes and smoke-free environments

Abstract citation ID: ckac129.034
Is Ireland ready for tobacco endgame? A national survey of knowledge and attitudes to tobacco endgame

Ellen Cosgrave

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Background:

In 2013 'Tobacco-Free Ireland' (TFI) shifted Irish national policy from tobacco control to "tobacco endgame": policies, plans and interventions seeking to end the tobacco epidemic completely. Recent trends suggest the current 2025 TFI goal will not be achieved. This cross-sectional study is a timely assessment of public knowledge and attitude to re-focus Irish "tobacco endgame" planning.

Methods:

A literature-informed, pre-tested survey instrument was telephone-administered to a representative sample of 1000 members of the Irish public aged $\geq$15 years recruited via random digit dialling in February 2022. Prevalence of "tobacco endgame" views was measured; logistic regression determined factors associated with key responses.

Results:

Response rate was 30% (n = 1,000, post-hoc weighting applied). While TFI goal awareness was low (34%), support was high (75%), albeit most (61%) recognised postponement beyond 2025 was required for achievability. There was majority support for 18/22 endgame measures assessed. Product-focused tactics were popular, while views on targeting users were mixed: e.g. 86% supported a reduction in tobacco-product nicotine content; 40% supported introduction of a tobacco-user license. Phasing-out tobacco sales was highly-supported (83%); however, this was contingent on special supports for those currently addicted. Support for the TFI goal was higher among non-tobacco users (aOR 2.66, 95%CI 1.89-3.76), females (aOR 1.57, 95%CI 1.17-2.11) and those of higher social class (aOR 1.72, 95%CI 1.25-2.35).

Conclusions:

While achievement by 2025 is increasingly unrealistic, findings strongly affirm Irish public opinion is ready for "tobacco endgame". Recognition of the needs of currently addicted tobacco users and focusing on subgroups with lower support levels should be integral to equitable "tobacco endgame" planning and communication. This study should mobilise renewed Irish political commitment to bold actions aimed at ending smoking-related harm.

Key messages:

- There is strong support for tobacco endgame measures among the Irish population, which is a supportive factor for bold political leadership to make these radical ideas a reality.
- Public preference for product and non-user-focused measures aligns with tobacco endgame discourse and should aid policy reframing to tackle structures and dynamics sustaining the tobacco epidemic.

Abstract citation ID: ckac129.035
Creating smoke free environments by local policy

Selinde Rouwenhorst

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In The Netherlands, around 20.000 people die each year from the effects of smoking and passive smoking. Every week, hundreds of children become addicted to smoking. To improve the overall public health in the Netherlands, it is important to substantially reduce the prevalence of smokers. Until recent years, municipalities played next to no role in helping to reduce smoking in the Netherlands. The start of a large campaign that aims a smokefree generation by 2040 has changed that. Part of that campaign is to create smoke-free environments. In a two-year program, 90% of the Dutch municipalities started policy and actions to ban smoking from public places, as part of the National Prevention Agreement. The participating municipalities were supported by all 25 Regional Health Services (GGDs) by providing knowledge and manpower on a regional level, together with national, regional and local organisations. The project has a number of successful elements: the GGD received a (very small) budget to actively participate in the region; knowledge was shared between the regions and from national to local level and legal issues were dealt with by the Nat Assoc of Municipalities (VNG). In 2021, 317 out of 352 Dutch municipalities were active in this project. There is a significant increase of smoke-free environments, mostly schoolyards, playgrounds, sports facilities, smoke-free bus stops and municipal institutions. Other results are integrated plans for smoking cessation care and accessible stop smoking service, e.g. in GGD Fryslan the number of registrations for smoking cessation care increased dramatically and 80% actually quit smoking. All parties involved agree that the strength of this project is its positive approach and the broad social support it generates for the Smokefree Generation. It is about persuasion, not compulsion. Working from a national focus towards a smoke-free environment, while taking into account local differences and needs, makes this project a success.

Key messages:

- This project resulted in more local and regional partnerships and an increase of smoke-free environments, bringing the ultimate goal of a Smokefree Generation closer.
- 90% of Dutch municipalities have created smoke-free environments with the guidance of the regional GGD, financed by Ministry of Health: multilevel governance works.

Abstract citation ID: ckac129.036
Evaluation of Factors Associated with Dual Use of E-Cigarettes in University Students

Feyza Nehir Öznur Muz

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Background:

The World Health Organization defined smoking as the fastest spreading and longest lasting epidemic globally. It has been reported that two-thirds of all tobacco consumption in the world is in developing countries, and with today's technology, the use of electronic cigarettes (e-cigarettes) has increased rapidly among young people and adults, especially in recent years. The study aimed to evaluate the factors associated with dual use of e-cigarettes (e-cigarette plus one of the tobacco products) in university students.

Methods:

This study was carried out with the participation of 2477 students at Eskişehir Osmangazi University in the 2019-2020 academic year, and it was designed as a nested case-control study from a study in which 49 were determined to be dual smokers. A randomized 1:3 for age and gender with 147 non-smokers (NS) and 147 classic cigarette smokers (CSS) selected by the propensity score matching method was performed, with the final sample consisting of 343 participants. Chi-square and multinomial logistic regression analyzes were used in the study.

Results:

In the multinomial logistic regression, the belief that e-cigarettes do not help quit classical cigarette smoking was 4.0 (95% CI; 1.7 - 9.6) times higher in NS and 4.1 (1.6 - 10.0) times higher in CCS compared to dual smokers, while the belief that e-cigarettes may suppress the desire to smoke was 4.4 (1.7 - 11.2) times higher in NS and 6.8 (2.6 - 17.6) times higher in CCS.

Conclusions:

The study determined that dual smokers were less likely to believe that e-cigarettes are more innocent than other tobacco products. While dual smokers believed that e-cigarettes might not suppress the desire to smoke, CCS believed e-cigarettes could even increase classical cigarette smoking.

Key messages:

- Since the effects of e-cigarette use on human health are controversial, it is still a significant public health problem in developing countries.
- Although it was initially marketed to help quit or reduce the use of classical cigarettes, it should be noted that e-cigarettes are also a type of tobacco product addiction.

Abstract citation ID: ckac129.037
Global market trends of flavour capsule and menthol cigarettes in 78 countries, 2010-2020

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Background:

Flavoured tobacco products, including innovative flavour capsule cigarettes (FCCs) and menthol cigarettes, can increase appeal and encourage smoking initiation and use. Global epidemiological data on these products are scarce.

Methods:

This study examined market trends of FCCs and menthol (non-capsule) cigarettes across 78 countries from 2010 to 2020 and assessed ecological-level factors associated with market shares of these products. Market share and retail volume data came from Euromonitor Passport and country-specific socio-demographic data come from the WHO and World Bank. Adjusted linear fixed effects panel regression analyses were used to evaluate the relationship between predictors variables and market outcomes.

Results:

Global total retail volume of FCCs increased over time (0.2% in 2010 to 4.5% in 2020) and market share was associated with year and unemployment rate and inversely associated with % urban population and smoking prevalence ($p < 0.001$). In contrast, menthol retail volume decreased over time (5.0% to 3.8%) and market share was associated with % urban population ($p = 0.001$) and inversely associated with year ($p = 0.004$) and unemployment rate ($p = 0.017$). The greatest market increase of FCCs was observed in the Americas region and among upper-middle income countries. In Europe, there was a decrease of 0.64 percentage points from 2019 to 2020.

Conclusions:

Overall, FCCs experienced substantial global growth in the recent decade, with the exception of Europe whose slight decrease may be attributable to the European Union ban on flavours in cigarettes. Findings indicate that there is a need for increased efforts to address flavours and innovative features used in tobacco products, which are known to appeal to youth.

Key messages:

- This study contributes to global monitoring of tobacco products.
- Findings can be used by advocates and policy makers to support countries in adopting measures to ban flavoured tobacco products.

Abstract citation ID: ckac129.038
Effectiveness of Behavior Change interventions for smoking cessation among expectant and new fathers

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Background:

The perinatal period is an optimal time to intervene for achieving smoking cessation in expectant parents and offers multiple health benefits for women and the newborn. While Behavior Change Technique (BCT) interventions are a promising approach to support pregnant smokers to quit smoking, effectiveness of these interventions among expectant and new fathers is not equally well documented. Better understanding of the potential utility of these BCT interventions for this group is important for the development of effective gender-sensitive programmes.

Methods:

This systematic review examines the existing evidence on effectiveness of BCTs on smoking cessation outcomes when offered to expectant and new fathers (child < 1 year) both through individual and/or couple-based interventions. Eight databases were searched for peer-reviewed articles. Studies were subjected to systematic retrieval and quality-assessment by two independent reviewers.

Results:

We identified 9 randomised control trial studies (including 4,681 men) that fulfilled the inclusion criteria. In terms of quit outcome data, 8 studies reported biochemically verified quit rates for men. While 5 BCT interventions targeted expectant/new fathers, 3 were directed to couples and 1 primarily focused on women with a component directed at men. Though most of the interventions were found to be effective, they showed small significant positive effects on cessation outcomes. Findings are suggestive of gender specific interventions being more likely to have positive outcomes. High heterogeneity across the studies made it difficult to determine the most effective BCT approach.

Conclusions:

This review suggests that use of BCT interventions for smoking cessation among expectant and new fathers is effective in achieving positive quit rates; however, these studies are limited. Further research is needed to determine the most effective BCT approach associated with smoking cessation among this group.

Key messages:

- BCT interventions for smoking cessation among expectant and new fathers are a promising approach to increase quit rates.
- Future research needs to develop evidence based BCT interventions for smoking cessation specifically targeting expectant and new fathers to inform policy and practice.

1.L. Workshop: Building capacity for a resilient and healthy post-COVID health workforce

Abstract citation ID: ckac129.039

Organised by: EUPHA-HWR, WHO Europe
Chair persons: Ellen Kuhlmann (EUPHA-HWR), Tomas Zapata (Denmark)
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Background:

The COVID-19 pandemic added new challenges to health workforce resilience. High workload, increased risk of COVID infection and continuing stress threaten the health and wellbeing of healthcare workers (HCWs) and increase existing (gendered) inequalities, thus reinforcing health labour market problems. Investment in the health workforce and prioritisation of the health and wellbeing needs of healthcare workers in health policy and pandemic recovery plans is therefore called for by the WHO, the European Union and others. However, health systems and policymakers across countries have not sufficiently understood the importance of HCWs.

Objectives:

This workshop brings health workforce needs onto the health policy agenda. It seeks to build capacity for a resilient and healthy health workforce, setting the focus on protection and preparedness of HCWs and their individual wellbeing, and reduction of gendered inequalities. The following major questions will be addressed: What do we know about COVID-19 and the health and wellbeing of HCWs? What skills are needed to respond to new demands? What policy approaches are available to improve protection, preparedness and mental health support of HCWs? How to integrate gender equality and the situation of migrant/refugee HCWs in these approaches, and finally build capacity for effective health workforce governance and its implementation.

The workshop introduces novel results drawn from European comparative research and country case studies. It connects policy and practice, as well as health system and individual HCW needs. A number of important policy recommendations are emerging from the research. (1) The health and wellbeing of the health workforce must be addressed systematically across all levels of health policy and governance, including the organisation settings. (2) Health systems must take responsibility and leadership in responding to health workforce needs. (3) Important lessons to be learned from HCWs' experiences should guide future health workforce policy and pandemic recovery plans. (4) Participatory governance and inclusion of HCWs must be strengthened, including gender equality and diversity.

The workshop will stimulate critical debate and improve knowledge exchange across countries and between researchers. It will contribute to strengthen resilience of the health workforce and health systems, and to build back better after COVID-19 in a fair and equitable manner.

Key messages:

- Health workforce needs and mental health support must become policy priorities and addressed as part of health system resilience.
- Action has to be taken to strengthen participatory health workforce governance sensitive to new needs.

Abstract citation ID: ckac129.040
Investing in the health workforce, protecting mental health: policy and action taken by WHO

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Background:

The COVID-19 pandemic and the current war in Ukraine have presented opportunities to increase national leadership on mental health, including support health and care workers. Member States across the region have worked closely with the WHO to strengthen their policy levers to support the mental health and occupational safety policies for the workforce at various levels including government, organization and local service levels. To complement these policies, the WHO will launch the WHO Global Health and Care Compact at the Seventy-fifth World Health Assembly in May 2022.

Methods:

The WHO has convened Member States to discuss the policy levers that can support the mental health of health and care workers. These include online multistakeholder webinar series, national policy dialogs, ministerial discussions during the Regional Committee, preparatory consultations for the World Health Assembly to discuss priority areas and policy. More recently with the crisis in Ukraine, the WHO has been working closely with the UN Interagency Steering Committee (IASC) Reference Group on Mental Health and Psychosocial Support in Emergency Settings rolling out services for refugees, including health workers in these settings.

Results:

A number of important policy recommendations are emerging from this work: (1) strengthening national and political leadership; (2) adopting stepped approaches; (3) facilitating collaboration across professions, sectors and levels of syste for more effective responses; (4) strengthening capacity and expertise; (5) monitoring effectiveness for continuous improvement; (6) ensuring acceptability and accessibility.

Conclusions:

Promoting health and well-being and mental health support to the health and care workforce has become a key priority for health systems to enable sustainable national health workforces. WHO will prioritize country support on this area and the development of regional guidance.

Abstract citation ID: ckac129.041
Health workforce governance during the COVID-19 pandemic: learning lessons from Europe

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Background:

This study considers some of the effective governance tools that have been utilised to mobilise, redeploy and repurpose the health workforce during the COVID-19 pandemic to create surge capacity, protect workforce health and wellbeing and ensure effective implementation of vaccination programmes.

Methods:

Data were systematically extracted from the Observatory/WHO Europe/European Commission Health System and Response Monitor, covering the period from March 2020 to May 2021 with a focus on four dimensions of health workforce governance: national/regional government policies; legislation; regulation; the role and remit of employers and management.

Results:

A wide-range of governance actions across all levels were required to ensure the health workforce could provide effective pandemic responses. Creating surge capacity, for example, often required adoption of emergency legislation to facilitate exceptional hiring procedures and the changing of (re-)registration requirements, as well as additional training and development of new competencies among other actions. Putting in place physical and mental health support meanwhile required defining infection control policies, monitoring PPE supply and distribution, ensuring access to free mental health support, and implementation of breaks. Some countries also allowed ‘‘new’’ types of workers to vaccinate; online or in person training; adjustments to payment mechanisms; and creating new supervision requirements.

Conclusions:

Pandemic responses have broken up sclerotic governance structures which have hampered past health workforce development and reform, new training programmes have been rapidly developed, leadership roles have been delegated to a wider-range of health professionals than before and monitoring systems that provide more rapid data on staffing levels have been put into place. Learning from and evaluating these changes will be important to help inform future pandemic responses.

Abstract citation ID: ckac129.042
Health workforce needs and health policy responses to COVID-19: a European comparative assessment

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Background:

The COVID-19 pandemic revealed the importance of the health workforce for health system resilience. This study aims to explore whether and how healthcare system in Europe have responded to new emergent needs and transformed their health workforce policies.

Methods:

A qualitative comparative approach is applied, based on multi-level governance theory and a rapid assessment of three areas of health workforce policy: mental health, gender equality, and public health competencies. We consider two years of the pandemic with a focus on recent waves, October 2021-January 2022. Denmark, Germany, Portugal, Romania and Switzerland are selected for comparison, representing different health systems, health workforce conditions and COVID-19 indicators in the European Union and European Economic Area.

Results:

Across countries the pandemic has highlighted mental health needs, persisting gender inequalities and demand for public health competencies. Our comparison reveals similar weaknesses and governance gaps. (1) Mental health needs of healthcare workers are increasingly recognised (more strongly in Denmark and less in Romania with the other countries clustering in-between); however, health workers' perceptions are not used as guidance and effective programmes are lacking. (2) The situation is worst in relation to gender equality goals that are largely ignored in pandemic policy and recovery plans.

(3) Public health competences are more advanced and integrated in the NHS systems in Denmark and Portugal, but no country has taken action to innovate health workforce education and strengthen public health.

Conclusions:

The comparative assessment highlights that health systems failed to adequately respond to health workforce needs and the COVID-19 challenges. Action has to be taken to implement participatory governance and step up efforts towards more responsive and resilient health workforce policy.

Abstract citation ID: ckac129.043
Interventions to improve teamwork and wellbeing in primary care settings: a mixed method review

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Background:

General practices are experiencing increasing pressures due to rising demand, declining staff numbers, and knock-on impacts on patient care. The COVID-19 pandemic has added further challenges and reinforced the importance of teamwork and organisational settings. We undertook a mixed-method systematic review to explore which interventions can improve teamwork within primary care and improve inter-sector partnerships with other health and social care services.

Methods:

Five major bibliographic databases were systematically searched for relevant studies from inception to February 2022. We included controlled intervention study designs and linked qualitative studies. For amenable data, meta-analysis is being undertaken using random effects models taking into account the between study heterogeneity (quantified using the I2 statistic) and potential publication bias (funnel plots and Egger's test). The qualitative studies are analysed using thematic analyses.

Results:

The original search yield of 3012 studies, of which 14 studies with 1,534 participants were include in our analyses. Most of the evaluated interventions focused on improving non-technical skills and provided evidence of improvements in the quality of teamwork in primary care. Meta-analysis and narrative synthesis is undertaken to examine the impact of the teamwork interventions on staff outcomes (team attitudes, knowledge, and functioning; wellbeing), and patient outcomes (e.g. quality of patient care, patient satisfaction/experience).

Conclusions:

The findings provide information of immediate importance for the mental health and wellbeing and teamwork support of professionals entering primary care and for the organisation of primary care services.

Abstract citation ID: ckac129.044
Hospital doctors in Ireland working through COVID-19 pandemic: learning from individual experience

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Background:

This study was part of a 5-year, HRB-funded research project about hospital doctor retention and emigration.

Methods:

In 2021, we conducted a Mobile Instant Messaging Ethnography (MIME) with 28 hospital doctors in Ireland. This involved interviewing doctors via Zoom and engaging them in a 12-week work-related conversation via WhatsApp.

Results:

Our findings illustrate that the pandemic intensified already difficult working conditions. Respondents described working in an under-staffed and under-resourced system, in which they were unable to protect their own wellbeing or achieve a work-life balance. Morale was low and few had hope of health system improvement.

Conclusions:

The findings reveal a workforce under strain and raise concerns about health worker wellbeing and health worker attrition, post-pandemic. However, they also highlight the importance (and value) of listening to the voices of frontline health workers and using their insights to inform and enhance retention policies.

1.M. Oral presentations: COVID-19 and vaccination

Abstract citation ID: ckac129.045
Risk factors for SARS-CoV-2 infection: a case-control study in college students after vaccination

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Background:

Within the SARS-CoV-2 screening campaign offered through RT-PCR test by Sapienza University of Rome, we conducted a case-control study to identify the risk factors for the acquisition of SARS-CoV-2 infection among university students.

Methods:

Positive students identified through the SARS-CoV-2 screening campaign (September 2021 - February 2022) were enrolled as cases and matched to two randomly selected students who tested negative on the same day. The interview questionnaire consisted of 39 questions investigating exposure to modifiable and nonmodifiable risk factors for SARS-CoV-2 in the two weeks before testing. A multivariable conditional logistic regression model was constructed to identify predictors of SARS-CoV-2 infection. Adjusted odds ratio (aOR) and 95% CI were calculated.

Results:

Out of 8.730 tests for SARS-CoV-2, 173 students tested positive (2.0%), of which 122 were included in the case-control study (response rate: 70.5%). Most students were female (73.2%), with a mean age of 23.3 years (SD ± 3.6), vaccinated for SARS-CoV-2 (97.8%) and enrolled in non-health faculty (56.8%). At the multivariable analysis, significant positive associations were found with having had contact with a person who tested positive for SARS-CoV-2 (aOR: 3.04, 95% CI: 1.59-5.82) or having been to a disco/nightclub (aOR: 5.37, 95% CI: 2.00-14.38). Instead, being vaccinated against SARS-CoV-2 (aOR: 0.13, 95% CI: 0.01-0.93), having a valid EU COVID digital certificate (aOR: 0.06, 95% CI: 0.01-0.30) and attending lectures in-person (aOR: 0.35, 95% CI: 0.17-0.70) were negatively predictors. No association was found for sex, age, health faculty students, use of public transportation, attendance at restaurants or gyms.

Conclusions:

The results highlight how anti-COVID-19 vaccinations and the reasons for students to obtain an EU COVID digital certificate may prevent students from getting infected. In addition, university environment seems to be safe for students.

Key messages:

- Promoting SARS-CoV-2 vaccination adherence in the college-age population is crucial to limiting the SARS-CoV-2 spread.
- Attending in-person educational activities in regulated settings (e.g., low occupancy, mask use) may not be a risk factor for COVID-19 infection.

Abstract citation ID: ckac129.046
COVID-19 vaccination uptake in Belgium: socioeconomic and sociodemographic disparities

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Background:

Recent studies have identified important social inequalities in SARS-CoV-2 infection and related COVID-19 outcomes in the Belgian population. This study aims to investigate socioeconomic and -demographic characteristics associated with the uptake of COVID-19 vaccine in Belgium.

Methods:

We conducted a retrospective analysis of the uptake of the first dose of COVID-19 vaccine among 5,341,584 adults ($\geq$ 18 years) tested for COVID-19 in Belgium until August 31, 2021. We integrated four national data sources: the Belgian vaccine registry (vaccination status), COVID-19 Healthdata (laboratory test results), STATBEL (socioeconomic/-demographic data) and the Common Base Registry for HealthCare Actors (people licensed to practice a healthcare profession in Belgium). Unvaccinated and vaccinated people (with at least one dose) were compared using multivariate logistic regression analysis.

Results:

During the study period, 53,887 people (10%) did not receive the first COVID-19 vaccine dose in Belgium. Migrant background was associated with vaccine uptake (e.g., non-Europeans were almost three times [2.96-3.00] more likely to be unvaccinated compared to Belgian nationals). Single parents (OR 1.27 [1.26-1.28]) and people living alone (OR 1.18 [1.17-1.19]) were more likely to be unvaccinated compared to couples with children. Having a low or moderate education level (OR 1.36 [1.35-1.38] for low; OR 1.30 [1.29-1.32] for moderate) and income (OR 2.36 [2.34-2.38] for low; OR 1.54 [1.52-1.55] for moderate), being unemployed, (OR 1.50 [1.49-1.51), and having low health literacy (OR 1.41 [1.39-1.43]) led to a greater likelihood of being unvaccinated.

Conclusions:

Migrants, people living alone, single parents or socioeconomically disadvantaged groups have lower uptake of COVID-19 vaccine in Belgium. The identification of these socioeconomic and -demographic disparities is critical to develop strategies guaranteeing a more equitable COVID-19 vaccination coverage in Belgium.

Key messages:

- The study highlight important determinants in the uptake of the first dose of COVID-19 vaccine in Belgium.
- These results highlight the importance to focus efforts on socioeconomically disadvantaged groups currently underrepresented in COVID-19 vaccination uptake in Belgium.

Abstract citation ID: ckac129.047
SARS-CoV-2 Seroprevalence in Germany: results from the second wave of the RKI-SOEP study

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Introduction:

The first wave of the ''Corona Monitoring bundesweit'' (RKI-SOEP) study showed that shortly before the start of the German vaccination program only about 2% of adults (> 18 years) had already experienced SARS-CoV-2 infection and more than half of these cases had been detected and notified. The objectives of the second wave of this study are to further investigate the spread of SARS-CoV-2 in Germanýs population aged over 14 years. It aims to determine the seroprevalence of infection- and vaccine-induced IgG antibodies against SARS-CoV-2. Finally, it examines health, demographic and socioeconomic risk and protective factors for infection and vaccine acceptance.

Methods:

From November 2021 to February 2022, the second wave of this cross-sectional study collected biospecimens (capillary blood samples) and interview data, including information on infection and vaccination, from a nationwide population sample drawn from the German Socio-Economic Panel (SOEP). The dried self-collected blood samples were then analyzed for the detection of SARS-CoV-2 IgG antibodies by Euroimmun ELISA assay.

Results:

Based on preliminary, unweighted data of around 11,000 participants aged >14 years (52% response rate), we expect the final seroprevalence of SARS-CoV-2 antibodies to be in the range of 80 to 90%. Thus, around 10 to 20% of the German population may still be susceptible to a severe disease progression because they are neither infected nor vaccinated. Final results, weighted for non-response and adjusted for test sensitivity and specificity, will be presented.

Conclusions:

The RKI-SOEP-2 study will be pivotal in both, contributing to an improved understanding of SARS-CoV-2 propagation in different regional and sub-group settings and in identifying vulnerable target groups that need to be protected against future infections.

Key messages:

- Dried blood self-sampling in a nationwide sample is a robust tool to estimate seroprevalence at a population level.
- As of February 2022, presumably 80 to 90% of the German population has previously been infected and/or vaccinated against SARS-CoV-2.

Abstract citation ID: ckac129.048
Waning of SARS-CoV-2 IgG antibodies after vaccination: first results from the CoMoLo follow-up 2021

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Background:
In 2020, the study “Corona-Monitoring Lokal” (CoMoLo) assessed seroprevalences of SARS-CoV-2 IgG antibodies in four study locations that were particularly affected by outbreaks in the early stages of the pandemic in Germany. One of the objectives of the 2021 follow-up was to examine the development of immunological parameters over time, including the extent of IgG antibody waning after vaccination.

Methods:
Venous blood specimens were collected from a sample of initial study participants over a 2-week period between May and October 2021, with an oversampling of seropositive or previously infected individuals. Levels of IgG antibodies to the SARS-CoV-2 spike protein were measured from serum using Anti-SARS-CoV-2-QuantiVac-ELISA (IgG) tests by Euroimmun. Information on SARS-CoV-2 vaccinations or known infections was collected via online questionnaires or telephone interviews.

Results:
A total of 3328 participants (74% response) gave blood specimens for this follow-up study, with questionnaire information available for 2843 (85%) of these. Preliminary analyses suggest that in participants who had received two doses of a vaccine more than 3 weeks before giving blood (n = 1583), IgG levels decreased exponentially by about 9.8% (95%CI 9.1% - 10.4%) with each additional week since the last dose, when controlling for age, sex, and type of vaccine. There was evidence of this waning effect differing by vaccine type. Antibody levels also appear to decline with increasing age, according to preliminary results. Final results of the linear model used to assess the dynamics and predictive factors of antibody levels will be reported.

Conclusions:
This follow-up study will add evidence to an improved understanding of antibody waning after SARS-CoV-2 vaccination. Preliminary results are in line with international studies and may be helpful for discussions on potential benefits of further vaccinations in Germany.

Key messages:
- Antibodies induced by COVID-19 vaccination wane over time. The magnitude of this effect differs by vaccine type. Antibodies also decreased with increasing age.
- Our results may be helpful for discussions on potential benefits of further COVID-19 vaccinations in Germany.

Abstract citation ID: ckac129.049
Predictors of seropositivity against SARS-COV-2: a population-based seroepidemiological study

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Background:
Data on parameters of actual exposure to SARS-CoV-2 is limited, and specific population groups might be at a higher risk of infection. In line with the growing need for large-scale investigations to determine the presence of antibodies against SARS-CoV-2 among different population groups, we conducted a nationwide assessment in Armenia.

Methods:
We performed a cross-sectional seroepidemiological study among the adult population in Armenia, in May-September 2021. A multi-stage cluster random sampling was performed to recruit the participants across the capital city and regions. The study had two main components: blood sampling, which took place in primary care facilities and a phone survey on socio-demographic characteristics, comorbidities, and previous history of COVID-19.

Results:
The number of participants included in both blood sampling and phone survey was 3483. The nationwide prevalence of SARS-CoV 2 antibodies weighted by age and gender was 66.4% with significantly higher prevalence in urban compared to rural areas (67.3% vs 59.3%, $p < 0.001$). Only 22.7% (n = 772) of the total sample reported a previous history of PCR confirmed COVID-19, among whom antibodies were detected in 94.2% (n = 727). In the final adjusted model, the seropositivity was associated with being female (OR = 1.60, 95% CI: 1.32; 1.92), employed (OR = 1.41, 95% CI: 1.17; 1.69), and having previous PCR confirmed COVID-19 (OR = 10.6, 95% CI: 7.39; 15.21).

Conclusions:
Over 66% of the population were seropositive for antibodies against SARS-CoV 2; and over 1/5 of the sample reported a previous PCR diagnosis. Factors associated with increased odds of seropositivity included gender, employment status, and place of residence. Targeted interventions are recommended to minimize the risk of infection among those groups, including vaccination and infection prevention and control measures.

Key messages:
- The prevalence of SARS-CoV 2 antibodies is about three times higher than the rate of infection based on PCR confirmed prevalence of COVID-19.
- Women, people living in urban areas, and those employed are at a higher risk for exposure to SARS-CoV 2.

1.N. Oral presentations: Child and adolescent public health

Abstract citation ID: ckac129.050
Do preventive child examinations in general practice reduce the risk of overweight and obesity?

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Background:
The prevalence of children with overweight and obesity is increasing. General practitioners in Denmark follow children throughout early childhood via the preventive child health examinations. These examinations are offered to all children

from birth to the age of five. Thus, the general practitioners have a unique opportunity for early tracing and identification of overweight and obesity, but the impact of the examinations are not examined. Therefore, the aim of this study was to examine the association between attending preventive child health examinations and the risk of overweight and obesity at the age of six both for the total pediatric population and within groups of vulnerable children such as children of parents with low educational level or low household income.

Methods:

A population-based birth cohort study was conducted including all Danish children born from 2000-2012 using the Danish nationwide registers. Data included information on child participation in preventive health examinations at general practice, height and weight at the age of six, and parental information on socioeconomic factors.

Results:

The analyses included 801,444 children. Attending preventive child health examinations were not associated with a lower risk of overweight at the age of six. A lower risk of obesity was seen in children attending the examinations, both in the general population (RR 0.71, 95% CI 0.66-0.76) and within vulnerable groups (low level of maternal education: RR 0.80, 95% CI 0.72-0.89), low household income (RR 0.79, 95% CI 0.72-0.87). The risk of obesity was greater in the vulnerable groups than in the not-vulnerable groups.

Conclusions:

Attending preventive child health examinations were associated with a lower risk of obesity at the age of six, but not overweight. This was seen for both the general pediatric population and within vulnerable groups. The lowest risk of obesity was seen in the not-vulnerable groups.

Key messages:

- The results indicated that attending preventive child health examinations in general practice reduced the risk of obesity at the age of six, but not the risk of overweight.
- The lowest risk of obesity was seen in the not-vulnerable groups attending the preventive child health examinations in general practice.

Abstract citation ID: ckac129.051
How did the covid-19 pandemic affect lower respiratory tract infections in young children in England?

Kimberley Foley

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Background:

Social distancing policies to reduce transmission of covid-19 also reduced children's exposures to endemic respiratory viruses. We aimed to examine the impact of the covid-19 pandemic on lower respiratory tract infections in under 5s presenting to primary care in England.

Methods:

Longitudinal trends analysis using electronic health records from a nationally representative primary care database. Our target population was children aged <5 years registered with a primary care practice from January 2015 to March 2021.

Our main outcome was total weekly contacts with primary care for a lower respiratory tract infection (LRTI). We defined three pandemic phases from March 2020 - March 2021: i) first national lockdown (late March to early June 2020), ii) childcare settings reopened and second national lockdown with schools open (mid-June to mid-December 2020) and iii) third national lockdown with schools closed (late December 2020 to end of March 2021). We compared outcomes during each of the three phases with corresponding calendar weeks during pre-pandemic years 2015 to 2019.

Results:

Our study population included 843 020 children <5 years who had 1 076 181 contacts with primary care for LRTIs. During the first phase (first lockdown) there were falls of 79.3% (95% CI: 73.6 to 84.5) from an average of 28 547 primary care contacts for LRTI in 2015 - 2019 to 5915 in 2020; there was a 78.9% (95% CI: 73.7 to 83.9) fall in phase two (childcare settings reopened and second lockdown) from 107 873 to 22 792 contacts; and a 77.7% (95% CI: 73.5 to 81.4) fall in phase three (third lockdown) from 57 200 to 12 764 contacts.

Conclusions:

Children under 5 in England had fewer contacts with primary care for LRTIs during the covid-19 pandemic. This change likely reflects lower prevalence of respiratory illness due to fewer social contacts. This may impact on future health service use as these children have had less exposure, and therefore may have less immunity, to respiratory diseases.

Key messages:

- Children under 5 had fewer contacts with primary care for lower respiratory tract infections during the covid-19 pandemic in England likely due to the restrictions in place to reduce social contacts.
- The falls in lower respiratory tract infections during the covid-19 pandemic in under 5s may mean they have less immunity to respiratory viruses which may impact upon their future health service use.

Abstract citation ID: ckac129.052
Long-term immunity after HBV vaccine: shall we consider a change? A 20-year-follow-up study

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Introduction:

Although vaccines against HBV have been available since the 1980s, the long-term immunity is still debated. When assessing immune persistence, a number of clearly defined variables must be taken into account. Often the expression 'infant vaccination' means the administration within the first year of life at any age, but a difference of a few months may imply a different antibody persistence over the years. This study assessed the anti-HBs titre 20 years after the primary vaccination course and estimated the effect of age at 1st dose and time interval between doses on long-term protection.

Methods:

Data on age, sex and date of administration were collected. Inclusion criteria: born to negative mother, 3-dose schedule, no previous HBV infection, age at enrolment 18-24 years; age at 1st dose 2-12 months. Titres ≥10IU/l were considered protective. A logistic regression was performed, adjusting for sex, follow-up time and date of 1st dose and analysis.

Results:

We included 5,485 participants (64% female). The mean anti-HBsAg increased from 46, 52, 85 to 193IU/l when the 1st dose was administered in the I, II, III or IV trimester of life, respectively. Similarly, the proportion of individuals with titre <10IU/l decreased from 51 to 18% between the two extreme quarters. The risk of a titre <10IU/l decreased with age at the

1st dose (AOR: 0.84; 95%CI: 0.78-0.91 per one-month increase) and time between the 2nd and 3rd doses (AOR: 0.89; 95%CI:0.85-0.94).

Conclusions:

The mere presence of a titre <10IU/l does not equate lack of protection. However, antibody levels are very different depending on the actual age of vaccination. One-month delay within the first year is associated with a -18% chance of a titre <10IU/l 20 years later. Although this information needs to be combined with local epidemiology and surveillance to obtain an informed risk-benefit balance, the implications from a public health and economic perspective may be diverse and worth considering.

Key messages:

- Still within the first year of life, a delay in the administration of the 1st dose of HBV vaccine and a longer time between the 2nd and 3rd dose imply a higher antibody persistence even 20 years later.
- Considering the local circulation of HBV and surveillance, this result could be taken into account to obtain an informed risk-benefit balance.

Abstract citation ID: ckac129.053
Country-level social mobility and inequalities in adolescent health behaviours in 32 countries

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Background:

Higher family affluence is associated with healthier behaviours in adolescents, but the strength of this association varies across countries. Differences in social mobility at the country-level, i.e. the extent to which adolescents develop a different socioeconomic status (SES) than their parents, may partially explain why the association between family affluence and adolescent health behaviours is stronger in some countries than in others.

Methods:

Using data from adolescents aged 11-15 years from 32 different countries, participating in the 2017/2018 wave of the Health Behaviour in School-aged Children (HBSC) study (N = 185,086), we employed multilevel regression models with cross-level interactions to examine whether country-level social mobility moderates the association between family affluence and adolescent health behaviours (i.e. moderate-to-vigorous physical activity, vigorous physical activity, healthy foods consumed, unhealthy foods consumed, having breakfast regularly, weekly smoking).

Results:

Higher family affluence was more strongly associated with higher levels of physical activity in countries characterized by high levels of social mobility (cross-level interaction linear regression coefficient 0.34; 95% CI 0.08 to 0.60; p = 0.009 for moderate-to-vigorous physical activity, and 0.31; 0.11 to 0.50; p = 0.002 for vigorous physical activity). No cross-level interactions were found for any of the other health behaviours.

Conclusions:

Our findings suggest that differences in social mobility at the country-level may contribute to cross-national variations in socioeconomic inequalities in adolescent physical activity. Further research can shed light on the mechanisms linking country-level social mobility to inequalities in adolescent physical activity to identify targets for policy and interventions.

Key messages:

- This is one of the first studies to investigate country-level social mobility in relation to health equity. Inequalities in adolescent physical activity were steeper in socially mobile countries.
- Stronger efforts to engage adolescents from low-affluent families in physical activity may be necessary in countries characterized by high levels of social mobility.

1.O. Oral presentations: Mental health, conflict and violence

Abstract citation ID: ckac129.054
The longitudinal impact of social media use on adolescent mental health in the UK

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Background:

Cross-sectional studies have suggested a relationship between social media use and depression and anxiety in young people. We examined the longitudinal relationship between social media use and young people's mental health and the role of self-esteem and social connectedness as potential mediators.

Methods:

The sample comprised 3,228 young people from the UK Longitudinal Household Study (waves 1-10). Mental health at age 14 or 15 was measured by the SDQ Total Difficulties score. The number of hours spent on social media was measured at age 12 or 13. Self-esteem at age 13 or 14 was measured via eight questions and social connectedness was measured by two questions. Multilevel linear regression models explored whether social media use at age 12 or 13 predicted mental health at age 14 or 15. Path analysis with structural equation modelling investigated the mediation pathways.

Results:

In unadjusted analysis, for those who spent 7 or more hours on social media vs none, their mental health problems trended upwards by 3.87 (95% CI, 0.71-7.03) but this relationship was attenuated after including covariates. In unadjusted path analysis, more social media use was associated with lower self-esteem ($b = -0.10$, $p < 0.05$), which in turn was associated with more mental health problems ($b = -6.80$, $p < 0.001$). The indirect effect ($b = 0.70$, $p < 0.05$) showed that 68% of the effect of social media use on mental health two years later was mediated by self-esteem. This relationship was attenuated after adjusting for covariates and in imputed data, and social connectedness was not associated.

Conclusions:

This study shows the importance of longitudinal evidence, as we found there was little evidence to suggest a causal relationship between social media use and mental health issues two years later. Interventions that address social media use alone may not improve young people's mental health but those that consider factors like self-esteem may be more effective.

Key messages:

- Longitudinal data suggests there is limited evidence that high social media use causes poorer mental health in adolescents despite indications from cross-sectional analyses.
- Policy makers should consider that targeting social media use alone is unlikely to prevent poor adolescent mental health and factors like self-esteem may be more important prevention targets.

Abstract citation ID: ckac129.055

Conceptual views of mental health among adolescents in Sweden

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Background:

Lay and professional people may use terms for mental health and mental health problems differently, causing difficulties in adequately addressing associated needs. Despite the public health issue of increased mental health problems among adolescents, there is limited research on perceptions of mental health concepts among young people. This study aimed to explore conceptual views of mental health and mental health problems among adolescents.

Methods:

During October and November 2020, a total of 32 adolescents (15-18 years old) living on Sweden's largest island Gotland were interviewed in focus groups or individual interviews. The interviews were semi-structured and audio recorded. Data were analysed thematically according to Systematic Text Condensation.

Results:

Three themes emerged from the analysis: Mental health is about how we feel; One's mental health depends on one's situation, thoughts and ways of coping; and Mental health problems should be taken seriously and can get severe. The adolescents described mental health as an overarching concept encompassing both positive mental health and mental health problems. Mental health problems were perceived as something other than normal challenges in life, however ranging from minor problems to severe illness. Good mental health was understood as a condition with absence of mental health problems and presence of symptoms of positive mental health.

Conclusions:

The adolescents' had a complex and holistic understanding of mental health concepts, consistent with definitions used by the World Health Organization and Swedish authorities. They suggested both positive mental health and mental health problems to be considered when assessing and discussing their mental health. Further, the results highlight the need of support for young people on how to cope with difficulties in life and support for those suffering from minor mental health problems.

Key messages:

- The adolescents' understanding of mental health and mental health problems were highly consistent with current accepted definitions of the concepts.
- According to the participants, both positive mental health and mental health problems should be considered simultaneously to understand and address adolescents' mental health.

Abstract citation ID: ckac129.056

Help-seeking behaviors among survivors of intimate partner violence during pregnancy in 54 LMICs

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Background:

Intimate partner violence (IPV) experienced by pregnant women is pervasive worldwide. As survivors rarely seek help, there exists a paucity of research on their help-seeking behaviors. The present study provides a multi-national perspective into the nature of help-seeking behaviors among survivors of IPV during pregnancy.

Methods:

Population-based data from 54 LMICs were abstracted from the Demographic and Health Surveys Program between 2005 and 2020 (N = 359,027). Bivariate and multivariable logistic regression were used to analyze the extent to which - and from whom - survivors of IPV during pregnancy sought help and assess associated factors.

Results:

Half of respondents (51.87%) sought help following IPV while pregnant (ranging from 39.02% in Asia and Oceania to 63.18% in sub-Saharan Africa). Support was primarily obtained from informal contacts (44.02%), such as family, neighbors, and friends, and rarely from formal institutions (10.45%), such as law enforcement, social and medical services. Help-seeking behaviors were positively associated with higher education, employment, earnings exceeding that of their spouse, exposure to mass media, intimate partner's alcohol consumption, fear of their intimate partner, parental violence, richer wealth status, partner's controlling behaviors, and facing barriers to access health care. Conversely, being married, and justifying wife beating were negatively associated with help-seeking.

Conclusions:

The research findings highlight the need for interventions, ranging in scope from the individual to familial and societal levels, to increase and improve help-seeking opportunities for IPV survivors. Efforts should be made on strengthening women's decision-making capacity, reducing poverty, ensuring educational attainment, improving employment opportunities, disseminating information about help sources, IPV screening within health care, and promoting the diffusion of gender equality by engaging communities as a whole.

Key messages:

- IPV during pregnancy is still pervasive in LMICs, and only half of survivors seek help. Women's individual, partner's/family's, and community's factors are associated with IPV survivors' help-seeking.

- The research findings highlight the need for interventions, ranging in scope from the individual to familial and societal levels, to increase and improve help-seeking opportunities for IPV survivors.

Abstract citation ID: ckac129.057

Young men's gambling and violence perpetration in Mwanza, Tanzania

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Background:
The prevalence of intimate partner violence (IPV) in Tanzania is one of the highest in the sub-Saharan African region. Studies have shown that traditionally ''manly'' behaviours, such as risk-taking, are at the root of IPV perpetration. Only few studies investigated the co-occurrence of gambling and IPV, and none from LMICs.

Methods:
Cross-sectional survey data of 1002 men aged 18-24 from Mwanza, Tanzania were analysed. Physical, sexual, emotional and economic IPV perpetration were measured using acts-based questions. Gambling was assessed through a question on whether the man bet or spent money on gambling or gambling machines. Consequences of gambling behaviours were assessed through four further questions. We conducted multivariate logistic regressions to control for potential confounders.

Results:
21% of the men in the sample confirmed they had bet or spent money on gambling in the previous 12 months; the prevalence raises to 24% for men who had been in a relationship in the previous 12 months (N = 755). Of these, 23% had ever perpetrated physical IPV, 29% sexual IPV, 56% emotional IPV and 37% economic IPV in their lifetimes. Of those who gambled, 24% had ever perpetrated physical IPV, 46% ever committed sexual IPV, 66% emotional IPV and 45% economic IPV. Gambling was statistically significantly associated sexual IPV (aOR: 2.39; 95% CI: 1.66-3.45) and emotional IPV (aOR: 1.48; 95% CI: 1.03-2.14) even after controlling for age, alcohol use, depressive symptoms and suicidal ideation. Gambling was not associated with physical and economic IPV after adjusting for those confounders.

Implications:
The analysis shows that young men's practice of gambling is an additional risk factor for IPV perpetration that needs to be addressed. More research is needed to understand how current prevention efforts can be expanded to include problem gambling treatment to curb the incidence of IPV and give couples conflict resolutions skills for issues that might arise from gambling.

Key messages:
- Problem gambling has so far remained vastly under-researched in violence research.
- Gambling as well as drinking were associated with increased odds of physical and sexual IPV perpetration.

1.P. Skills building seminar: Taking the elevator pitch to the next level: how to convince a policymaker in less than 2 minutes

Abstract citation ID: ckac129.058

Organised by: EUPHA
Chair persons: Maaike Droogers (EUPHA), Monica Brînzac (EUPHAnxt)
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Since a number of years the European Public Health Association (EUPHA), the European Public Health Conferences and other organisations have been working hard to translate the evidence in a such a format that policymakers take notice. For example, the WHO Regional Office for Europe works on 'telling the public health narrative' and provides factsheets and infographics, in order to effectively communicate public health messages to policymakers. At the European Public Health Conference so-called pitch presentations were introduced (at Glasgow 2014), where researchers are asked to present their work in 5 minutes with maximum 5 slides (no animations), as a way to learn to present key messages from research in just a few minutes. EUPHA has organised several skills building workshops on translation of evidence in the past years, including the 2019 session 'making the elevator pitch work', then in 2020 'making the elevator pitch more effective', and last year 'making the elevator pitch perfect'. Building forward on those three successful and well-attended workshops, the current workshop will follow up on this series and dive deeper into communicating the evidence through the elevator pitch. Lessons learned at the previous elevator pitch workshops:
– Have a clear ask (keep it simple).
– Appeal to the policymaker's own interests and priorities.
– Spell out how action will be beneficial for the policymaker.
– Be aware of upcoming elections.
– Built a relationship with the assistants of politicians.
– Considering the 'policy window'.
– Make the comparison with the policy plan.
– Propose an action the politician should undertake.
– Identifying the relevant stakeholders and groups affected by the problem.
The importance of effectively communicating the evidence to policymakers is highlighted by infodemics, e.g. called out by the WHO and UN in the context of the COVID-19 pandemic with the spreading of mis- and disinformation about the pandemic. Considering the physical distancing measures that were in place the past years, which made teleworking (working from home) more common, the workshop will also cover virtual tactics. Communicating the science in an increasingly virtual world has made it a whole different kind of sports. In this skills-building workshop, we will select a number of abstracts that have been accepted by the International Scientific Committee as posters and we will invite the presenting authors to this dare: Present your work and key messages in less than 2 minutes. In order to see whether the policymaker/politician is convinced, we are organising a small panel of policymakers and politicians and ask them to give their feedback. Are they interested? Do they remember the key message? And if all goes well, do you get an invitation to come back and present more of your work?

Key messages:

- Being able to present your key messages anywhere, anytime is needed (including virtual tactics).
- Telling the public health narrative and telling a story are important skills for public health professionals to have.

Speakers/Panellists:
Marleen Bekker
EUPHA (PHPP)

1.Q. Workshop: Summarising research evidence related to COVID-19 impact

Abstract citation ID: ckac129.059

Organised by: PHIRI
Chair persons: Maria João Forjaz (Spain), Paulo Nogueira (Portugal)
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After the first SARS-CoV-2 infections surge in late 2019, and its spreading worldwide, COVID-19 rapidly became a pandemic by March 2020. Facing a new public health crisis, the scientific community deployed research efforts to study this new disease, generating a large amount of scientific evidence in a very fast way. This research was developed in several directions, for instance, describing how COVID-19 impacts the population's health and well-being. Specifically, the research aimed at describing and evaluating the risk factors either for being infected or evolving toward adverse outcomes, such as hospitalisation or death. Moreover, the effectiveness of implemented public health measures was assessed since countries' governments rapidly implemented them to mitigate the pandemic.Therefore, several literature reviews have been performed within the European Project 'Population Health Information Research Infrastructure (PHIRI)' to summarise and share the published COVID-19 evidence through a health information portal, where researchers and other stakeholders can exchange best practices and expertise. This workshop aims at sharing the collaborative work and experience of a large group of European researchers within the PHIRI consortium, consisting in preliminary results and lessons learnt with the scientific community. The workshop format consists of five presentations by PHIRI members, each one presenting their literature review work, followed by a discussion among the presenters and with the audience. The first workshop presentation will describe the methodological aspects of research conducted to assess the COVID-19 impact on the population's health and well-being, including research methods and statistical methods. The subject for the second talk will show a representative sample of health indicators used to evaluate the direct impact of COVID-19 in the scientific literature. The third presentation will elaborate on a short and long-term impact of COVID-19 crisis on population with frailty, multimorbidity or with different socioeconomic status; evidence derived from systematic literature reviews of population-based studies. The fourth presentation will describe the effectiveness and impact of tracking COVID-19 patients using digital contact tracing tools. The last presentation describes the methodological aspects of a systematic literature review conducted to gain an overview of the foresight studies that have been done throughout the World about COVID-19.

Key messages:

- During the pandemic, a literature reviews provide an important tool to summarise the large amount of scientific evidence that was generated.
- This workshop aims at sharing the collaborative work and experience of a large group of European researchers participating at PHIRI, the results and lessons learned with the scientific community.

Abstract citation ID: ckac129.060
Looking for methodologies and data pathways used in research to assess the COVID-19 impact: a scientific literature review

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COVID-19 spread worldwide after the surge of a novel coronavirus infecting humans in late 2019, rapidly becoming a pandemic in early 2020. Then, the scientific community started studying SARS-CoV-2 infection to address the uncertainties around the impact of this new disease on the population health and sustain public health measures to mitigate it. As a result, the research on COVID-19 proliferated fast, and the number of related records also multiplied in research databases. By November 2020, one year after starting the outbreak, PubMed counted more than 80 thousand records, which had already tripled by April 2022. Facing that large body of research, the PHIRI WP5 team deployed a literature review to identify research methods and the research paths from the generation and collection of data used to assess the COVID-19 impact on the population's health and well-being. Consequently, this work aims to describe the evidence gathered according to the location where the research was conducted, its design and statistical methods used to analyse the COVID-19 impact. Therefore, the sample of COVID-19-related records indexed in the PubMed database until November 2020, which concomitantly matched the "data" search term, was considered. As a large sample was retrieved (19837 records), automated text analysis and text mining methods were considered to summarise the information. Then, titles and abstracts were screened for inclusion, and more than half of the initial sample was excluded. The main reasons to exclude were not using original data, not being related to the assessment of the impact of COVID-19 on the population's health or well-being, or not having complete information on the title and abstract. This work is intended to highlight gaps in the evidence on the COVID-19 impact on the population's health and well-being, leading to further research that could enhance the countries' preparedness for future pandemics.

Abstract citation ID: ckac129.061
Review of direct impact health indicators of COVID-19 in the scientific literature published between January 2020 and June 2021

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Background:

The Joint Action Population Health Information Research Infrastructure (PHIRI) seeks to create infrastructures to generate quality data on the COVID-19 pandemic between European countries. The aim of this study is to present a synthesis of health indicators used to evaluate the direct impact of COVID-19

Methods:

Scoping review using a common search strategy in Pubmed, Embase and WHO Covid-19 databases. Health indicators of direct impact of COVID-19 were obtained from observational studies in the general population, hospitals and long-term care facilities from papers published worldwide in English between 01/01/2020 and 06/31/2021. Titles and abstracts were screened first by 15 reviewers using the Rayyan tool. Any discrepancies were solved by agreement between reviewers. Then, articles containing indicators of direct impact were selected in a full-text reading phase. Of them, a random sample of 35 was drawn and their indicators were described.

Results:

After eliminating 262 duplicates 3891 records were reviewed. Screening discarded 3171 abstracts. Of 720 articles sought for retrieval, 445 met inclusion criteria for indicators extraction. In a sample of 35 papers (8.1%), 116 direct impact indicators of COVID-19 were identified. 28 morbidity indicators were found, classified as indicators of prevalence (n = 15), incidence (6), transmissibility (4) and underreported infection (4); 32 of mortality (mortality rate, 9; case fatality rate, 17; time to death, 2); and 54 for severity (complications, 27; mechanical ventilation, 12; hospitalization, 8; requiring ICU admission, 1; time from hospitalization to ICU admission, 1). Two composite indicators of severity and mortality were also identified.

Conclusions:

According to the scientific literature, a wide variety of health indicators has been used to measure the direct impact of COVID-19. The systematization of indicators used in the current COVID-19 pandemic could help for future health crises management.

Abstract citation ID: ckac129.062
Etiologic and prognostic roles of frailty, multimorbidity and socioeconomic characteristics in the development of SARS-CoV-2 infection and related severe health outcomes: systematic reviews of population-based studies

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The study had 2 objectives, to: 1) evaluate the etiologic roles of frailty, multimorbidity and socioeconomic status on SARS-CoV-2 infection probability, hospitalization, intensive care unit (ICU) admission, mechanical ventilation and COVID-19 related mortality; 2) investigate the prognostic roles of mentioned risk factors on the likelihood of hospitalization, ICU admission, mechanical ventilation, COVID-19 mortality, functioning, quality of life, disability, mental health and work absence. Three systematic reviews were performed, for each risk factor. The reviews shared first screening steps relying on a common population-based approach. Initial search took place on 7 April 2021 in PubMed, Embase, PsycINFO and WHO Covid-19 database. An update was performed for frailty only, on 1 February 2022, due to the scarce literature retained initially. Prospero registration number: CRD42021249444. Initial search retrieved 10 139 records; 411 studies were read in full text. An update for frailty retrieved 565 records. Finally, the total number of included studies was: for multimorbidity, objective 1 N = 2, objective 2 N = 13; frailty, objective 1 N = 2, objective 2 N = 3; socioeconomic characteristics, objective 1 N = 57, objective 2 N = 30. The risk of severe short-term outcomes such as mortality, ICU admission or hospitalization increased with increasing disease burden and socioeconomic deprivation. Literature on long-term impacts was not identified. The evidence indicates a dose-effect association across all risk factors and outcomes. There is a lack of work conducted on population-based representative samples accounting for frailty and multimorbidity. Measures of multimorbidity and frailty were heterogeneous between studies. Most of the studies observing socioeconomic determinants were performed in the USA and the UK; hence the need for more research in different contexts. Further evidence is required in order to estimate the impact of crisis among general population.

Abstract citation ID: ckac129.063
Systematic review on digitals tools used for contact tracing of COVID-19 patients: interim results

Brigid Unim

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Background:

Contact tracing is a public health intervention implemented in synergy with other measures, such as testing, physical distancing, and vaccination, to curb the COVID-19 pandemic. Digital solutions have been developed worldwide to enhance the contact tracing process. The aim of the study was to evaluate the effectiveness and impact of tracking COVID-19 patients using digital tools.

Methods:

A systematic literature review was performed on eight online databases to identify observational studies on digital contact tracing, published 2020-2021, in English. Studies identified through the ‘Population Health Information Research Infrastructure’ project were also included. An ad hoc form has been deployed for data extraction of relevant information. Quality assessment of the included studies will be performed using validated tools.

Results:

Over 8000 records were identified, of which 27 met the inclusion criteria: 16 modelling and 11 population-based studies. A study was based on GPS technology, four were Bluetooth-based, and others used digital technologies and manual tracing. The uptake rate of the tools ranged 19-100% across the studies. Most studies compared digital contact tracing with other strategies (e.g., no intervention, lockdown). Digital contact tracing was associated with improved identification of contact persons (9 studies), reduction of the effective reproduction number or covid-19 infections (8 studies), and increased effectiveness in combination with other containment measures (9 studies). Security and privacy issues were considered in 8 studies.

Conclusions:

Digital contact tracing contributes in reducing further transmission, especially with sufficient population uptake of the applications and in combination with other public health measures. However, its deployment has been limited by security and privacy issues. Further studies are required to investigate the combined impact of digital and conventional contact tracing and enhance privacy and security.

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Foresight and Preparedness Studies on COVID-19 in the World: A Systematic Literature Review

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A foresight study refers to a broad range of methodologies to describe possible futures. Also, foresight can be described as 'a university human capacity that allows people to think ahead and consider, model, create and respond to future eventualities' (Foresight International, 2006). Foresight studies in public health are research tools to support the understanding of possible future developments, which is essential for policy makers to anticipate and possibly influence trends. Therefore, we aimed at providing an overview of COVID-19's foresight activities across Europe and beyond. A systematic literature review was conducted following Preferred Reporting Items for Systematic Reviews and Meta-Analysis Methodology. The databases searched were Scopus and Web of Science Core Collection and the literature screening was conducted through March 2022. The exclusion and inclusion criteria were previously defined by the team and all the results had to be journal papers, published between 2019-2021 (except for "Foresight" query that was between 2015-2021) and written in English or Portuguese. The documents collected were only about Population Health and Non-Pharmaceutical Approaches. Among the topics under study (foresight, scenarios, modelling and preparation) it was possible to collect 9 550 articles. After removing duplicates and filtering out those that did not meet the inclusion criteria, 2 434 articles were selected for analysis. The literature review revealed that a large number of studies on the pandemic of COVID-19 have already been conducted using predictive methodologies, but that the focus of attention is on analysing how countries are prepared for the pandemic and what direction it will stat using mathematical modelling methods (e.g. in the short term). This study highlights the importance of predictive studies and that their use needs to be well-founded and cohesive if the conclusions drawn are to have impact and value in the future.

2.A. Round table: From Ebola to COVID-19: lessons learned from health systems strengthening efforts and system shocks

Abstract citation ID: ckac129.065

Organised by: Robert Koch Institute
Chair persons: Johanna Hanefeld (Germany), Hanna-Tina Fischer (Germany)
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Five years after the devastating Ebola outbreak in West Africa, the health systems in Guinea and Sierra Leone are facing a new shock with the advent of the COVID-19 pandemic. After the Ebola outbreak, countries of the European Union including Germany played a major role in responding to Ebola in these countries and in strengthening their health systems. Guinea, Liberia and Sierra Leone received 115 million Euros combined, in terms of development assistance for health dedicated to health system strengthening and sector wide approaches. For these countries that are now facing the COVID-19 pandemic, the situation is ideal to assess how well health systems have absorbed the current pandemic, and reflect on the effectiveness of health system strengthening interventions received. The objectives of the workshop are two-fold: 1, to illustrate the extent to which health systems in Guinea and Sierra Leone were able to absorb the demands of the COVID-19 pandemic whilst continuing the ongoing delivery of essential health services; 2, to provide German and European policy makers with evidence relating to the effectiveness of investments that have been made over the last half-decade in strengthening health systems following the 2014 Ebola outbreak. To achieve this, three 10-minute presentations will be made followed by a 30-minute moderated discussion between the speakers and with the audience. In the first presentation, Dr Charbel El-Bcheraoui will provide insight into the scope and scale of health system strengthening interventions that were implemented in Guinea and Sierra Leone after the Ebola outbreak, and will describe a research project that was carried out to assess the impact of the COVID-19 pandemic on health systems in these two countries. In the second and third presentations, Prof Alexandre Delamou and Dr Abdul Mbawah evidence will be shared from Guinea and Sierra Leone respectively on the impact of COVID-19 on the health systems. Malaria will be used as a case study as is a leading cause of morbidity and mortality in both countries and it is a multifaceted disease that requires interventions through the whole spectrum of the health system, ranging from public health prevention activities like vector control, to delivery of treatment through health care services. Together, the three presentations will provide insights into the effectiveness of interventions implemented in the two West African countries to strengthen the capacity of the health systems to respond to new health emergencies. The subsequent 30-minute discussion will be chaired by Prof Johanna Hanefeld, Head of the Center for International Health Protection, Robert Koch Institute, Germany. It will focus on highlighting key issues that have been identified in the three presentations and on discussing specific recommendations that can be derived to improve health systems strengthening.

Key messages:

- Understanding how health systems responded to the COVID-19 pandemic illustrates what is needed now to make them more resilient to future shocks.
- Learning from what was done to strengthen health systems in past outbreaks will improve the effectiveness of future health system strengthening interventions.

Speakers/Panellists:

Charbel El Bcheraoui
Robert Koch Institute, berlin, Germany

Alexandre Delamou
University Gamal Abdel Nasser, Conakry, Guinea

Abdul Mbawah
COMAHS University of Sierra Leone, Freetown, Sierra Leone

2.B. Round table: Rethinking innovation systems to meet the challenges of AMR: Lessons from the Covid-19 pandemic

Abstract citation ID: ckac129.066

Organised by: RAND Europe and the European Observatory on Health Systems and Policy
Chair persons: Sonja Marjanovic (UK), Sarah Parkinson (UK)
Contact: smarjano@randeurope.org

Innovations have always been essential to solving our most pressing public health issues - from diagnostics to vaccines, to various therapeutics including antimicrobials. The ability of innovations to improve public health depends on the wider healthcare innovation systems that frame their development, uptake and diffusion. These innovation systems are made up of diverse actors including researchers and innovators in the public sector and industry, regulators, international bodies, not-for-profits, investors, healthcare professionals and patients and the public. However, the needs and interests of these diverse actors do not always align, nor do innovations systems always align with societal needs, particularly where there are market failures. Antimicrobial resistance (AMR) is an example of a public health issue that is challenging to solve within existing innovation systems, as incentive structures for developing and (not inappropriately) using antimicrobials are not sufficient to address the threat of growing resistance. In this workshop, we will facilitate a discussion of how innovation systems can be rethought to better align with societal needs, with a specific focus on how learning from the Covid-19 pandemic may be applied to innovation in response to the ‘‘silent pandemic’’ of AMR. This type of discussion matters greatly for tackling one of the most pressing public health challenges of our time and for harnessing the potential for timely learning and action. This panel discussion is co-hosted by RAND Europe and the European Observatory on Health Systems and Policy. Researchers from RAND Europe will first introduce the session and present key insights from their recent research on AMR-relevant innovation and lessons from the Covid-19 pandemic. This will provide the foundation for a panel discussion in which panelists will share their expertise and views on what lessons from the Covid-19 response mean for AMR and how these lessons can be feasibly applied to AMR-relevant innovation. Some areas for reflection include economic push and pull incentives, regulation, surveillance, data-sharing and data linkage, public-private collaboration, awareness raising and political will. Throughout the session, we will encourage participation from the audience and will ask participants to identify relevant questions in small groups at the beginning of the session. In bringing together diverse voices (on the panel and in the audience) that approach the innovation system from different angles, we hope to build an understanding of how the innovation system and mechanisms by which it operates can work better for everyone and tackle the urgent societal challenge of AMR, as well as explore whether any of the insights gained may apply more widely to other pressing public health challenges where there are market failures.

Key messages:

- Participants will gain a better understanding of how aspects of the Covid-19 response may be transferrable or adaptable to AMR-relevant innovation and how this can be achieved in a timely manner.
- Participants will identify needs for further research, policy and action to support innovation systems that are more responsive to AMR needs and potentially also to other public health challenges.

Speakers/ Panellists:
Sonja Marjanovic
RAND Europe, Cambridge, UK

Sarah Parkinson
RAND Europe, Cambridge, UK

Nick Fahy
RAND Europe, Cambridge, UK

Dimitra Panteli
European Observatory on Health Systems and Policies, Brussels, Belgium

Michael Anderson
London School of Economics and Political Science, Birmingham, UK

2.C. Oral presentations: Comparitive public health analysis

Abstract citation ID: ckac129.067

Measuring health expectancy in the European Union

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Background:

Healthy life expectancy (HLE) is a population health measure that combines mortality and morbidity, which can be calculated using different methods. In this study, we aimed to assess the correlation, reliability and (dis)agreement between two estimates monitored in the European Union (EU), that is, the European Commission’s HLE based on self-perceived health (SPH-HLE) and the Institute for Health Metrics and Evaluation’s HLE based on disability weight (DW-

HLE), by sex, and comparing these results with LE and proportion of life spent in good health (%GH).

Methods:

We performed a retrospective study in the EU28 countries, between 2010 and 2017. The HLE methods differ in definition, measurement and valuation of health states. While SPH-HLE relies directly on one question, DW-HLE relies on epidemiological data adjusted for DW. Spearman's r, intraclass correlation coefficient, information-based measure of disagreement and Bland-Altman plots were used to assess reliability, correlation and disagreement in HLE resulting from both methods and in LE or %GH measured by both institutions.

Results:

Correlation and reliability between SPH-HLE and DW-HLE were good (better for males), with low disagreement, and were even better for LE between both institutions. The HLE Bland-Altman plots suggest a variability range of approximately 6 years for both sexes, higher for females. There was also an increasing HLE difference between methods with higher average HLE for both sexes.

Conclusions:

We showed wide variations between both methods with a clear and different high impact on female and male HLE, showing a tendency for countries with higher health expectancies to yield larger gaps between SPH-HLE and DW-HLE.

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Key messages:

- Different methods for evaluating health expectancy lead to significantly different results.
- There is a systematic tendency with countries with higher health expectancies to yield larger gaps between SPH-HLE and DW-HLE.

Abstract citation ID: ckac129.068
Barriers and facilitators to healthcare access for homeless people in four European countries

Tobias Schiffler

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Background:

People experiencing homelessness (PEH) have higher prevalence of adverse health outcomes and premature mortality compared to the general population, and often experience significant barriers in accessing healthcare services. This study aimed to better understand the health needs of PEH, as well as to identify the barriers and facilitators to their timely and equitable access to health services from the perspective of PEH and relevant health professionals and social care workers.

Methods:

During autumn 2021, a cross-national qualitative study was conducted within the framework of the Horizon 2020 funded CANCERLESS project. Semi-structured interviews were conducted across four European settings (Austria, Greece, Spain and the UK). Interviews were audio-recorded, transcribed verbatim and analyzed according to the inductive thematic approach set out by Saldaña (2021).

Results:

In total, 69 interviews were completed with a sample comprising 15 professionals working in homelessness support services, 19 health professionals, and 35 PEH. Three overarching themes relating to the research question were identified: (a) Health needs of people experiencing homelessness; (b) Barriers to access healthcare services and (c) Facilitators to access healthcare services. Overall, the general health of PEH was depicted as extremely poor and mainstream health services were portrayed as ill-equipped to respond to the needs of this population, with many organizational and system-level barriers noted. Tailored approaches to care, and in particular involving trusted professionals in the delivery of care, were identified as a key strategy for overcoming existing barriers.

Conclusions:

While a number of context-specific findings were identified, results indicated there to be a high degree of overlap and consistency in the health needs of PEH, and in the barriers and facilitators that exist when accessing healthcare across four different healthcare systems.

Key messages:

- Homelessness is a determinant of health that is linked to poor health outcomes. Tailored approaches that draw upon trusting relationships have the potential to overcome this problem.
- The array of identified barriers indicates that general healthcare services are not currently structured in a way that facilitates timely and equitable access and appropriate care for PEH.

Abstract citation ID: ckac129.069
Barriers to access cancer prevention services for the homeless population in four European countries

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Background:

People experiencing homelessness (PEH) are known to have increased burden of cancer and higher cancer-related mortality when compared to the general population. These outcomes are linked to a variety of etiological factors, as well as the existence of significant barriers in accessing cancer prevention services. The aim of this study was to better understand current practices and knowledge relating to cancer prevention among PEH, health professionals and social care workers.

Methods:

During autumn 2021, a cross-national qualitative study was conducted within the framework of the Horizon 2020 funded CANCERLESS project. Data were collected in Austria, Greece, Spain and the UK through semi-structured interviews. Interviews were transcribed verbatim and thematically analyzed in accordance with the approach set out by Saldaña (2021).

Results:

In total, 69 interviews were conducted with a sample comprising 15 professionals working in homelessness support services, 19 health professionals, and 35 PEH. Two overarching themes relating to the research question were identified, namely (a) experiences and understanding of cancer prevention and treatment, and (b) considerations for program intervention. While cancer was a major source of concern, tailored cancer prevention programs for the homeless population were described as effectively non-existent, and very few homeless participants recalled being invited to a screening appointment. Health professionals also indicated that because of barriers to health care, opportunities for the early diagnosis of cancer among PEH were often being missed.

Conclusions:

The results indicate that PEH have limited knowledge around the importance of cancer prevention programs, and that more focused input on the part of health and social care services is required in this area. Culturally sensitive and person-centered approaches should be adopted to facilitate access to cancer prevention for PEH.

Key messages:

- Specialized cancer prevention and health care pathways that take account of the living conditions and support needs of PEH should be established to improve health and cancer-related outcomes.
- Cancer prevention programs should focus on improving health literacy by using accessible and tailored approaches, both for PEH and those that work directly with the homeless population.

Abstract citation ID: ckac129.070
Trans* people's access to gender-affirming health care: A European comparison

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Background:

Trans* people's life satisfaction is correlated with established legal frameworks for gender recognition and access to trans*-specific health care (Transgender Europe [TGEU], 2021). TGEU's guidelines to human rights-based principles of trans*-specific health care highlight bodily integrity/autonomy, free self-determination of gender, quality, specialized and decentralized care, and the right to determine reproductive paths as important pillars of gender affirming health care. We conducted a policy comparison across Europe regarding access to gender-affirming health care to assess how adherence to human rights-based principles could be strengthened.

Methods:

We compared access to health care across four main domains: legal framework (e.g., legally recognised genders), insurance coverage (e.g., out of pocket costs), access barriers (e.g., legal requirements to access gender-affirming surgery), and health care offers (e.g., hormone replacement therapy). Criteria were developed in guided brainstorming sessions. Three researchers rated 28 countries across 28 items based on available policy documents.

Results:

The majority of European countries prescribes a medicalised gender-affirming process rather than a self-decided process. Psychiatric diagnosis is also required in most countries to access gender-affirming health care. Gender-affirming health care is partly financed by statutory health insurance in most of the countries. Not all countries authorise full gender-affirming health care. Especially where statutory health insurance-covered gender-affirming health care relied centralised on single outpatient clinics or hospitals, waiting times between 6-24 months are found.

Conclusions:

Many European countries fail to fully comply with TGEU's guidelines to human rights-based principles of trans* health care. Given the negative impact of access barriers on life satisfaction, European countries should target these shortfalls in ensuring gender-affirming health care.

Key messages:

- Non- or only partly covered trans* health care contributes to health inequality.
- Regarding trans* people, European countries need to strengthen human-rights based access to gender-affirming health care.

Abstract citation ID: ckac129.071
A longitudinal study of how disability has affected survival in Swedish populations across 150 years

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Background:

Studies from across the world report that disability jeopardizes people's health and increases the risk of premature death. The trend has been demonstrated in present-day populations but there has been little research about whether disability affected survival in historical populations. Our objective was to identify long-term developments in the relationship between disability and survival.

Methods:

We focused on all causes of mortality in ages 25-42 among groups with any type of disability in Swedish populations in the 1800s, 1900s and 2000s. We used Cox proportional regression and longitudinal micro-level data, measuring both relative differences (HRs) and absolute differences (excess LYL) in premature mortality, across time by disability status and sex.

Results:

Although the overall mortality declined profoundly in Sweden during the centuries studied, the strong association between disability and premature mortality persisted, generating a significant disability-survival gap that has held since the 1800s. The absolute difference in this gap narrowed only slightly during the 1900s, from excess LYL due to disability for men of 1.67 (CI 0.17-3.44) in the 1800s, to 0.69 (CI 0.54-0.85) in the 2000s, while for women the change was even smaller, from 1.24 (CI -0.46-3.12) to 0.59 (CI 0.43-0.69). However, the relative difference widened, particularly for women, from HR of 2.46 (CI 0.91-6.70) in the 1800s to HR 12.00 (CI 9.88-14.60) in the 2000s. For men we found a change in HR from 2.30 (CI 1.31-4.06) to 8.48 (CI 7.26-9.92).

Conclusions:

Our study is unique in providing comprehensive results about how disability has limited survival for more than 150 years. In Sweden, fundamental societal changes and extensive welfare provisions promoting equality in health and social wellbeing of all citizens have not been enough to improve the survival of younger generations with disabilities.

Key messages:

- The strong association between disability and premature mortality persisted from the 1800s to the 2000s.
- In Sweden, fundamental societal changes and extensive welfare provisions promoting equality in health have not improved survival of young adults with disabilities.

2.D. Workshop: The challenges of developing population health intervention research in cancer health promotion

Abstract citation ID: ckac129.072

Organised by: French National Cancer Institute
Chair persons: Jérôme Foucaud (France)
Contact: afguillemin@institutcancer.fr

As the leading cause of death in Europe and the second leading cause of death in North America, it is known that about 40% of cancers are preventable. Until recently, it was considered that if we know the risk factor, then we can act on it: experience has shown that this knowledge is necessary but insufficient to know how to act. Population health intervention research (PHIR), a 'solution' science, addresses this challenge. It is concerned with the design, implementation, evaluation, adaptation, transferability and durability of interventions aimed at improving the health of populations, in order to produce valid knowledge with a high potential for social and health impacts. This scientific approach apprehends interventions as 'events in systems' and challenges the methodological hegemony imposed for many years by the biomedical sciences.

Today, the development of PHIR in health promotion in the domain of cancer faces three major challenges:
– Policy;
– Methodology;
– Transferability.

Three complementary presentations are proposed, each of which will respond directly to these challenges and each of which will be based on concrete examples of implementation in the domain of cancer. The aim of this workshop is to offer a time for exchange and discussion on the challenges to be met in developing PHIR in health promotion, in the domain of cancer and at all stages of the disease, as an innovative model of research within an innovative paradigm shift. It will enable participants to clarify their conceptions of PHIR for the advancement of health promotion in oncology and to evolve these concepts in relation to these three key issues. An interactive format is proposed, including time for discussion based on participants' perceptions and time for presentations.

Key messages:

- PHIR: an effective scientific approach and a relevant tool for thinking about and developing health promotion policies in the field of cancer.
- a new research paradigm for cancer control based on intervention with populations to act on health determinants.

Abstract citation ID: ckac129.073
Intervention research in health promotion: policy issues, the example of the ten-year cancer strategy in France

Jérôme Foucaud

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Prevention research covers a wide domain of studies, including identification of unknown risk factors for certain cancers, for example prostate cancer; or health promotion with approaches by population, by living environment or by territory. This research focuses in particular on identified carcinogenic factors (e.g. tobacco, alcohol, certain pesticides) but also on the causes of the prevalence of these factors in certain populations. PHIR makes it possible to meet these challenges. In 2010, the French National Cancer Institute was a pioneer in the development of PHIR in France and decided in 2021 to make it one of the spearheads of its ten-year strategy. This presentation will aim to give an account of this policy of developing RISP as a relevant tool for thinking about health promotion policies and actions, by targeting the issue of inequalities as one of the priority research objects as well as certain audiences (young people, vulnerable populations). The presentation will discuss four challenges for the implementation of this research policy: the development of the French scientific community in order to be able to respond to priority issues; the structuring and animation of this community; the evaluation of research projects and the mobilisation of a still timid global community; the articulation of academic and concrete/experiential knowledge. Through a concrete example of a national research development policy, the aim of this presentation is to help participants understand the challenges of RISP (its obstacles and levers, not limited to financial issues), the organisation of research, and the links between the actors involved (researchers and field workers, beneficiaries, health professionals). The first part will focus on identifying the participants' representations of the obstacles to the development of RISP. The second part will be an interactive presentation of 12 minutes, the last 2-3 minutes will be devoted to final questions.

Abstract citation ID: ckac129.074
Intervention research in health promotion: methodological issues

Anne-Fleur Guillemin

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Intervention research in population health focuses on actions carried out by researchers in partnership with those involved in the intervention: health professionals, patients, carers, public policy makers and population communities. The diversity of actors shapes PHIR projects, testifies to the richness of this research and gives it a privileged place to analyse and intervene as accurately as possible in different contexts and populations. It also implies the need for a better understanding of how to intervene by considering the determinants of health in these interventions. PHIR in health promotion in the domain of cancer thus proposes a paradigm shift from describing the problem and its causes to intervention. RISP bases its theoretical anchors on the one hand on the contributions and models of public health, health promotion and human and social sciences and on the other hand, on its own contributions to theorise and build its own theoretical and methodological corpus. This presentation will aim to clarify this paradigm shift and five methodological challenges of PHIR: the imperialism of epidemiology as a research model; the evaluation models of PHIR and their polymorphism; the complexity of the objects of study; the partnership dynamics between researchers and field actors without which research cannot be carried out. Finally, the challenges of publication and valorisation of this type of research. Through concrete examples, participants will be invited to understand the challenges of the RISP methodology, and to analyse different concrete perspectives to address them. The first part will focus on identifying the participants' representations of the methodological difficulties of PHIR. The second part will be an interactive presentation of 12 minutes, the last 2-3 minutes will be devoted to final questions.

Abstract citation ID: ckac129.075
Intervention research in health promotion: transferability issues, from project to structuring

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The work carried out in intervention research has revealed the complexity of health interventions, particularly in health promotion. Even if these interventions are in themselves complex systems interacting with their context or 'intervention systems', PHIR is making considerable progress in understanding the mechanisms thus revealed, a key element for their transferability, which is an essential issue in public health.Transferability assesses the extent to which the outcome of a successful intervention, evaluated in one context, can be achieved in another context. It is through the concrete example of the interventional research that has made it possible to evaluate the transferability of the project 'P2P, peer action for the prevention of smoking among high school students in vocational training'', that the issues presented in the two previous presentations will be analyzed. Using the example of this transferability study, which aimed to assess whether the P2P programme developed and conducted in the south of France is transferable to other regions and under what conditions, participants will be invited to analyse the conditions of this implementation. Thus, the question of the reproducibility of the effectiveness results with a similar population but in a different geographical context, implying differences in the functioning of the intervening structures and the high schools involved, but also in the characteristics of the high school students targeted, will be examined. After the presentation of the project and its transferability in different spaces, an interactive debate will be organised on the challenges of transferability.

2.E. Workshop: The city of proximity: Accessible, Inclusive, Sustainable, Healthy and Salutogenic

Abstract citation ID: ckac129.076

Organised by: EUPHA-URB, EUPHA-ENV
Chair persons: Stefano Capolongo (EUPHA-URB), Marija Jevtic (EUPHA-ENV)
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According to the ''Urban Health Rome Declaration'' at European meeting ''G7 Health'' that defines the strategic aspects and actions to improve Urban, Environmental and Public Mental Health into the cities, and referring to the Agenda 2030 in which the 11th SDG argue about ''Sustainable Cities and Communities. Make cities and human settlements inclusive, safe, resilient and sustainable'', one of the most expressive syntheses of the challenging relationship between urban planning and Public Health is stated by WHO (2016): ''Health is the precondition of urban sustainable development and the first priority for urban planners''. Referring to the Healthy Cities & Urban Health definitions, we can consider Public Health not merely an aspect of individual health protection and promotion, but a collective condition, strongly influenced by the environmental context and by the strategies implemented by local Governments. The ''Health in All Policies'' strategy, clearly underlines how health depend by the quality of outdoor and indoor living environments. In this scenario, healthy living and the requirements for healthy places, infrastructure for the public good and Public Health, cycling, walking, disintegrating the role of polluting traffic from the urban environments, social vulnerability and equality are just a few aspects in complex puzzle when designing the urban spaces for healthy, active, walkable cities. The lockdown due to the pandemic has prevented travels, forcing many people to work at home and reducing the possibility of accessing services in the territory. This condition has further highlighted the importance of urban living areas capable of satisfying basic needs within a reasonably easy range of accessibility. The concept of the ''15 minutes city'' is a useful vision to represent the city of proximity, where it is possible to meet the needs for sustainable, fair, quality, and healthy living. This dimension of proximity can be central to formulating strategies to improve the quality of urban life. A place of proximity, therefore not only defined based on the physical characteristics and people's uses, but also based on the data collected from a public health perspective in which it is also possible to try to test different types of information and build the conditions to suggest suitable policies and projects. Aim of the Workshop - organized by the two EUPHA Section URB+ENV - it would like to be to build the capacity and knowledge between participants about the main topics and urban features capable to have relevant Urban Public and Environmental Health outcomes. Additional scope is to collected case studies and research experiences considered virtuous at the international level, analyzed in detail to highlight the main urban and architectural features of those healthy experiences and the related health outcomes, such as sedentary lifestyle reduction, increase of the attractiveness of places, reduction of air and noise pollution.

Key messages:

- Cities for people, promoting Urban Public Health, Environmental Health and active mobility, require optimization of public spaces for citizens and their activities.
- Case studies and research experiences to highlight the main urban and architectural features of those healthy experiences and the related health outcomes, such as sedentary lifestyle reduction.

Abstract citation ID: ckac129.077
Introducing walkable cities as a Public Health intervention

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COVID-19 pandemic yet again showed that health crises and epidemics are introducing urban planning as a public health response. Globally, we saw a renewed interest in urban environment and healthy living and the changes in urban environments which can make for a healthier living. Even before the pandemic, various urban concepts and models that take as basis a health-oriented, holistic approach are being implemented in many cities. To name a few: car-free centres or neighbourhoods, the so-called 'Superblocks', neighbourhoods with low-speed traffic, walkable and cyclable cities aiming at all amenities being easy reach so-called '15 Minutes city'. COVID-19 crisis only accelerated many of these initiatives and brought them to global level need and attention. Such interventions are being introduced to demotivate the use of polluting cars, to ease up and to promote healthy and active transportation such as walking and cycling. As a consequence, those interventions not only are hoped to lead to an increase in physical activity, but also better air quality, reduction of noise. Cities have accelerated urban transformations of the space for active transportation such as the introduction of more cycling lanes in their networks, transforming 'car' streets to mix use streets, etc. Particularly during the pandemic, the streets that were previously dominated by car use, parking lots, parking spaces, and car lanes have shifted their focus to the pedestrians, healthy and active mobility. Though, not so optimistic continuation of the speed of the changes in urban planning are seen at the end of the pandemic. It is still clear that spaces for people, spaces promoting mental health such as green spaces, green islands, green pedestrian streets and healthy mobility, are missing. Lockdown measures of reducing the car traffic and increasing the walkable spaces for citizens were primarily imposed to save public health but had one important co-benefit - improved air quality in many areas.

Abstract citation ID: ckac129.078
(Re)thinking the city of proximity for Salutogenic purposes

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As centres of population and human activities, nowadays urban environments are simultaneously the main cause of and solution to a growing number of health-related challenges. In this setting, COVID-19 pandemic has helped reiterate this and serves as a wake-up call and an opportunity to rethink the way we approach cities. Aim of this paper is to research what today seems the most promising urban model for long-term individual and global resilience: the "city of proximity", namely about inclusive walkable and cycling environments where people can access all basic destinations within reasonable times and distances from home. Therefore, urban proximity dimension, methodological approach and urban features and functions become the main subject of a quanti-qualitative matrix of comparison of five international case studies centred on the topic, by which it is possible to set out general criteria for such model, along with a methodology to measure all cities in its respect. As a result, residential density, functional mix, pedestrian surface, cycle routes, public transport stops, green areas, schools, cultural facilities, sport facilities, retail services and urban gardens make up the fix components of a comprehensive set of 11+n urban features, whose occurrence is investigated through GIS-based analysis within designated distance ranges, creating a comprehensive assessment framework that is adjustable to all urban contexts worldwide. In the end, the application of such framework to the city of Milan finally helps to validate its effectiveness in providing a picture of city-wide accessibility to proximity services, and in highlighting the value of integrated analysis in view of shaping public policies and informed planning choices which put health and sustainability at the centre.

Abstract citation ID: ckac129.079
The city of proximity (accessible, inclusive, sustainable, healthy & salutogenic): the case of Brussels Bourse, Grand-Place station

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The ecological dimension is expressed, among other things, in the matter of movement and the process of appropriation of local spaces. The creation of public space is oriented towards centralising and bringing exchanges closer together. It is a recognition of the ways of life of the individual who has become aware of the other essentials for human well-being. How does the proximity of multimodality and culture strengthen the urbanity? And how does it influence urban intensity, livability, health & the salutogenic approach of public space? The study investigates the quality of public mobility spaces through design, multimodality and sustainable planning by surveying the case of Bourse-Grand-Place station in Brussels. This transformation project is the subject of an empirical method using the material of recent research on urban design and professional practice. Falling within the scope of the "Cities for People" vision of the future, the design of this project integrates socio-cultural activities around the idea of "Station for People". A concept based on universal accessibility ensures that all individuals can access it. Thereafter, an evolving social economy programme promoted cycling through equipment, maintenance, recycling, training, innovation and the encouragement of cycling culture. The breakthrough of the innovative multimodal design process based on multidisciplinarity could become a helpful urban strategy, oriented toward making proximate neighbourhoods both residentially and practically attractive. The present article carries out an enquiry of how design and urban activities take part in strategies to improve the quality of the public spaces. It reveals some hints that could help urban practitioners when making decisions regarding the quality of an urban place and 'living together' oriented developments. With a contribution to climate change issues, this article demonstrates how urban design can contribute to the quality of life of users and citizens.

Abstract citation ID: ckac129.080
Environmental health perception by Brussels inhabitants: comparison between a top-down raising awareness and citizen science

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The effects of the environment on health are well documented and prove to be a real public health problem. It is therefore essential to raise public awareness of these issues to induce preventive and protective behaviours. We focused on two methods: passive information transmission (top-down approach) and citizen science (bottom-up approach). The study aims to compare both approaches while raising awareness among Brussels citizens. We created two groups: a traditional awareness group, receiving infographics by email,

and a citizen science group, carrying out immersive activities with researchers. All enrolled participants filled out a questionnaire before and after. The ''top-down'' group (n = 137) received 3 infographics. The citizen science participants deep-dived into the environmental health body of knowledge, carried out individual measurements of air quality and noise pollution along a city walk and analysed, together, the results in groups to design actions. The citizen science sessions were finalised by a focus group. All sessions enjoyed and developed knowledge and awareness of environmental health. Accompanying citizens in developing knowledge was beneficial and required for environmental health empowerment. It showed the added value of citizen science in raising curiosity, creativity, and capacity building. The participants showed different socioeconomic statuses and demonstrated an appetite for understanding the exposures measured during the walks. Our results integrate several SDGs among those SDG4 and SDG3, since by raising awareness of participants, we enabled them to improve their capacities in becoming actors in their health. The risk of developing health problems related to the environment is higher in lower socio-economic groups, due to a greater vulnerability and the inequitable environment distribution between neighbourhoods. Pro-environmental behaviour fosters reduced exposure for now and future generations.

2.F. Skills building seminar: Health Data Pipelines: moving away from Excel to scalable, insightful and future-proof infostructure

Abstract citation ID: ckac129.081

Organised by: EUPHA-DH
Chair persons: Stefan Buttigieg (EUPHA-DH), Juan Rachadell (Portugal)
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Public Health Data Pipelines are critical in the implementation of scalable Digital Public Health projects as part of the reporting, evaluation and monitoring aspects of any public health intervention. The WHO Europe Programme of Work covering the period 2020 to 2025 puts an emphasis on ''developing big-data capacity in surveillance, modelling and policy monitoring''. This workshop will provide an initial insight into the world of Health Data Pipelines and will give you the necessary ingredients to get closer to establishing processes and systems that provide you the right information at the right time and context.

Key messages:

- Data Linking is critical in the transition between legacy systems and data sets based on decades old technology to reliable and robust information infrastructure (infostructure).
- Kicking off the necessary internal discussions to consolidate data and processes into health data pipelines do not require advanced technical knowledge.

Abstract citation ID: ckac129.082
From Personal to Public Health - building Health Data Pipelines

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The creation of future proof infostructures requires a number of efforts on different levels within a health organisation. One important thing that we need to be genuinely realise and grow aware of is that there is an inherent need to move away from Excel Spreadsheets, Access Databases and legacy data tools (including paper) towards interoperable information systems that are focused on high-quality data coordination mechanisms, robust processes and documentation and most of all design of data flows that enable sustainable data collection and analysis. This hands-on session will inform users on the following elements:

- Doing a thorough situation analysis of your current data situation
- Design your health data pipeline - paper and imagination required
- Resources to help you design the ideal infostructure
- Setting your next steps forward
- Being aware of your organisational culture to ensure maximum success

Abstract citation ID: ckac129.083
Data protection and fairness by design

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Building a health data pipeline is an opportunity not only to review the efficiency of data flows and organisational processes but also to guarantee that the resulting data system incorporates data protection and fairness principles by design. This session will cover some key aspects of data protection and the principles of data fairness and ethics:
Transparency, simplicity and fairness
The importance of a diverse team with diverse expertise
Keeping the business objectives in mind and purpose limitation
Compliance with data protection directives (GDPR)

2.G. Workshop: The development of HTA collaboration in Europe: where we are and where we are going

Abstract citation ID: ckac129.084

Organised by: EUPHA-HTA; EUPHAnxt
Chair persons: Chiara de Waure (EUPHA-HTA), Elena Petelos (EUPHA-HTA)
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Health decision-making should be always well-informed. This draws the attention on the need to make the best use of available evidence in respect to different clinical and non-clinical issues to make a value-based allocation of resources. Health Technology Assessment (HTA) is a method for supporting evidence-informed health policymaking as it is defined as a multidisciplinary process that uses explicit methods to determine the value of a health technology at different points in its lifecycle. The role of HTA is of utmost importance at European Union level considering that citizens have the right to access healthcare in any EU country with reimbursement by their home country. Therefore, Member States (MS) cooperation in the evaluation of health technologies is envisaged to ensure safe, high-quality, and efficient healthcare. Several efforts have been put in place at EU level to make this collaboration possible. The cross-border healthcare directive 2011/24/EU have led to the establishment of a voluntary network of MS to facilitate their cooperation and the exchange of scientific information. This network has been supported by another network, namely the European Health Technology Assessment Network (EUnetHTA) that was launched in 2006 with the aim to increase the contribution of HTA to decision-making in EU MS, strengthen the link between HTA and health policymaking, and reduce the overlap and duplication of HTA efforts by promoting a more effective use of resources. EUnetHTA has created a long-lasting Joint Action that has developed principles, methodological guidelines, as well as functional online tools for the sharing production of HTA. In the meantime, starting from 2018, a proposal for an EU regulation on HTA has been discussed within the European Commission first and the European Council and Parliament later. The discussion led to the approval of the Regulation (EU) 2021/2282 on health technology assessment (HTAR) that entered into force on 11 January 2022 and will apply from 12 January 2025 onwards. The HTAR calls for mandatory participation in and use of joint clinical assessments at MS level opening a new era for HTA at EU level. In order to make public health professionals ready for the challenge, this skill-building seminar will provide the audience with basic knowledge in respect to the objective, the application, the methods, and the history of HTA at European level. After two formal presentations on these issues, a case study will lead the following interactive discussion with the audience.

Key messages:

- Health decisions should be informed by the determination of the value of health technologies through shared methods, such as Health Technology Assessment.
- Collaboration on Health Technology Assessment at European level has had a long-lasting story and is now looking out into a new challenging era that will be the EU regulation being implemented.

Abstract citation ID: ckac129.085

Why and how can HTA support evidence-informed health policymaking?

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Issue:

Health care systems actors are in need to take decisions every day. The basis for a good decision is to consider all the factors, the value of the action, the values that support a ‘‘go’’ or ‘‘not go’’ decision and the intended and unintended consequences that those decisions could entail. Furthermore, understanding decisions implies knowing which the context and the circumstances that surround decisions are.

Description of the issue:

HTA should cover all those aforementioned aspects and make it along the life cycle of health technologies. Thus, it should be the pivotal element that health systems should look at when making decisions. Nevertheless, this is not the case in all the countries/regions or health systems. Empirical research (facts) and normative inquiry (values) are not consistently considered and holistic approaches to the determination of value are lacking.

Results:

Policymakers, health care systems and HTA bodies are differentially approaching to value determination, and, in most cases, this is not explicitly shared with the stakeholders concerned. The consideration of the implication of life cycle concept is not well addressed and decisions are mainly focused on introduction and implementation, meanwhile decisions on deletion or modification of use are lacking, although relevant for health systems sustainability. Mostly systems failed by individual determination of technologies’ value without considering that they are used on systems in combination to other technologies, by different professionals, applied to different patients and within different contexts.

Lessons:

There is a need for a holistic approach of value determination. Likewise, the life cycle concept offers a unique opportunity to promote proactive actions in improving added value generation for technologies under development. Similarly, the assessment of value once solutions are introduced is substantially a way to improve systems’ outcomes and their efficiency.

Abstract citation ID: ckac129.086

The development of HTA collaboration at European level and the challenge of the EU regulation

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Issue:

The establishment of HTA has been an important topic in Europe for many years. The engagement of HTA agencies, scientists, politicians and many other stakeholders throughout more than 20 years lead to the EU-HTA regulation, which came into force beginning of 2022. Now it is time to prepare for a sustainable European Network for HTA.

Description:

The implementation of HTA in Europe is of high importance of the EU-commission for more than 20 years. Started with the first projects in 1994 (EUR-ASSESS) it needed quite a bunch of different projects and, in the end, three joint actions for finally providing legal ground for HTA with the EU-HTA regulation. This journey seemed a long one. However, referring to the need of addressing the requirements of Health Care of 27 Member States combined with the demand of reliable high methodological quality and applicability, investing all the time and effort for a sustainable European Network of HTA was definitely worthwhile. Joint Scientific Consultation (JSC) and Joint Clinical Assessments (JCA) will play a central role for national HTA and decision making in health care. But for understanding role, content, national uptake and further development of means, products and results of a European Network for HTA it is quite important to get a perception of the development of HTA collaboration in Europe. Based on this the challenge of the EU-HTA regulation and its implementation will be tackled easier.

Effects:

Through provision of the main pillars of the previous EU-HTA collaboration the appreciation and understanding of the differences and complexities behind the HTA processes in the EU-healthcare systems will made aware. Based on this understanding the challenges of the implementation of the EU-HTA regulation will be discussed.

2.H. Workshop: Commercial determinants and global capture of public health- cases spanning the world

Abstract citation ID: ckac129.087

Organised by: Governance, Ethics and Conflict of Interest in Public Health Network, UK Faculty of Public Health
Chair persons: Jihad Makhoul (Lebanon)
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Growing research around the globe shows that for-profit corporations incur increasingly adverse impacts on health and well-being of people, the planet and the global economy. Their health damaging products and practices fuel non-communicable disease epidemics, damage the earth's natural environment and interfere in health policy making. Such corporate interference in social and public health policy, research and practice is well documented for the pharmaceutical, tobacco, food and beverage, alcohol and arms industries. A commercial determinant lens allows a better understanding of heath inequalities by drawing attention to corporate actors and their tactics as drivers of ill-health rather than people's behaviors. This framework also makes it possible to present interventions to counter these influences. This workshop panel of 5 scholars and activists from around the world who are members of the Governance, Ethics and Conflict of Interest in Public Health Network serves to confirm the detrimental reach of industry practices and the global responses to this interference in public health. It aims to add to the emerging body of knowledge on commercial determinants of health using innovative research approaches and findings. The format is a series of 5 short sequential presentations, followed by an interactive discussion with the audience, moderated by the panel organizer. The presentations will showcase the research methods used including multi-stakeholder interviews, policy analyses, systems mapping and analyses of policy debates. The presentations will also document examples and cases of corporate capture of food industry in Europe, a global mapping of corporate systems, industry interference in health-protecting laws in Columbia, exploitation of humanitarian emergencies in Lebanon, and suggestions of ways forward to protect adults and children from industry vested interests with a Public Health Playbook.

Key messages:

- Corporate interference in public health is a growing concern globally for its health harming influence on health systems and future generations.
- Continued concerted research revealing overt and covert health harming industry practices is needed to counter their impact on PH in a world fraught with global challenges and uncertainty.

Abstract citation ID: ckac129.088

Building a qualitative systems map: applying systems thinking to the commercial determinants of health and industry influence on health policy

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Background:

Unhealthy commodities are major drivers of the global burden of noncommunicable diseases. Commercial actors attempt to influence policy to undermine regulation and existing literature draws attention to the underlying macro-level factors that enable this influence. Public health literature also suggests that industry adapts to regulation and such influence may thus be considered a complex adaptive system. Therefore, this study aimed to build a qualitative systems map to help communicate the complexity of industry influence and develop a tool to facilitate the identification of interventions in follow up research.

Methods:

In-person group model grouping workshops were adapted for the online environment. A preliminary qualitative systems map was developed by synthesising two recent studies to facilitate workshop discussions and expedite the mapping process. Twenty-three small group system mapping workshops were conducted with a total of 52 stakeholders, representing researchers, civil society, and public officials from various geographical regions.

Results:

The qualitative systems map identifies five pathways through which industry influences policy: a) direct access to public sector decisionmakers; b) creation of confusion and doubt about policy decisions; c) prioritisation of commercial growth; d) industry leveraging the legal and dispute settlement processes; and e) industry leveraging policymaking rules and processes. The pathways contribute to perpetuating macro-level factors that enable industry to deploy practices to influence policy.

Conclusions:

A system thinking approach can be applied to industry influence on health policy to depict a complex adaptive system. Interventions need to take into consideration the system's complexity and adaptivity. Further research is needed to test, and improve the systems map and identify interventions to achieve systems change.

Abstract citation ID: ckac129.089
''We will take money from anywhere to support our work'': industry funding of humanitarian assistance in crises

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Background:

Corporate funding has been described to be beneficial for humanitarian assistance in times of shrinking financial resources globally. Despite the growing global research on commercial determinants and their impact on population health, evaluations of corporate partnerships with humanitarian organizations and victims of multiple crises are rare. Conflicts of interest and corporate interference in public health policy and practice are well-documented. Health-harming industries are currently funding large scale projects for refugees in the eastern Mediterranean region which has witnessed humanitarian crises from armed conflicts. For example, food and beverage corporations and tobacco industries have funded projects to integrate migrants in their host countries, and offered educational scholarships to refugee children in Europe and beyond.

Methods:

This research presents the experiences of humanitarian agencies in Lebanon on their funding from corporations, and the perceived influences on the populations served over a two-year period coinciding with a long-lasting refugee crisis, the COVID-19 pandemic, an epic economic collapse and the devastation of a large part of Beirut from a cataclysmic explosion in its port. The study used qualitative in-depth interviews with representatives of non-governmental organizations working in Lebanon with Lebanese and refugees.

Results:

Funding from corporations starts with a two-way communication process between the organizations and the corporations, which recently started to be initiated by the corporations themselves after the Beirut blast. Funding from the tobacco, food and beverage industries is reported to come with conditions described to enhance their visibility, yet described as necessary, helps disadvantaged communities and sustains the organizations' operations. Other results relating to the availability of guidelines for detecting and managing COI from corporate funding are discussed.

Abstract citation ID: ckac129.090
Corporate Capture of the laws application in Colombia: a new form of capture for public policy actions

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The law popularly known by the title 'Junk Food', was approved in Colombia in 2021 after years of advocacy from the Civil Society. Many authors as M. Mialon (2019, 2020, 2021) have documented the level of actions to intervene in the legislative space of the Parliament in Colombia created by the food industries to change the terms of the content of this law. Nowadays and after the approval of the text interpreted as a victory for Civil Society, Colombia is confronted with the re-regulation of the law, leading to a new form of capture: the capture of the spaces of decision-making actors in public health policy in the country. We present an analysis of the case from a follow-up study designed by our organization FIAN Colombia (human rights organization that advocates for the right to adequate food and nutrition). The data used in this process of monitoring and action research comes from the observational data of the advocacy scenario made during the debates of the law in the Colombian parliament, based on the proceedings of the work meetings with congressmen, academia and civil society. This research-action process makes it clear that the collective action of advocacy from civil society manages to mobilize conditions to denounce the corporate capture of decision-making spaces and the execution of public health policies, and generates pressures based on research free of conflict of interest to reduce this capture. Similarly, there is a capacity to demand accountability that was generated from this process in Colombia, and that turns out to be a pilot experience for other regions.

Abstract citation ID: ckac129.091
Corporate capture of public health by food industries in Europe

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Corporate capture is the deliberately planned process whereby political decisions respond to a particular interest of a private nature, in detriment to the public interest. The result is an unjust regulation or the absence of regulation where this is necessary for the protection of the common good. Corporate capture of public health has to do with commercial determinants of health, such as alcohol, tobacco, sugar-sweetened beverages and ultra-processed foods. Capture-related actions are targeted at civil society, experts, public-health officials, civil servants and politicians. These actions range from material (corruption, revolving doors and donations to political parties) to intellectual (distortion of science and professional training), social (control of information and communication) and/or cultural (group identity, status and relationship of the regulator with the representatives of private corporations). The most common capture strategies are aimed at biasing scientific results, creating consumers from an early age, promoting a good image of corporations, questioning the legitimacy and appropriateness of governmental intervention aimed at regulating their activity, controlling professional education; and exerting pressure on governments and international bodies. To illustrate this phenomenon, we present findings from several examples of corporate capture of food policies in Europe. Preliminary results from publicly available information suggest that most of the mentioned tactics were used in Europe in order to block nutritional profiles, health warnings on food and effective food advertising regulations. We suggest implications for how European legislation can better protect European citizens, especially children, from vested interests aimed at promoting the consumption of unhealthy food and beverages.

Abstract citation ID: ckac129.092
The Public Health Playbook: ideas for challenging the Corporate Playbook

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Background:

Many commercial actors use a range of coordinated and sophisticated strategies to protect business interests at the expense of public health, for example: attacking and undermining legitimate science, intimidating and vilifying critics, and framing and reframing discussion and debate. These strategies can be thought of as a ‘Corporate Playbook’ that spans numerous health and planet-harming industries. To counter this Corporate Playbook and advance health and wellbeing, public health actors need to develop, refine, and modernize their own Public Health Playbook.

Methods:

This paper seeks to consolidate thinking around how public health can counter and proactively minimize powerful commercial influences. It draws on previous attempts to develop approaches to counter commercial influence for public health, sustainability, human rights and democracy, and develops eight thematically grouped strategies.

Results:

We propose an initial eight strategies: 1) Expand the public health workforce and coalitions; 2) Increase public sector resources; 3) Link with and learn from social movements to foster collective solidarity; 4) Protect public health advocates from industry threats; 5) Develop and implement rigorous conflict of interest safeguards; 6) Monitor and expose corporate activities; 7) Debunk corporate arguments; and 8) Leverage diverse commercial interests.

Conclusions:

This set of strategies seeks to amplify inherent assets of the public health community and create opportunities to explicitly counter the Corporate Playbook. These strategies are not exhaustive, and our aim is to provoke further discussion and exploration on this topic. Moving forward, there is a need for further work to develop a rigorously researched and tested Public Health Playbook.

2.J. Oral presentations: Health at work

Abstract citation ID: ckac129.093
Life events as predictors of unsustainable working life trajectories from a life course perspective

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Background:

The association between family-related life events (e.g., getting married or having children) and unsustainable working life in terms of unemployment, sickness absence and disability pension (SA/DP) are rarely studied from a life-course perspective although having public health importance. We investigated trajectories of unsustainable working life, and the associations between change in family-related life events and unsustainable working life trajectories by controlling for familial factors.

Methods:

This is a prospective cohort study of 37,867 Swedish twins aged between 20-40 years on 31st December 1994. Data on trajectories of annual unemployment, SA/DP, and a combined measure of unsustainable working life months was collected from the Swedish national registers. The trajectories over a 23-year period were analysed by group-based trajectory modelling. Associations of change in family-related life events with trajectory groups in the whole sample were estimated by multinomial logistic regression and in discordant twin pairs (n = 4,647 pairs) with conditional models.

Results:

Most participants had no or low levels of unemployment, SA/DP or combined unsustainable working life during 1994-2016. Individuals who were stably married or changed from being single living without children to married living with children had a decreased risk of unsustainable working life compared to individuals with stable family-related life events. The risk of unsustainable working life months over time was higher among individuals who changed from married to single status regardless of having children (range of HRs:1.31-4.44).

Conclusions:

Family-related life events such as maintaining the relationship or getting married and having children decreases the risk of unsustainable working life while divorce is a risk factor for unsustainable working life. From a public health perspective, actions to support family formation or life would consequently promote a sustainable working life.

Key messages:

- Unsustainable working life was less likely among married and among those who changed from single living without children to married with children compared to those with stable family life events.
- Individuals who changed from being married to divorced status had an increased risk of unsustainable working life over time and therefore being potentially an important group for public health.

Abstract citation ID: ckac129.094
Contribution of compositional changes in the workforce to sickness absence trends in Finland

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Background:

Information on factors driving work disability trends helps to evaluate the potential of interventions to improve the health and work ability of the workforce. We assessed whether the long-term decrease in sickness absences in Finland is explained by observed and unobserved compositional changes in the workforce.

Methods:

Utilising register-based panel data on Finnish private and public sector employees aged 30-62, we examined the annual onset of compensated full sickness absence (granted after 10 working days) in the period 2005-2016. We applied random effects models adjusting for changes in observed sociodemographic factors of the study population. We also applied fixed effects models, with corrections of the estimates for cohort ageing, to additionally account for unobserved time-invariant characteristics of the study population over the years.

Results:

Of the observed factors, increases in educational level partly explained the decreasing trend in sickness absences, and more so among women than men and among private than public sector employees. Changes in occupational class and industrial sector played little role in the public sector and only slightly further explained the sickness absence trend in the private sector. The decreasing trend in sickness absences appeared to be largely explained by unobserved time-invariant individual characteristics.

Conclusions:

The decrease in sickness absences appeared to be more strongly influenced by compositional changes in factors that are established before fully entering the labour market - such as educational level as well as unmeasured individual characteristics that remain unchanged after childhood and early adulthood - than in the work environment or other factors contributing at working age. Attempts to improve the health and work ability of the workforce should not only rely on interventions directed at the working age population, but also on those carried out early during the life course.

Key messages:

- Compositional changes in the workforce should be taken into account when assessing sickness absence trends.
- Interventions aiming to improve the health and work ability of the workforce should be implemented already early in the life course and not only in working age.

Abstract citation ID: ckac129.095
Employer support for employees returning to work from sick leave – evidence for Europe

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Background:

Employers play an important role in facilitating the return-to-work (RTW) of employees after a prolonged sick leave. The involvement of employers in RTW efforts is however largely unexplored in an international comparative context. This paper provides evidence on the diffusion of procedures to support RTW after sick leave in European workplaces and discusses different policy approaches to involve employers in RTW.

Methods:

Employer activities are examined using microdata from the three waves of the European Survey on New and Emerging Risks (ESENER), collected in 2009, 2014 and 2019 (N = 47,425). ESENER is a representative company survey, conducted on behalf of the European Agency for Safety and Health at Work (EU-OSHA). The outcome of interest is information on the existence of a procedure to support employees' RTW after a long sickness absence. The analysis is carried out using logistic models, comparing countries and welfare state regimes.

Results:

Overall, 71.8% percent of workplaces with more than 50 employees have procedures to support RTW. Employer support is most common in Nordic and Anglo-Saxon countries (OR = 3.2, 95% CI 2.58-4.05 and OR = 8.9, 95% CI 5.41-14.68 respectively, compared to Continental countries and accounting for firm size and sector of activity). In Southern and Eastern Europe, the diffusion of RTW support is lowest (OR = 0.3, 95% CI 0.26-0.37 and OR = 0.2, 95% CI 0.17-0.24). With the exception of Nordic and Anglo-Saxon countries, smaller establishments are significantly less likely to have procedures in place than larger ones. The observed patterns are stable over time.

Conclusions:

Employer support for RTW varies greatly across countries and welfare state regimes, indicating that institutional settings and policies matter for employer involvement in RTW, particularly in smaller workplaces. Countries with high levels of RTW support display different combinations of legal obligations and/or incentives for employers to support RTW.

Key messages:

- There are large differences in employer support for RTW after sick leave across Europe.
- High support levels are associated with policies combining obligations and/or incentives for employers.

Abstract citation ID: ckac129.096
Labour market strategies addressing precarious employment and its impacts: A systematic review

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Background:

Precarious employment (PE), characterized by reduced worker rights, and employment and income insecurity, has complex public health implications including negative impacts on workers' mental and physical health, occupational health and safety, wellbeing, and inequities in access to health and social protections. There is, however, a knowledge gap regarding effectiveness of interventions. We describe findings from a review of evaluated interventions with potential to address PE.

Methods:

Our systematic review followed the 2020 PRISMA framework and covered PubMed, Scopus, Web of Science, and sources of grey literature. We included qualitative, quantitative, or mixed-methods studies evaluating initiatives to reduce workers' PE published from 2000 to 2021 and focused on adult workers.

Results:

The 23 eligible studies from across the world evaluated diverse strategies addressing PE including tax and trade reforms, industrial disputes legislation, business registration, and use of incentives to stimulate permanent contracts. Also included were union strategies to reach precarious workers, the provision of social benefits, and youth apprenticeships.

Generally, while most initiatives had the potential to tackle certain PE aspects, they usually acted only on one or two PE dimensions. Additionally, the evaluation components were missing key details, thus, limiting the generalizability of findings, as did the heterogeneity of study designs, initiative purposes, economic and political context, and diverse populations targeted.

Conclusions:

The increase in PE prevalence and its complex health implications requires sustainable upstream public health solutions. Multidisciplinary collaborations among public health and occupational health practitioners along with researchers, evaluation specialists, economists, and politicians could facilitate the implementation and evaluation of policies and standards regulating and monitoring PE and its health impacts.

Key messages:

- Precarious employment has complex public health implications.
- Sustainable solutions to address precarious employment must be upstream and multidisciplinary.

Abstract citation ID: ckac129.097

Excess costs of multiple sclerosis: A register-based study in Sweden

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Background and Objective:

Population-based estimates of the socioeconomic burden of multiple sclerosis (MS) are limited, especially regarding primary healthcare. This study aimed to estimate the excess costs of people with MS that could be attributed to MS, including primary healthcare.

Methods:

An observational study was conducted of the 2806 working-aged people with MS in Stockholm, Sweden and 28,060 propensity score matched references without MS. Register-based resource use was quantified for 2018. Annual healthcare costs (primary, specialised outpatient, and inpatient healthcare visits along with prescribed drugs) and productivity losses (operationalised by sickness absence and disability pension days) were quantified using bottom-up costing. Costs were compared between the people with MS and references with independent t-tests with bootstrapped 95% confidence intervals (CIs) to isolate the excess costs of MS.

Results:

The mean annual excess costs of MS for healthcare were €7381 (95% CI: 6991-7816) per person with MS with disease modifying therapies as the largest component (€4262, 95% CI: 4026-4497). There was a mean annual excess cost for primary healthcare of €695 (95% CI: 585-832) per person with MS, comprising 9.4% of the excess healthcare costs of MS. The mean annual excess costs of MS for productivity losses were €13,173 (95% CI: 12,325-14,019) per person with MS, predominately from disability pension (79.3%).

Conclusions:

The socioeconomic burden of MS in Sweden from healthcare consumption and productivity losses was quantified, updating knowledge on the cost structure of the substantial excess costs of MS.

Key messages:

- Primary healthcare contributes around a tenth of the excess healthcare costs of MS in Sweden, primarily owing to contacts with healthcare professionals other than physicians.
- Overall, the excess costs of MS in Sweden from lost production are larger in magnitude than the excess costs for healthcare consumption.

2.K. Round table: Navigational health literacy. Perspectives from Austria, Germany and Switzerland

Abstract citation ID: ckac129.098

Organised by: Bielefeld University, School of Public Health, EUPHA Working Group on Health Literacy
Chair persons: Jürgen Pelikan (Austria)
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Background:

Theoretical and empirical studies indicate that a lack of transparency and highly complexity makes it difficult for patients to navigate healthcare systems. This requires the competence to access, understand, appraise, and apply information about the healthcare system, its organizations and proceedings, i.e., navigational health literacy. Since little is known about navigational health literacy, partly due to a lack of measurement tools, a new instrument measuring navigational health literacy was developed as part of the Health Literacy Population Survey Project 2019-2021 (HLS19). It was applied in national health literacy surveys of the three German-speaking countries Austria, Germany and Switzerland among others. The empirical findings obtained in the three German-speaking countries and further perspectives on the topic will be presented and discussed in the workshop.

Objectives of the workshop:

The workshop on navigational health literacy has three key objectives: 1) It gives an overview on the newly developed instrument for measuring navigational health literacy in HLS19, its development and validation; 2) it aims to discuss the distribution of navigational health literacy among the Austrian, German, and Swiss population and to highlight barriers and challenges for patients regarding navigation health literacy; and finally 3) it proposes steps to promote and strengthen navigational health literacy.

Added value of the workshop:

The workshop is designed to enhance the understanding of navigational health literacy and to propose future scenarios and steps for action to develop and implement better health literacy outcomes. By the end of the workshop, participants

– will have discussed the methodological approach for measuring navigational health literacy;

– will have heard of current data and developments regarding navigation health literacy in Austria, Germany and Switzerland;

– will have exchanged ideas and sustainable strategies to strengthen healthcare systems by developing navigational health literacy.

The four panelists will give short presentations on: HLS19, navigational health literacy research, the newly developed instrument measuring navigational health literacy in HLS19, key findings of their respective national health literacy surveys, and recommendations and current navigational health literacy initiatives in their countries. In a panel discussion, the panelists and workshop participants will discuss the presented findings and recommendations as well as the need for action regarding implementation strategies, hands-on initiatives, and sustainable solution approaches.

Key messages:

- Navigating healthcare systems and related information proves difficult for major parts of the general population.
- There is a need of health literate healthcare systems and organizations reducing the demands placed on patients by providing guidance and support.

Speakers/Panellists:

Doris Schaeffer
Bielefeld University, Bielefeld, Germany

Lennert Griese
Bielefeld University, Bielefeld, Germany

Saskia De Gani
Careum Center for Health Literacy, Zürich, Switzerland

Robert Griebler
Austrian National Public Health Institute, Vienna, Austria

2.L. Workshop: Public Health Institution and Academia's role in building capacity for Health Impact Assessment

Abstract citation ID: ckac129.099

Organised by: EUPHA-HIA, EUPHA-HWR, ASPHER
Chair persons: Piedad Martin-Olmedo (EUPHA-HIA), Ellen Kuhlmann (EUPHA-HWR)
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Health impact assessment (HIA) is a process, which systematically judges the potential, and sometimes unintended effects of any new proposal (policy, project, program or strategy) on the population health, and the distribution of those effects within the population. It was conceived in 1999 as the supporting tool for the implementation of Health in All Policies (HiAP), but its practical use remains quite partial worldwide, with exceptional regions and countries (e.g. Wales (UK), Australia). Several surveys conducted nationally, but also across Europe by the World Health Organization-Regional Office for Europe identified several barriers that hinder a broader and more extensive practical application of HIA. One of these limitations lies in the lack of understanding and knowledge of professionals from non-health sectors about the benefits that addressing health considerations in the planning process of their projects, strategies or programs may have. In this sense, the HIA is frequently seen as an additional bureaucratic burden. Other common constraints reported refer to inadequate resources (guidelines, tools, evidence) and lack of qualified staff experienced in conducting HIA. Respondents from those surveys also deplored a history of unsatisfactory experiences involving intersectoral collaboration with health professionals, decision makers and other public sector stakeholders. Health agencies, such as national and regional Public Health Institutes (PHIs) can play a critical role in overcoming these limitations. They can act by providing independent advice and support based on the best available evidence to governments and proposal developers (projects, programs, strategies). However, they need to have knowledge, resources and capacity to do so. On the other hand, these basic concepts and procedures related to HiAP or HIA are rarely addressed in depth in the university curricular training of health sectors or other sectors such as environmental science or urbanism. Present workshop intends to analyse different experiences in Europe regarding the role of PHIs and also the academia in overcoming those reported exiting barriers, and reach a more sustainable and healthy societies. The fundamentals of what could be a training program on HIA principles across Europe will be also discussed.

Key messages:

- PHIs can demonstrate leadership for HIA and HiAP by providing support to decision makers in better understand the wider health impacts and how they will manifest themselves across the population.
- HIA practice requires of the design of proper training programs and of certain validation process, which avoids conflicts regarding consultants' impartiality and independence in conducting a HIA.

Abstract citation ID: ckac129.100
Driving HIA implementation in Ireland: The role of academia and public health institutions

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Over the past decades public health research has presented compelling evidence that health is socially determined. To address structural inequalities and inequities in health, public policies require intersectoral development and implementation. Health Impact Assessment (HIA) is an established tool for analysing potentially detrimental health outcomes of policies, programmes and projects. In Ireland, we are presented with a unique opportunity to examine HIA implementation by capitalising on the synergy of recent policy commitments driving HIA implementation. Specifically, the national public health framework Healthy Ireland 2013-2025, and the newly developed all-island Institute of Public Health HIA guidance (2021), have coalesced in steering the strategic direction of HIA. This presentation outlines the current synergistic policy context on the island of Ireland, including the publication of new HIA guidance, which opens opportunities and new possibilities for implementing HIA. Reflections will be made on the potential and reality of current HIA training programmes in Ireland. Learning from the lessons of a dearth of HIA implementation at varying time periods since 2000, this presentation discusses the mechanisms in place, such as the successful World Health organization-led healthy cities projects in Ireland, such as Cork Healthy Cities, and those key drivers that are required to capture policy synergy for meaningful HIA implementation.

Abstract citation ID: ckac129.101
Health impact Assessment practice in Wales: factors conditioning its success

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Historically, Public Health Institutes (PHIs) were formed to address emergency public health and environmental health related challenges for example, infectious disease outbreaks and sanitary conditions which will affect health. The COVID-19 pandemic has demonstrated the importance and value of PHIs and the specific knowledge and expertise sat within them in the 21st century in relation to critical health issues. However, PHIs have also the potential expertise to look at the wider determinants of health and how they might affect population health and inequalities. In doing so, they play a critical role to advocate for Health in All Policies (HiAP) and Health Impact Assessment (HIA) by engaging with decision makers from health and non-health sectors and providing evidence and health intelligence. Public Health Wales (PHW) has conducted very complex studies as the HIA of the impact of Brexit on the population of Wales, which was praised as very useful by the Welsh Government and local decision makers at a time when, otherwise, little robust evidence-based information was available. Other positive HIA experiences are the recently published HIA about impacts of climate change or COVID-19 pandemic. Those achievements were possible thanks to the establishment of a specific unit dedicated to HIA within PHW, and to the political support and resources. This has built awareness raising and trust in HIA as a tool to support decision making from all sectors in Wales, enabled also by much training and stakeholder participation.

Abstract citation ID: ckac129.102
Old and new challenges of HIA Capacity building in Portugal

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Within the European framework on health, adopted in 2012 by the Member States in the World Health Organization European Region, Health Impact Assessment (HIA) plays a crucial role in achieving the Sustainable Development Goals by supporting decision-makers to address health impacts and inequalities and ensure health gains. In Portugal, the integration of HIA in the Public Health Services (PHS) is still lacking despite of several attempts to implement HIA. In the pandemic and post-pandemic context, Public Health Authorities are busy with a lot of mandatory tasks, and the absence of a national policy framework for HIA that puts into practice the legal obligations arising from the Environment Impact Assessment Directive 2014/52/EU inhibits its sustainable implementation. The National Institute of Health Doutor Ricardo Jorge (INSA) has been involved in capacity building initiatives designed to further support the institutionalization of HIA in Portugal. This presentation outlines the lessons learned from this experience and will identify key facilitators and barriers elements for HIA implementation in specific contexts. The role of PHS in HIA development and execution will be discussed taking into consideration policy dialogue conclusions, and data collected from a survey aim to address the use and perception of this methodology in Public Health Units at the local level. The more recent Portuguese Fundamental Law on Health (Law nº95/2019) provides an important policy support ensuring Health in All Policies (HiAP) and it also opens a new pathway to enable HIA implementation at the national, regional, and local levels. In this respect, the PHS could play a crucial role taking leadership for HIA in Portugal. Novel and old approaches are still withstanding challenges.

Abstract citation ID: ckac129.103
Networking experiences for promoting HIA implementation in Andalusia

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The Health Impact Assessment (HIA) is a useful tool that allows policymakers and project developers to predict and control the consequences of their proposals on the health and equity of the affected population. The existence of a legislative framework for the institutionalization of HIA has been proposed as a critical factor in providing permanent rules and in legitimizing HIA within the decision-making process. In Andalusia (Southern Spain), the HIA is legally binding after the approval of the Public Health Act 16/2011 and Decree 169/2014, which establishes the HIA procedure in the Andalusian context. This new legal framework made necessary to promote capacity-building programs in HIA, but also to develop an online platform that would allow sharing experiences and knowledge among all those public health professionals involved in the review and approval of HIA reports submitted by the developers of proposals. These tasks were addressed by a leading group of the HIA network made up of officials from the Regional Ministry of Health and experts from the Andalusian School of Public Health (EASP). The platform, set up in 2018, integrates around 90 professionals from different administrative bodies according to the proposal's scope (local, regional), covering the great geographical dispersion of Andalusia, and allowing to evaluate more than 2400 proposals in 4 years. The platform also facilitates the traceability of files (both for improving internal management and in responding to external queries), and acts as a source of relevant evidence, supporting the work of professionals involved in HIA. The platform allows extracting data and generating figures, showing information on the number of files created and resolved by different periods, provinces, type of proposals, etc. This tool has been very useful for the continuous training of professionals involved in HIA in Andalusia, following a coaching approach.

Speakers/Panellists:
Robert Otok
ASPHER, Brussels, Belgium

2.M. Workshop: Empowering examples of high vaccination in minorities: learning from three underserved communities

Abstract citation ID: ckac129.104

Organised by: RIVER-EU Project
Chair persons: Michael Edelstein (Israel), Danielle Jansen (EUPHA-CAPH)

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Childhood vaccine uptake in most minority or ethnic communities in Europe is typically substantially and unacceptably lower compared to the general population. Ethnic, religious, or cultural minorities are more likely to encounter health system barriers to accessing health care services which are a major contributor to comparatively low vaccine uptake among these disadvantaged communities. Despite these challenges, some minority communities manage to achieve high uptake for childhood immunization sometimes higher than the general population in their respective countries. We have called these populations ''empowering examples''. As part of RIVER-EU (Reducing Inequalities in Vaccine uptake in the European region - Engaging Underserved communities) an EU funded project aiming to improve access to vaccine services for children and youth, reducing inequality and improving vaccine uptake of HPV and MMR vaccination in underserved communities in Europe, we collected evidence on health system barriers and enablers to vaccination among underserved communities, including three empowering examples of underserved minority communities that achieve high vaccine uptake: the Somali community in Finland, the Arab community in Israel, and the Bangladeshi community in the United Kingdom. Understanding enablers to vaccination in these populations will help generate knowledge that will be translated to other populations in order to facilitate similar enablers, thus improving vaccine uptake. The main objective of this workshop is to share and discuss the preliminary findings related to health system enablers from these three ''empowering examples.'' The workshop will be structured in 3 presentations of 12 minutes each. Each empowering example will present preliminary findings from interviews and focus group sessions conducted with each minority community. Presentations will be followed by a moderated questions and answers session that will help the audience understand what factors have contributed high vaccine uptake in these populations and how they can be applied to others. Participants will be invited to share experiences from their own countries.

Key messages:

- Accessibility, trust in the health care system, and perceived vaccine safety, were found to be powerful health system enablers to HPV and MMR vaccination among three underserved populations studied.
- Normalizing vaccination as ''just something you do'' seems to be a common approach among the highly vaccinated minorities.

Abstract citation ID: ckac129.105
The Empowering Example of High Vaccine Uptake among the Arab Minority in Israel

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Introduction:
Over 1.9 million Arabs live in Israel and constitute 21% of the total population. Despite being a disadvantaged minority population with wide gaps in health indicators, Arabs have higher Human Papillomavirus (HPV) and Measles, Mumps, and Rubella (MMR) vaccination rates compared with the general Jewish population.

Methods:
In-depth interviews with 20 health care providers and 30-40 Arab mothers and teens will be conducted to collect information about health system enablers to HPV and MMR vaccination. All interviews are conducted in Arabic by an Arab researcher, audio-recorded, transcribed, and analysed using thematic analysis of the transcripts. Themes will be mapped on the theoretical Social-Ecological Model.

Results and discussion:
Preliminary results indicate several health system enablers, such as accessible vaccination services through the school system and mother child clinics, vaccination provided at no cost, and high levels of trust towards healthcare professionals, who are Arab and understand the social and cultural norms of the community. Despite high vaccine uptakes, parents and teens had limited knowledge regarding vaccination, particularly HPV.

Conclusions:
This research provides important insights into health system enablers regarding HPV and MMR vaccination among the Arab minority in Israel. Such evidence can serve as a basis for interventions and guidance to improve vaccine uptake among other underserved minority communities in Europe.

Abstract citation ID: ckac129.106
Enablers and barriers associated with high MMR uptake among the Finnish Somali population

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Introduction:
In Finland, the Somali-speaking community is the fourth largest migrant group after Russian, Estonian, and Arabic-speaking communities. Finland is home to 21,000 Somali-speaking individuals, with around 70 % of them living in the capital region. Even though vaccine uptake in most ethnic minority communities is usually lower, MMR coverage in Finnish Somali children is partly higher than that of ethnic Finns.

Methods:
We interviewed 30 Somali-origin mothers living in the capital region of Finland in terms of childhood vaccination acceptance, and in specific, issues affecting their children's MMR vaccine uptake. All interviews were conducted by a Somali researcher either in Somali or Finnish language. The interviews were recorded, transcribed, translated, and analysed using thematic analysis of the transcripts. To understand the enablers presented by the health care system in Finland, 10-15 public health nurses working in maternal and child health clinics in the capital region will be interviewed.

Results and discussion:
Preliminary results show that trust in the health care system is the main enabler of high MMR vaccine coverage in the Somali population - even when mother's knowledge of the vaccine was

very limited. In terms of information sources, mothers indicated that they ask, and trust maternal and child health clinics in all vaccine-related information- often more than any other source, including the internet.

Conclusions:

This study enhances our understanding of system level enablers in the Finnish Somali community regarding MMR vaccination. The results of this study are applicable to improve vaccine uptake in other underserved minority communities throughout Europe.

Abstract citation ID: ckac129.107

Reported Barriers and Enablers to Undertaking Childhood Vaccinations by Bangladeshi Parents in East London

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Introduction:

The Bangladeshi community living in the East London borough of Tower Hamlets is one of the UK's most socioeconomically deprived communities. Despite being a highly disadvantaged ethnic group with suboptimal health, the data suggests the uptake of several childhood vaccinations including the MMR vaccine is notably higher amongst this group, relative to other ethnic groups in Tower Hamlets.

Methods:

This study employs a qualitative research design. One-to-one, semi-structured interviews will be conducted with Bangladeshi parents, alongside relevant healthcare and public health professionals involved in vaccination delivery in Tower Hamlets to understand the barriers and enablers to childhood vaccinations. Interviews will be conducted in English by the researcher or in Bengali/Sylheti using an interpreter. Interviews will be audio-recorded, transcribed, translated and analysed using a thematic analysis. The socioecological model will be utilised as a theoretical framework to guide the data collection and analysis.

Results and discussion:

The preliminary results indicate parental trust in the safety of vaccinations, perceived health importance of childhood vaccinations, ease in accessibility and positive attitudes towards vaccinations within the community are notable enablers. Regarding barriers, parents have expressed reluctance on religious grounds towards childhood vaccinations which contain animal derivatives. The data also suggests differences exist between immigrant and non-immigrant parents in the decision-making process to undertake the vaccinations, with non-immigrant parents demonstrating a higher level of agency in their decision-making.

Conclusions:

The study provides valuable insight into the barriers and enablers for childhood vaccinations amongst the Bangladeshi community in Tower Hamlets. This data may inform tailored initiatives to improve childhood vaccination uptake amongst other underserved communities with suboptimal uptake.

2.N. Workshop: Improving perinatal health and reducing inequality: the value of European population comparisons

Abstract citation ID: ckac129.108

Organised by: Euro-Peristat Network
Chair persons: Guenther Heller (Germany), Mika Gissler (Finland)
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In Europe, maternal and child mortality and morbidity during pregnancy and childbirth have declined markedly since the turn of the 20th century, but recent data suggest this trend may be slowing or reversing. Improvements in perinatal health were due primarily to increases in overall standards of living and clinical advances in obstetrics and neonatology which successfully increased maternal and newborn survival when pregnancy complications arose. However, fewer gains have been made in prevention and, in many countries, preterm birth and low birthweight rates have increased. To further improve perinatal health, a population-level approach focusing on prevention and appropriate use of clinical interventions is required. Prevention strategies include reducing risk factors (e.g., smoking and obesity) and ensuring universal access to high-quality health care due to the key roles played by early antenatal care, regular antenatal appointments and referral pathways in the timely identification and management of pregnancy complications. A population approach is particularly essential because both the burden of disease and the dangers of poor care organization fall disproportionately on socially disadvantaged women and babies, contributing to lifelong health inequalities. A final challenge is to avoid over-medicalising pregnancy and childbirth for the large majority of women with uncomplicated pregnancies. Medical technology has contributed greatly to the decline in maternal and infant mortality and morbidity, but clinical intervention can carry risks and must be used appropriately to optimise health outcomes. Despite commonalties such as universal access to health care and access to scientific knowledge, perinatal health outcomes and approaches to maternity care differ greatly between European countries. In this context, comparisons between different European models can be powerful tools for identifying population risk factors, assessing care practices, setting targets for population policies and for understanding their strengths and weaknesses to provide insight into the efficacy of health and medical policies. Currently, European comparisons are limited by the availability, timeliness and quality of population data on maternal and newborn health. This workshop reports on a new protocol implemented by the Euro-Peristat network to provide comparable perinatal indicators from countries across Europe. Based on select core indicators collected using a common protocol, we provide a proof of concept study for a future health information system and report up-to-date data on perinatal outcomes. The four presentations in this workshop present this protocol, describe most recent trends and disparities between countries, explore social inequalities in perinatal outcomes across Europe and raise questions about approaches which can achieve low mortality and morbidity while keeping intervention rates low.

Key messages:

- A federated analytical approach is an efficient and feasible way to collect timely, high-quality and comparable population data on perinatal health in Europe.
- Marked disparities in perinatal health remain between and within European countries. Our results demonstrate a need

for targeted policies in many countries and offer data to inform these initiatives.

Abstract citation ID: ckac129.109
Continuous perinatal health monitoring and analysis in Europe based on a federated analytic approach: a proof of concept study

Marianne Philibert

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Background:

International comparisons of population indicators of maternal and newborn health are valuable for guiding health policy and practice. The Covid-19 pandemic revealed the difficulties of compiling comparable, timely data in Europe. As part of the PHIRI (Population Health Information Research Infrastructure) project, we developed a protocol to facilitate the exchange and analysis of population birth data in Europe.

Methods:

The Euro-Peristat network, which includes experts from 31 European countries, developed a common data model and R scripts to facilitate rapid exchange of anonymised aggregate tables (https://zenodo.org/record/5148032#.YmlUttpBxPY). These tables were used to compile comparable perinatal health indicators from routine population-based sources for the years 2015 to 2020. We assessed the feasibility of this approach and the availability, quality and comparability of the data.

Results:

Building on previous Euro-Peristat recommendations and a structured consensus process, the network defined a common data model including 22 variables for the testing phase. 17 additional variables were considered important and feasible for a second phase. 25 countries created patient-level data files. Most countries had 20 or more of the data items, whereas 1 had 18, 3 had 16 and 2 had 15 variables. Limiting factors included not having all data in a single database, most often the case for neonatal and infant mortality or vital statistics versus healthcare data, and the diversity or absence of data on socioeconomic status. Setting up the model was time consuming, but once established, running the R scripts was easy and quick (<15 min). The protocol requires the active participation of each country to ensure it is correctly applied.

Conclusions:

We illustrated the feasibility of using a common data model with open source scripts to facilitate rapid production of data and analysis on key perinatal health indicators in European countries

Abstract citation ID: ckac129.110
Setting targets for population health improvements: Trends in perinatal health in Europe over the past five years

Katarzyna Szamotulska

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Background:

The Euro-Peristat network documented disparities in perinatal outcomes between countries in Europe in its reports published every 5 years, but trend analyses were limited because data were not collected annually.

Methods:

Using the Euro-Peristat PHIRI protocol, we estimated rates and assessed trends between 2015 and 2019 for preterm birth, stillbirth, neonatal mortality and caesarean delivery. Country-specific relative risks (RR) for year, modelled as a continuous variable, were estimated and random effects meta-analysis used to generate pooled RRs. Heterogeneity was measured with the I2 statistic (percentage of variability in estimates due to heterogeneity rather than sampling error).

Results:

Stillbirth rates ≥24 weeks of gestational age (GA) varied in 2019 from <2.5 per 1000 births in Denmark, Estonia, Finland and Slovenia to over 4 per 1000 in Belgium, Cyprus, UK Wales and Lithuania. Preterm birth rates ranged from <6% in Lithuania, Finland, Latvia, Estonia and Denmark to 8% or more in Portugal, Belgium, UK Scotland and Cyprus. Fewer than 20% of births were by caesarean in Norway, the Netherlands, Finland, Estonia in comparison to one-third in Cyprus, Ireland, Italy, UK Scotland. Trends over time differed between countries and were not related to the level of the indicator: the pooled RR by year for preterm birth was 0.99 [0.99; 1.00] with five countries having significant decreases and three countries having increases. Caesarean section rates were stable overall (RR: 1.00 [0.99; 1.01]RR:1.00, 95% CI: 0.99-1.01), but with high heterogeneity (I2 = 99%); in six countries rates increased significantly, whereas in nine rates decreased between 2015 and 2019.

Conclusions:

European countries have varying rates and trends of the principal perinatal health indicators. Investigation of policies in high-performing countries could provide guidance for improvement elsewhere.

Abstract citation ID: ckac129.111
Socioeconomic differences in perinatal health outcomes: perinatal health surveillance through a health-equity prism

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Background:

Socioeconomic status (SES) is strongly associated with perinatal health outcomes, perpetuating intergenerational health inequalities. Our aim was to assess the utility of population data in Europe to monitor social inequalities in key perinatal health indicators.

Methods:

Using the PHIRI federated analysis protocol to aggregate routine birth data from across Europe, we collected data on selected perinatal health indicators by SES from 2015 to 2020. Mothers' education level (primary/lower secondary; upper secondary; postsecondary) was the preferred SES indicator; if unavailable, parents' occupation or area-based deprivation scores were provided. The International Standard Classification of Occupations was used to group parents' occupations into 4 categories, while area-based deprivation scores were measured in quintiles. For each country, we calculated risk ratios (RR) for preterm birth, stillbirth, neonatal death and caesarean delivery (CD) comparing the most with the least disadvantaged group

Results:

17 countries provided data on maternal education, 5 on area-based deprivation, 1 on parents' occupation and 2 could not provide data. For preterm birth, stillbirth and neonatal death, lower SES was associated with worse outcomes with most RR between lowest and highest groups in the range of 1.5 to 3.0. In contrast, in some countries, such as Croatia, Latvia, Lithuania and Spain, CD rates were higher for socially advantaged groups whereas the gradient was reversed in others (Denmark, Luxembourg, the Netherlands and Italy).

Conclusions:

European countries can provide perinatal health indicators by SES, revealing marked socioeconomic inequalities in perinatal health. The differing SES gradient between countries for CD raise questions about care organization and clinical practice. Further exploration of the harmonization of differing SES measure across countries is required, while countries that do not monitor SES data should aim to improve existing systems.

Abstract citation ID: ckac129.112

Achieving more with less: lessons from country-level analyses of caesarean delivery and perinatal outcomes in Europe

Jennifer Zeitlin

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Background:

There is consensus that caesarean delivery (CD) is a lifesaving procedure for both mother and child in emergency situations and that CD without medical indication should be avoided. However, the rate that optimally balances the risks and benefits of CD is unresolved. In 1985, the World Health Organization concluded that the CD rate should be no more than 10-15%; subsequent reviews relating CD rates to infant mortality show no benefits at the country-level for rates higher than 15-19%. However, stillbirth has not been investigated because comparable international stillbirth data are not readily available.

Methods:

We conducted an ecological study in 25 European countries from 2015 to 2019 utilizing data from routine birth data sources aggregated using the Euro-Peristat PHIRI federated data analysis protocol. We assessed country-level associations between CD rates and perinatal outcomes (singleton preterm birth, stillbirth at ≤ 24 weeks' gestational age, neonatal death) for all years using Pearson correlations, adjusted for clustering of years within country. Correlations were also estimated between linear trends over time in the indicators.

Results:

The median [range] of CD rates was 23.1% [16.2 to 56.9] in 21 participating countries, while these were 6.9% [5.3 to 11.9] for preterm birth, 3.3 per 1000 total births [1.8 to 7.6] for stillbirth and 1.9 per 1000 live births [0.7 to 6.1] for neonatal mortality. The CD rate was not associated with the stillbirth rate (cluster-adjusted rho: -.01, $P = .94$) or with the neonatal mortality rate (rho:.27, $P = .27$). However, there was a strong positive correlation with the preterm birth rate (rho:.81, $P < .001$). Results were similar in time trend analyses.

Conclusions:

Higher CD rates were not associated with lower stillbirth or neonatal mortality rates, but were strongly correlated with higher preterm birth rates. This study suggests no benefits and indicates potential harms for higher CD rates in Europe.

2.O. Workshop: Initial health assessments and catch-up vaccination for forcibly displaced migrants to Europe

Abstract citation ID: ckac129.113

Organised by: St George's, Lancet Migration European Hub, ESGITM
Chair persons: Sally Hargreaves (UK), Ana Requena Mendez (Spain)
Contact: s.hargreaves@sgul.ac.uk

Objectives:

Recent crises in Ukraine, Afghanistan, Syria and other countries have, again, resulted in large populations of asylum seekers and other migrant groups arriving in Europe. However, European countries still grapple with questions about what level of health care should be offered to forcibly displaced people (emergency care, preventative care, multi-disease screening and catch-up vaccination?), and when and where in the migration trajectory provision should be made (should it be at borders, reception centres, once settled via the national health system, via specialist or routine services, or left to non-governmental organisations?), and what their subsequent level of right to access the mainstream health-care system should be. Countries do not have a uniform approach to the provision of health care for these populations, with some countries more inclusive than others, and wide discrepancies between evidence and implementation in policy and practice. In this workshop we will discuss current approaches, implementation, research and policy gaps, and models of good practice from the clinic to the community to ensure both the immediate and long-term health needs of these diverse mobile populations are met.

Workshop plan:

The workshop will start with 10-minute presentations by each of the 4 speakers (to include a short Q&A after each talk). This will then move into a 20-minute audience discussion centred seeking specific feedback on examples of successful interventions, good practice, and lessons learned across EU/EEA countries in delivering multi-disease and catch-up vaccination and holistic and inclusive healthcare approaches.

Key messages:

- Governments should develop clear short-term and long-term policy and evidence-led research strategies to ensure the equitable provision of health services.
- Strategies must include multi-disease and catch-up vaccination approaches, alongside meaningful access to mainstream health systems.

Abstract citation ID: ckac129.114
Meeting the health needs of forcibly displaced populations: translating evidence into implementation via the WHO global research agenda on migration and health

Miriam Orcutt

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In this presentation, Dr Orcutt, will outline the health system responses needed to respond effectively to the health needs of forcibly displaced populations - from initial health assessments to the longer term - and the role that research can play in ensuring evidence-informed policies and practice. She will present the main areas of the WHO's new global research agenda on migration and health and outline how translating evidence into implementation is essential to improve the health of migrants.

Abstract citation ID: ckac129.115
Strengthening implementation of catch-up vaccination and multi-disease screening for new migrants

Sally Hargreaves

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Dr Hargreaves will discuss the current guidance for EU/EEA countries on public health considerations for newly arrived migrants, with a specific focus on catch-up vaccination delivery across the life course in mobile populations. She will explore current initiatives and best practices to ensure child, adolescent and adult refugees and migrants are included in catch-up planning and delivery for missed vaccines and missed doses and to align them with the host country vaccine schedule.

Abstract citation ID: ckac129.116
Community engagement to co-design and deliver public health interventions in newly arrived migrants

Alison Crawshaw

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Alison Crawshaw will talk about her participatory research that uses design thinking to develop community-based strategies to improve health outcomes in migrant populations. She will summarise the benefits of using community-based approaches and co-designing public health initiatives with affected migrant communities, bringing in lessons learned from a recent project with the Congolese community in London.

Abstract citation ID: ckac129.117
Health care provision to migrants: what did we learn from the Ukraine, Afghan, and Syrian crises?

Apostolos Veizis

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Dr Veizis was involved in the immediate health care provision to Ukrainian people fleeing to neighbouring countries including Poland and Moldova, as well as health care provision to Syrian people residing in Greece, working for the non-governmental organisation INTERSOS and previously MSF. He will discuss his experiences to date in terms of immediate and long-term provision to these groups and the role of both NGOs and mainstream health services in meeting the needs of forcibly displaced migrants to Europe.

2.P. Round table: Covid-19 pandemic: the rise or downfall of public health

Abstract citation ID: ckac129.118

Organised by: EUPHA
Chair persons: Iveta Nagyova (EUPHA), Marieke Verschuuren (EUPHA)
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This year, we are celebrating 30 years of the European Public Health Association. But celebrating this after over two years of COVID-19 and the Russian reinvasion of Ukraine, invites us all to reflect on the use, misuse and non-use of public health. Over the years, our approach to public health has evolved. At the start of the 20th century, public health emphasized the inequalities created by the environments in which people lived, including housing, sanitation, and nutrition. By the end of the century, this extended to the political and commercial determinants of health and the concept of planetary health, which would later be encapsulated by the 2016 Vienna Declaration on Public Health. Given this comprehensive approach, supported by a much greater body of knowledge produced by many disciplines, public health should have been in the driver's seat when the world was hit with COVID-19. But it was not. Its expertise was often absent from COVID-19 response teams. Policies were often driven by panic in the face of visions of overwhelmed hospitals. Restrictions on mixing were essential until more was known about this new virus but there were failures to appreciate the impact that these measures would have on those already disadvantaged, many in precarious employment in public-facing jobs and overcrowded accommodation. As a consequence, existing health inequalities deepened. It seemed that much that had been learned over the preceding decades had been forgotten. In this roundtable, we seek to explain why, and what needs to change in order to refocus the centrality of public health on supporting and creating fair societies as a prerequisite for health for all.

So, is COVID-19 the downfall or the new rise of public health? In this Round Table, we will discuss the questions as follows.

1. Where was public health during COVID-19?
2. Why were social factors ignored during COVID-19?
3. Why has public health not used/is not using the momentum created by COVID-19?
4. And the main question: How can we create a fair society?

Key messages:

- Public health needs to strengthen its core activities.
- Advocacy is a key role for public health.

Speakers/Panellists:

Martin McKee
LSHTM, London, UK

Natasha Azzopardi Muscat
WHO, Msida, Malta

Dineke Zeegers Paget
EUPHA

Klaus D Pluemer
Independent Public Health & Health Promotion Consultant, Duesseldorf, Germany

Caroline Costongs
EuroHealthNet, Brussels, Belgium

2.Q. Workshop: Prepared for the unexpected: using foresight to address uncertainty

Abstract citation ID: ckac129.119

Organised by: RIVM (Netherlands)
Chair persons: Henk Hilderink (EUPHA-FS), Ana Vieira (Netherlands)
Contact: henk.hilderink@rivm.nl

All future trends carry uncertainty in them. For example, the COVID-19 pandemic showed great uncertainty about current and future health impacts and how the virus may directly impact our health. Foresight (as a systematic, participatory, future-intelligence-gathering and medium-to-long term vision-building process aimed at enabling present-day decisions and mobilising joint actions) explicitly addresses uncertainty. Doing a foresight study one has to deal with different sources of uncertainty. Next to commonly known statistical uncertainty, foresight studies have to deal with cognitive uncertainty, i.e. uncertainty related to the limited knowledge that we have regarding the complexity of the underlying system or limited knowledge of what future economic growth will be. A better understanding of the location, level, and nature of the cognitive uncertainties helps assess the robustness of future scenarios. In addition to cognitive uncertainty, normative uncertainty are distinguished. This refers to uncertainty related to differences in what we consider a desirable future. Especially in the field of public health people differ on what they consider to be ''good health''. In this workshop, we will focus on the different aspects of uncertainty and how they are considered in existing foresight studies. The workshop will start with an interactive Mentimeter session to better understand how the audience is familiar with foresight and uncertainty. Then, a brief presentation is given as introduction to foresight and a systematic way of accounting for uncertainty, explaining the basic concepts to level understanding of the audience. This is followed by a presentation of a Foresight study (FRESHER) that addresses cognitive uncertainties consistently and systematically. The second foresight study (Dutch PHFS, RVIM) is a good example of how normative uncertainties are considered. Finally, the last presentation (CEG-IST) gives the policy perspective about how policy makers can incorporate uncertainty, as modelled through foresight, into policy evaluation. The workshop will be concluded by a discussion with the three presenters on the lessons learned regarding foresight and uncertainty.

Key messages:

- Foresight studies addressing uncertainty are essential to be better prepared for the future.
- Acknowledging different types of uncertainty is needed to support foresight-informed policy making.

Abstract citation ID: ckac129.120
The inseparable relation between foresight and uncertainty

Henk Hilderink

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This presentation starts with an interactive mentimeter poll to involve the audience. They will be asked several questions about what they find important in dealing with uncertainty in public health foresight studies.

Background:

The future is per definition uncertain. Our knowledge about the future is obviously limited, especially when we look further into the future. Next to limited knowledge, people also have different ideas about what they consider a desirable future. All these aspects of uncertainty play a role when doing a foresight study. One of the challenges when doing a foresight study is to address these uncertainties in a systematic manner.

Methods:

The cognitive uncertainty addresses the lack of knowledge, which can easily be extended to the information that can be inaccurate or unreliable. These cognitive uncertainties can vary widely, and can be classified according to location, level and nature of the uncertainty. Especially in foresight studies with a strong quantitative character, the cognitive uncertainties can be crucial and can form the basis of developing scenarios. Next to the cognitive uncertainties, normative uncertainties can be distinguished which address desirable futures. These represent the obvious differences in norms and values that people have when valuing health. There are several examples of public health foresight studies that include a proper consideration of uncertainties involved.

Conclusions:

Applications of foresight studies in the field of public health are still limited. However, the recent years we see a broadening of initiatives of doing a foresight study, including addressing uncertainty in an more systematic way. Especially in public health, the normative uncertainty might play a rather relevant role.

Abstract citation ID: ckac129.121
FRESHER: Challenges and opportunities for building Health/Healthy futures

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Background:
FRESHER (2016-2018) Foresight and modelling for European health policy and regulation - is a H2020 project that aimed at representing alternative health Scenarios to test future policies for tacking Non-Communicable Diseases (NCDs). The key added-value consists in the combination of qualitative foresight and quantitative forecast approaches: a micro-simulation model, specifically developed by the project, computed the health outcomes of the four FRESHER Scenarios.

Methods:
The Scenarios building activities involved overall more than four-hundred experts and stakeholders, with different backgrounds within and beyond health fields, throughout all the steps of the process, in two surveys and nine workshops. The horizon scanning phase led to identify a wide range of societal trends that impact health and NCDs. Considering a long-term horizon at 2050, eight trends were then selected and ranked according to their importance and uncertainty.

Results:
In the Scenario Building phase, the combination of different evolutions of the selected trends resulted in four alternative futures: a Business as Usual Scenario, ‘‘The rich get healthier’’, two response Scenarios, ‘‘We will Health you’’ and ‘‘Healthy together’’, and a worst case Scenario ‘‘Desolation Health’’. The scenarios imagine different futures and depict how health would subsequently change in such worlds.

Conclusions:
Given the increasing need to put health at the centre of all policies, it is necessary to make more evident the relationship between societal trends and their impact on health, specifically for NCDs. The translation of trends, and their evolutions, into changes of risk factors is a viable option to assess the impact of public health policy. FRESHER aimed to trigger a dialogue across different scientific and policy communities outside the health sector in order to define innovative strategies and identify disruptive innovations.

Abstract citation ID: ckac129.122
Normative uncertainties in public health foresight

Frank Den Hertog

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Background:
People value health differently, based on the norms and values. This is important when looking into the future trends in health and health care., and the perception of challenges they may arise from these trends.

Methods:
Together with stakeholders from a broad range of health-related professions, we identified several challenges for public health and healthy environments. Professionals working on these subjects came up with different goals and different ways to achieve them. These normative goals in health policies provide uncertainties in foresight, because they can be either synergetic or conflicting.

Results:
In the Dutch Public Health foresight study of 2014 four societal challenges for public health and healthcare were identified and formulated, as follows: (1) to keep people healthy as long as possible and cure illness promptly; (2) to support vulnerable people and enable social participation’ (3) to promote individual autonomy and freedom of choice; and (4) to keep healthcare affordable. In 2022 we will update and deepen these perspectives on public health and at the same time we will broaden the usability of working with this method by focussing on environmental health.

Conclusions:
To explicitly distinguish different perspectives on health leads to a better understanding and dealing with normative uncertainties by taking into account the trade-offs between competing interests and values. The challenge then is to identify policy options that have positive effect from different perspective, the win-wins.

Abstract citation ID: ckac129.123
How can policymakers incorporate uncertainty (as modelled through foresight) into policy evaluation?

Ana Vieira

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Background:
Using a robust policy evaluation framework is critical to inform policymakers about the relevance of a policy in a structured way, clarifying its implications and providing arguments and criteria to compare competing options and decide which policy should be prioritised. In the current context of complex societal, environmental and public health challenges, decision-makers demand tools that allow a comparative assessment of the effectiveness of multisectoral policies and their comparison under different scenarios.

Methods:
This presentation will detail a socio-technical ‘‘desirability-doability’’ framework (2xD). In 2xD, an additive value model is constructed to measure the desirability of public policies, and their doability is appraised under two contrasted scenarios. For these purposes, the MACBETH approach is used in developing the three group modelling phases of 2xD: (I) Structuring facilitated workshops, (II) Evaluation decision conference, and (III) Desirability-doability decision conference. Tailor-made interactive protocols or questioning procedures are used to elicit group judgements, based on which objective-specific value scores are assigned to the policies, and the objectives are weighted (in II). Finally, we elicit doability scores for the policies under each scenario (in III).

Results:
We present how the 2xD framework was applied in Lisbon’s urban health policymaking setting and discuss case insights regarding the role of scenario analysis in the appraisal and selection of policies.

Conclusions:
The 2xD framework advances knowledge on how to assist policymakers in evaluating and selecting policies and contributes to the literature on overall policy formulation and evaluation. Specifically, the framework enabled a group of policymakers to balance (multicriteria) desirability versus doability of policies under the light of two contrasting scenarios, therefore incorporating uncertainty in their decision-making process.

3.A. Round table: Evidence-informed decision-making in patient care, public health, and health policy: the road ahead

Abstract citation ID: ckac129.124

Organised by: European Observatory on Health Systems and Policies
Chair persons: Dimitra Panteli (Belgium), Samuel Sieber (Belgium)
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This year marks the fiftieth anniversary of Archie Cochrane's seminal report "Effectiveness and Efficiency: random reflections on health services", which spurred a paradigm shift in basing health policy and practice on robust empirical evidence. Indeed, evidence-informed decision- and policy-making has since permeated different levels of healthcare, public health, and health systems. More recently, the notion of "evidence-based" medicine has seen a shift towards "evidence-informed" health policy and practice, explicitly acknowledging that research evidence is but one of several factors influencing decision-making. In patient care, clinical expertise and a patient's own values and beliefs influence treatment and care; while in health policy-making, political and social factors, financial concerns, timing, and stakeholder relationships are decisive to successful implementation. Nonetheless, evidence-informed decision-making in health revolves around several core tenets, including a clear and well-communicated definition of objectives, using best-available, empirical evidence sourced from multiple sources, excellence and interdisciplinarity in the methods of analysis, and active collaboration across sectors and stakeholders to drive change. Across healthcare, public health, health systems and global health, actors continue to adapt these core principles into increasingly sophisticated strategies of evidence-informed decision-making. In the shadow of the global COVID-19 pandemic, exchanging best practices across these areas of application within the complex evidence ecosystem is a key driver for building more sustainable capacities in evidence-informed decision-making and partnerships to accelerate progress towards strengthening health systems and achieving global health equity. This panel aims to bring together major actors in knowledge translation and evidence-to-policy processes, highlighting latest resources and their relevance to public health, and stimulating collaboration and future action. With brief inputs from knowledge brokers, such as the European Observatory on Health Systems and Policies and the World Health Organization's (WHO) Evidence-informed Policy Network (EVIPNet), the panel will reflect on the current state of evidence-informed policy- and decision-making, showcase latest tools and resources, and discuss them from the specific perspectives of public health, coverage (with a focus on Health Technology Assessment), and patient and citizen involvement (with a focus on shared decision-making). Contributions from the audience will be sought in an open discussion round following initial inputs from panelists, with the objective of further shaping collaboration with involved stakeholders towards improving population health.

Key messages:

- Building on current best practices in evidence-informed decision-making is crucial to achieving better outcomes in healthcare, public health and health systems.
- Leveraging synergies and collaborating between different areas of application of evidence-informed decision-making can help ensure maximum impact and strengthen the evidence ecosystem.

Speakers/Panellists:

Suszy Lessof
European Observatory On Health Systems and Policies, Brussels, Belgium

Tanja Kuchenmueller
WHO, Geneva, Switzerland

Elena Petelos
CSFM & HSR-PH Lab, Faculty of Medicine, University of Crete, Iraklion, Greece

Ansgar Gerhardus
German Public Health Association - DGPH, Bremen, Germany

Isabelle Scholl
University Clinic Hamburg-Eppendorf, Hamburg, Germany

3.B. Workshop: Quality of COVID-19 science: meta-research and the ethical implications for public health

Abstract citation ID: ckac129.125

Organised by: EUPHA-EPI, EUPHA Research Pillar, EUPHA-ETH, EUPHA-PHG, EUPHA-HTA, UK Faculty of Public Health
Chair persons: Stefania Boccia (EUPHA-EPI), Alastair Leyland (EUPHA)
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Since the beginning of the COVID-19 pandemic, scientific researchers have had to balance the need to disseminate information rapidly while still maintaining high-quality standards of research design and reporting. Early meta-research efforts comparing the methodological quality of COVID-19 research with pre-pandemic medical research found a higher prevalence of observational studies with a shorter time from submission to acceptance, lower methodological quality scores, higher risk of bias, and lower number of participants. This workshop is intended to showcase some public health relevant meta-research that has assessed COVID-19 study quality during later phases of the COVID-19 pandemic, analysed transparency and integrity indicators, and revisited earlier studies in the light of stronger evidence. After three more technical presentations that will examine the role of meta-research in addressing some of the COVID-19 pandemic research challenges, an ethical overview of the concept of "the science" as an idea used in public decision-making and policy will be given.

Key messages:

- Meta-research role of scrutinizing evidence as it is produced is even more important when scientific information is diffused at an expedited rate.
- Ethical questions might be as relevant as epidemiological ones when science is not able to be all that leads decision-making.

Abstract citation ID: ckac129.126
Quality of COVID-19 research: An overview of large-scale assessments and a case study on excess mortality estimates

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COVID-19 is an ongoing public health emergency, which affected individual and population health, whereas it disrupted social and economic activities for more than 2 years. High-quality research evidence, which is published without delays in the peer-review and publication pipeline, is the most powerful tool for evidence-based decision-making by physicians, public health and health policy specialists, and politicians. However, from the early stages of the pandemic till now, there is a debate on the quality of COVID-19 research, whereas it has been observed that the decrease in the time from submission to publication was accompanied by a decrease in research quality. This presentation discusses the findings and main conclusions from two research projects. The first part focuses on a systematic review of published large-scale qualitative evaluations of COVID-19 research. By taking advantage of these large-scale assessments, we will provide a bird's eye view on the quality of COVID-19 research done so far. The second part focuses on a case study describing the methodological quality of studies calculating excess mortality estimates during COVID-19 pandemic. Excess mortality estimates depend on important choices about the pre-pandemic reference period, the pandemic period of interest, and the modelling of the comparison between these two periods. Such an assessment has not been done yet although there is an abundance of published approaches to estimate excess mortality during the COVID-19 pandemic. Overall, these two projects highlight the importance of meta-research in the time of pandemic by scrutinizing and assessing scientific evidence while deriving recommendations for improvement of future research. This presentation concludes with a summary of the implications of low-quality COVID-19 research in decision-making and some general considerations to improve research quality and integrity in the case of future pandemics.

Abstract citation ID: ckac129.127
Lessons learned from automated screening of COVID-19 preprints

Tracey Weissgerber

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Preprints occupied the spotlight early in the pandemic, as scientists, the media and the public sought information on the evolving pandemic. While some in the scientific community embraced this shift, others were concerned about the quality of these papers, which had not yet undergone peer review. Furthermore, the flood of COVID-19 preprints quickly overwhelmed the scientific community's ability to monitor and assess new preprints. Automated screening tools that detect beneficial practices, or common problems, in preprints are one potential solution to this problem. These tools could potentially provide individualized feedback, allowing authors to improve their manuscripts prior to publication in a peer-reviewed journal. We have combined many tools into a single pipeline, called ScreenIT. ScreenIT assess factors such as open data and open code, blinding, randomization, power calculations, limitations sections, and data visualization problems. Since June 2020, we have used ScreenIT to screen and post daily reports on more than 23,000 new COVID-19 preprints deposited on bioRxiv and medRxiv. Results show that practices such as sharing data and code are relatively uncommon. Sample size calculations, blinding and randomization are rarely reported and most papers do not report the sex of participants, animals or samples. This work demonstrates the feasibility of using automated tools to rapidly screen many preprints in real time, and provide authors and readers with rapid feedback. However, this approach has important limitations. Automated screening tools can make mistakes. Tools can't always determine whether an item is relevant to a particular manuscript. Further studies are needed to determine whether feedback from automated tools is effective in encouraging authors to improve reporting.

Abstract citation ID: ckac129.128
Sources of bias in COVID-19 infection fatality rate estimation

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Since the beginning of the devastating COVID-19 pandemic, there has been a great debate about various public health relevant parameters such as the number of people infected with SARS-CoV-2, the number of deaths from COVID-19, and the resulting infection fatality rate (IFR), calculated as a ratio of the number of deaths from COVID-19 and the number of people infected with SARS-CoV-2. Among people dying from COVID-19, the largest burden is carried by the elderly, and locations with an older population will have a higher average IFR. Drawing from a project on the estimation of age-stratified IFR at an international level, in this methodological presentation, I will review the considered sources of bias for COVID-19 IFR calculation and interpretation. Both numerator and denominator can be overestimated or underestimated leading to biased estimates, while different locations can present sources of true variability. The estimation of the number of people infected with SARS-CoV-2 (the denominator of the IFR) presents several challenges. Relying on testing is inadequate due to a substantial undiagnosed proportion, and seroprevalence studies have been used to estimate the number of people infected with COVID-19, but selection bias can arise when the examined population might have a lower or higher risk than the target population. This can be the case when factors such as ethnicity, working status, and comorbidity are not considered in the recruitment. Information bias can result from suboptimal test performance and seroreversion. The number of deaths can be underestimated in situations where testing is not widely available and overestimated by the attribution of COVID-19 deaths to patients that have died with COVID-19 but not from it. Sources of true variability between locations are the population age distribution, protection of the vulnerable populations, as well as the presence of a prepared and efficient healthcare system.

Abstract citation ID: ckac129.129
Public Health Ethics and 'the Science' in Public Decision-Making

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In this presentation, I aim to complement the ideas presented by the other speakers by raising questions about ethics and (different senses of) integrity. In particular, against the pressures of providing evidence bases for governmental decision-making during the COVID-19 pandemic, I ask critically whether, or to what extent, we find harmony between the integrity of science, scientists, and democratic decision-makers. The potential for tensions is explained through consideration of public communication, pluralism in scientific knowledge bases, basic uncertainty, and fundamental principles such as transparency in political decisions. The reality of the tensions is found by considering some limits of 'the science' as it has been used in political turns of phrases such as 'we are following the science'. The tensions are particularly evident where there are gaps given expedited methodologies, when we explore how 'the science' actually represents a plural concept, and where we acknowledge that science even broadly conceived is not able to be all that leads decision-making. And they are compounded by factors that might motivate silence or simplification in public communication, such as the apparent appeal of making 'the science' seem clearer or more uniformly agreed than may be the case, or by using 'the science' to avoid or obfuscate discussion of value judgments. The complexities of these ethical points provide their own important context for evaluating evidence-based policy within and beyond the pandemic.

3.C. Workshop: The WHO European Health Report 2021: overcoming gaps in data and health information systems

Abstract citation ID: ckac129.130

Organised by: WHO Europe
Chair persons: Natasha Azzopardi Muscat (WHO Europe)
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The publication of the European Health Report every three years gives readers a vital snapshot of health in the WHO European Region and progress towards health and well-being for all. The European Health Report 2021 (EHR2021) shows trends in and progress towards the health-related Sustainable Development Goals (SDGs) and the goals of the European Programme of Work 2020-2025 (EPW). It reveals gaps in progress, persistent health inequalities and other areas of concern and uncertainty, where action must be taken. The Report also lays bare, and not for the first time, considerable data gaps for key indicators, as well as operational problems in Member States' (MS) health information systems (HISs). As strong HIS are a prerequisite for evidence-informed policy-making, overcoming these issues is critical. In this workshop, we will first present the main findings of the EHR2021, showing which challenges the European Region is facing related to the three core priorities of the EPW: moving towards universal health coverage (UHC), protecting people better against health emergencies and ensuring healthy lives and well-being. Although from the EHR2021 it shows that data for many SDG indicators can be reported, there are also many areas that we cannot monitor well due a lack of data. Such data gaps are not stand-alone problems but relate to wider issues with the functioning of HISs. In the second presentation we will present an overview of the most important data gaps for key indicators and common issues in national HISs in the European Region, providing insight into where concretely action needs to be taken to ensure a stronger evidence-base for policy-making. Supporting MS in strengthening their HIS has traditionally been an important focus in WHO Regional Office for Europe's (WHO-Euro's) work and continues to be so under the EPW. One important tool that WHO-Euro uses for this purpose is a HIS assessment. Such an assessment provides insight into the strengths and weaknesses of the HIS and is the starting point for an evidence-informed process of HIS strengthening. In the third presentation, we will present WHO-Euro's HIS assessment approach. Lacking or incomplete digitalisation is a common issue in HISs in the Region, and the COVID-19 pandemic has emphasized the need for implementing digital solutions to improve the efficiency of HISs. Therefore, supporting Member States in the further digitalisation of their HIS is an important focus of WHO-Euros HIS strengthening work for the coming years. In the final presentation, we will present WHO-Euro's existing tools and planned activities related to this. Participants of this workshop will get a comprehensive overview of current challenges related to achieving the health-related SDGs in Europe, with a specific focus on challenges related to health information. They will learn about WHO-Euro's approaches and plans for how to tackle these challenges.

Key messages:

- Although the European Health Report 2021 shows data for many health-related SDGs, there are important areas that we cannot monitor well due to a lack of data and issues in health information systems.
- Overcoming these issues is crucial for a strong evidence-base for health policy, and therefore WHO Regional Office for Europe has a series of tools and activities to support Member States in this.

Abstract citation ID: ckac129.131
Main findings of the European Health Report 2021

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The EHR2021 examines the WHO European Region's progress towards the health-related SDGs, the impact of the COVID-19 pandemic on population health, and approaches to build back better from 2022 onwards. It provides insight into the main challenges related to the 3 core priorities of the EPW, which are moving towards UHC, protecting people better against health emergencies, and ensuring healthy lives and well-being for all at all ages. In this presentation, we will have look at these 3 core priorities in more detail. Although the European Region is making good progress for some of the SDG targets, challenges and delays exist across the core priorities. For example, the incidence of catastrophic health spending ranges from 1% to 19% across countries, and the European Region is one of two global regions where the overall number of new HIV infections is increasing. One year into the pandemic, 29% of health services were still at least partially disrupted in the Region. The impact of the pandemic aggravates the effort Member States will have to make to reach the health-related SDGs by 2030. Furthermore, there are large and persistent differences between Member States. The COVID-19 pandemic has exacerbated existing health inequalities by impacting vulnerable groups most severely. To build back after the COVID-19 crisis, the EPW will be the leading policy framework for the coming years to take on the challenges identified. The report shows that the evidence base for supporting the policy efforts that Member States will have to make for reaching the SDGs and working on the EPW core priorities is suboptimal. While the COVID-19 pandemic has emphasized the importance of health information and sparked innovative ways of data collection and processing, there are still data gaps for key indicators and operational challenges in HISs. Overcoming these issues in health information is critical for improving the health of the people in the WHO European Region.

Abstract citation ID: ckac129.132
Current gaps in data and health information system in the European Region

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When the SDGs were adopted in 2015, it was already clear that major issues regarding data availability would need to be tackled to enable comprehensive and policy-relevant monitoring and reporting. The SDG Report 2019 found that most MS were still not regularly collecting data for more than half of the global indicators. The measurement framework (MF) of the EPW builds on the SDGs. Also here, important data gaps for the included health-related SDG indicators exist. These gaps relate, e.g., to coverage of treatment for substance use disorders and the proportion of women with satisfied family planning needs. In addition, the MF exposed data gaps for several other areas that are highly relevant for the WHO European Region, such as health inequalities, intersectoral action for health, ageing populations and mental health. To help overcome these gaps, the EPW MF includes a development list. This list contains 20 indicator areas for which either no well-defined measures have yet been included in Region-wide international data collections or where data are available only for a limited number of MS. It will serve as a priority list for developmental work on indicators in the European Region in the coming years. Data gaps as described above are not stand-alone problems but are linked to wider issues with the functioning of HISs. In the European Region, the main HIS challenges relate to limited resources and capacity; insufficient coordination and collaboration, leading to fragmentation and problems with interoperability; lack of central governance; and limited use of health information for decision-making. In this presentation, we will give an overview of the main gaps in data and HISs in the European Region and explain the roadmap for the implementation of the EPW MF, which will be an important tool to achieve sustainable improvement of data availability and quality for key indicators. Tools to improve HIS performance overall will be addressed in the next presentation.

Abstract citation ID: ckac129.133
Health information system (HIS) assessments as the starting point for HIS strengthening

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One of main the HIS strengthening tools applied by WHO-Euro is the ‘Support tool to assess health information systems and develop and strengthen health information strategies’, which was first published in 2015 and updated in 2021. The support tool comprises two main parts: it provides guidance firstly for performing an overall assessment of the full HIS, and secondly, for the subsequent development of an HIS strategy. The common mode of application of this tool is an external HIS assessment by a WHO team and a subsequent country-led process of HIS strategy development. So far, experience in the field has been gained mainly with the assessment part of the tool, which has been applied in 15 MS. The assessment process starts with a preparatory desk review, followed by a country visit during which semi-structured interviews are held with key HIS stakeholders. The guidance for the interviews consists of a core module and several add-on modules. The aim of the core module is to provide an overview of the functioning of the entire national HIS, while the add-on modules shed more light on specific parts or functions of the HIS, such as noncommunicable diseases monitoring, human resources for health or health data governance. The core module forms the basis of the HIS assessments, and one or several add-on modules can be added to it, according to the needs of the assessed country. The country visit is finalised with a multi-stakeholder debriefing. After the visit, a report is written with a summary of the situation in the country including an HIS maturity score, an analysis of strengths, weaknesses, opportunities, and threats (SWOT), and recommendations for improvement for the short, medium, and long term. In this presentation, we will explain the methodology of the assessment tool, and reflect on its added value as well as challenges encountered when applying it in practice.

Abstract citation ID: ckac129.134
The importance of digitalisation and data science for HIS strengthening

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The COVID-19 (coronavirus disease 2019) pandemic has underscored the critical need for all countries to strengthen their health data and information systems and ensure the routes the data travel, from submission to use, are unobstructed. Timely, credible, reliable, and actionable data are key to ensuring that political decisions are data driven and facilitate understanding, monitoring, and forecasting. To ensure that critical decisions related to the wider health and socioeconomic effects of this pandemic are data driven, each country needs to develop or enhance a national data governance plan that includes a clear coordination mechanism, well-defined and documented data processes (manual or electronic), the exchange of data, and a data culture to empower users. In addition, countries should now more than ever invest and enhance their data and health information systems to ensure that all decisions are data driven and that they are prepared for what is next. Furthermore, strong enabling environments and advanced and digitized health information systems are vital to controlling epidemics. Sustainable finance and government support are required for the continued implementation and enhancement of HIS. It is important to promote digital solutions beyond the COVID-19 pandemic. Now is the time to discuss potential solutions to obtain timely, accurate, and reliable health information and steer policy-making while protecting privacy rights and meeting the highest ethical standards.

3.D. Workshop: An urgent need to fully understand Long Covid-19 and its sequela

Abstract citation ID: ckac129.135

Organised by: EUPHA-CHR
Chair persons: Sarah Cuschieri (Malta), Julian Mamo (EUPHA-CHR)
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Introduction:

Covid-19 has been a pandemic for the past two years. From early on, it became obvious that some of the individuals surviving the infection continued to experience symptoms beyond the acute phase of the infection or else developed symptoms after the acute infection. Multiple terminologies describing this phenomenon started to appear with 'Long Covid' being a popular nomenclature. It soon became evident that Long Covid can affect almost all the body's systems with a plethora of associated symptoms, while new symptoms keep on emerging across time. These persistent symptoms are noted to act differently among different individuals, irrelevant whether they were previously healthy or previously suffering from any chronic disease/s. Indeed, while some experienced persistent symptoms for a couple of weeks, some had persistent symptoms for months. The variations in the severity of symptoms are another feature that became evident among Long Covid sufferers. The year 2021 saw the approval of different Covid-19 vaccines and the initiation of vaccination rollouts across Europe. As the vaccine population coverage progressed, it was anticipated that the lower viral infectivity rate will also decrease the occurrence of Long Covid-19 among the vaccinated as compared to the unvaccinated. Yet breakthrough Covid-19 infections still occurred along with the development of Long Covid-19 among vaccinated, especially as new variants emerged and immunity waned. Long Covid-19 is still a relatively new condition with unspecified pathophysiology and unknown long-term disability trajectory. Therefore, it is imperative that this condition is put into the spotlight to comprehend this pandora's box while trying to prevent its occurrence and the associated sequela.

Aim:

Considering the fluidly of this condition with speculations that Long Covid might be the new chronic disease of this decade, this workshop is set to provide a multidisciplinary platform for emerging evidence on Long Covid originating from across Europe. In fact, the presentations in this workshop will tackle various aspects pertaining to Long Covid. The first presentation will provide evidence on the different risk factors and symptoms of Long Covid. The second presentation will discuss the association of multimorbidity and socio-economic factors as risk factors of Long-Covid. The third presentation will bring forward the perspectives of those suffering from the condition and the need for an integration of health care targeting both Long Covid and chronic diseases. While the fourth presentation will discuss the burden of Long-Covid symptoms and its impact on the quality of life. Finally, the bidirectional relationship between Long Covid-19 and NCDs along with the required public health action will be discussed. This will be followed by a discussion between the presenters and the audience.

Key messages:

- Long Covid-19 is a common occurrence among healthy and chronic diseases population alike with a plethora of contributing risk factors.
- An integrated healthcare plan is required to decrease the impact of Long Covid-19 on the population while simultaneously managing other underlying conditions and diseases.

Abstract citation ID: ckac129.136
Classification and risk factors of Post COVID-19 condition: a longitudinal study in the Belgian population

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Background:

Since the onset of the COVID-19 pandemic, most research has focused on the pathophysiology and management of the acute symptoms of COVID-19, yet some people tend to experience symptoms beyond the acute phase of infection, that is, Post COVID-19 condition (PCC). However, evidence on the prevalence of PCC, its symptoms, and mechanisms are still scarce. This study aimed to assess the distribution, patterns of symptoms, and associated factors of PCC in adult with confirmed COVID-19 infection in Belgium.

Methods:

This is a longitudinal cohort study of Belgian adult population with recent COVID-19 infection confirmed via a molecular test and systematically recruited via national tracing call centers. A total of 5181 people were followed-up using online questionnaires at the time of their infection and 3 months later (from April 2021 to February 2022). Their physical, social and mental health was evaluated as well as their acute COVID-19 symptoms and persistent PCC symptoms. These different variables were self-reported.

Results:

Half of the participants reported PCC (49.6%). The most frequent persistent symptoms 3 months after infection were fatigue (28%), headache (18%), and memory problems (12%). Women (OR = 1.67,CI95% = 1.40-1.99), people with a lower level of education (OR = 1.23,CI95% = 1.02-1.48), obese people (OR = 1.23,CI95% = 1.02-1.48), people with chronic disease (OR = 1.97,CI95% = 1.40-2.77), and people with a higher number of acute COVID-19 symptoms (OR = 2.56, CI95% = 1.83-3.58) or hospitalised (OR = 2.19,CI95% = 1.25-3.82) were more likely to report PCC. Finally, a latent class analysis on the 29 PCC symptoms highlighted 3 different classes of symptoms.

Conclusions:

With the growing number of people infected with COVID-19, PCC is becoming an important public health issue. To allow people with PCC to recover, it is essential to have a multidisciplinary approach and to provide early post-acute physical and psychological rehabilitation interventions according to symptom patterns.

Abstract citation ID: ckac129.137
How multimorbidity and socio-economic factors affect Long Covid: Evidence from European Countries

Piotr Wilk

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Introduction:
An increasing number of individuals continue reporting symptoms following the acute stage of Covid-19 infection. Few studies have investigated the factors related to Long Covid. Our aim was to assess how multimorbidity, socio-economic factors (immigration, education, employment, and income), and country of residence affect the presence and number of persistent symptoms attributable to Covid-19 illness in Europe.
Methods:
We used data from the SHARE Corona surveys collected in 2020 and 2021. The sample included 4,004 respondents aged 50 years and older who were affected by the Corona virus. The outcome was the number of persistent symptoms attributable to Covid-19 illness, including: fatigue; cough, congestion, shortness of breath; loss of taste or smell; headache; body aches, joint pain; chest or abdominal pain; diarrhoea, nausea; and confusion. We conducted a multilevel analysis for a hurdle model with negative binomial distribution.
Results:
Overall, 73% of respondents were estimated to have at least one persistent symptom associated with Covid-19 illness and, on average, they had 2.73 symptoms. However, there were some statistically significant across country differences in the presence and number of symptoms. Respondents who were employed were more likely to report at least one symptom (OR = 1.40) and those with higher levels of education were less likely to report any symptoms (OR = 0.67). Respondents with multimorbidity had an increased risk of experiencing an additional symptom (RR = 1.12) while respondents who were employed had a decreased risk of experiencing an additional symptom (RR = 0.85).
Discussion and conclusions:
Presence and number of persistent symptoms associated with Covid-19 illness was highly prevalent and varied significantly across European countries. Evidence from the present work underscores the need to target high-risk groups and those with multimorbidity to reduce long-term health consequences of Covid-19.

Abstract citation ID: ckac129.138
Perspectives of long COVID patients on their (unmet) needs: a national quantitative and qualitative study

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Introduction:
After COVID-19, many people continue to experience various symptoms for several weeks, even after a mild acute phase, and encounter difficulties when confronted with the healthcare system. Patient associations asked the Belgian Health Care Knowledge Centre to investigate the needs of these patients to improve their management.
Purpose of research:
An online quantitative survey was conducted in 2021 among Belgian patients with history of COVID-19; having/had persisting symptoms for at least 4 weeks. Alongside questions on symptoms, treatment and impact on employment, Health-Related Quality of Life (HRQoL) before and after COVID-19 was measured through the EQ-5D-5L. A regression analysis identified the factors associated with the impact of long COVID on HRQoL. The qualitative approach consisted in 33 interviews and forum discussions among 101 patients.
Results:
1320 patients completed the online survey, most were symptomatic for more than 3 months. The average EQ-5D-5L index score was 0.85(95%CI:0.83-0.86) before and 0.65(95%CI:0.63-0.66) after infection. Duration, number and type of symptoms of long COVID significantly impacted HRQoL. More than half of the patients were unable to work. Qualitative part identified lack of empathy of health professionals, of systematic diagnostic approach, of interdisciplinary coordination. Patients felt misunderstood and developed their own diagnostic or treatment strategies. They questioned the value of medicine and resorted to non-reimbursed alternative therapies.
Conclusions:
Long COVID has a significant impact on HRQoL and employment. Because of long COVID, patients were confronted, sometimes for the first time, with the imperfections of the health system. Better informing the health professionals on Long COVID patterns and management options, including reimbursement possibilities, and a comprehensive interdisciplinary assessment would give them the tools to respond to the needs of these patients.

Abstract citation ID: ckac129.139
Long COVID: health symptoms, impact on health-related quality of life and mapping to disability weights

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Introduction:
Previous studies indicated that a significant share of COVID-19 patients experiences long lasting health complaints; a condition also referred to as ‘‘long COVID’’. In order to assess the long term burden of disease of COVID-19, including long COVID, information is needed on health symptoms, health-related quality of life and duration of symptoms of long COVID patients. Therefore, the aim of this study was to assess health symptoms and health-related quality of life of long COVID in the general population of the Netherlands.
Methods:
A total of 33,903 COVID-19 patients from the region South-Holland South (the Netherlands) whom tested positive between June 2020 and May 2021 at the municipal health services were invited to complete a web-based questionnaire on the presence, nature and consequences of long COVID and health-related quality of life, measured with the EQ-5D-5L.
Results:
In total, 3,768 participants who completed the questionnaire experienced long COVID. Most commonly reporting symptoms were reduced physical condition (65.5%), fatigue (59.6%), problems concentrating (49.6%), loss of smell

(41.2%) and shortness of breath (37.8%). 648 participants indicated that they experienced long COVID symptoms for 5 months or longer. Preliminary analysis showed that increasing number of symptoms was associated with a decrease in health-related quality of life.

Discussion and conclusions:

Long COVID covers a range of health symptoms of varying severity and duration. This complicates the calculation of the non-fatal burden of disease of COVID-19, particularly because mapping of long COVID to existing disability weights is hampered.

Abstract citation ID: ckac129.140

Long COVID and NCDs: the Elephant in the Room

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Issue/problem:

COVID-19 has now emerged as a public health concern that not only disrupted healthcare services of people living with non-communicable diseases (NCDs) but likely also increase the burden of NCDs.

Description of the problem:

Before the pandemic, SDG target 3.4, which calls for a reduction in premature mortality from NCDs by one third by 2030, was expected to be achieved by 17.5% of countries, and a further of 23% could achieve the target with a slight acceleration in decline. Currently, most countries are off track due to disruption of healthcare services for people with NCDs, overstretched health systems, and fewer resources than before the pandemic. In addition, only around one in four people who had COVID-19 reported feeling fully recovered within a year of being discharged from hospital. The adverse health effects from long COVID range from ‘invisible symptoms’ such as fatigue and difficulty concentrating, to neurological and neuropsychiatric symptoms, respiratory and cardiovascular problems, and metabolic disease.

Results:

The COVID-19 pandemic has shown that siloed programmes are increasingly unfit, and the bidirectional relationships between communicable diseases and NCDs underscore the need to dismantle disease-specific silos, emphasising reforms and investments that improve a wide range of health outcomes. Cost-effective, feasible, and relevant interventions that target both physical and mental health impairments are urgently required.

Lessons:

By 2030, ministries of health would need to contribute about 20% of their budgets to high-priority NCD interventions. Protecting current investments and scaling up cost-effective public health interventions is especially crucial in the context of long haul COVID and NCDs. Policy makers and planners will need concrete guidance for making progress on SDG target 3.4, often with overburdened health systems and scarcer resources.

3.E. Workshop: Is (Planetary) health a priority in international deals?

Abstract citation ID: ckac129.141

Organised by: EUPHA-ENV
Chair persons: Marija Jevtic (EUPHA-ENV), Vlatka Matkovic (Belgium)
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This workshop is dedicated to different types of deals/arrangements relating environmental health to planetary health, healthy energy, arrangements linking science to actions, and statement given by experts to recognise health in ambitious initiatives toward zero pollution. By presentations about planetary health education, it will underline the role of training as a cornerstone for international sustainable public health deals. The Lancet Public Health underlines: “No public health without planetary health”, the future health of the planet and human health are inextricably linked. Planetary health should be part of all global, national but also regional and local deals to improve sustainability worldwide. Further research and applications of the public health (PH) Education Framework are needed in order to increase evidence and awareness in PH and strengthen PH collaboration in Europe and beyond. Workshop will also discuss the European response and transformation towards healthy energy, as a part of many agreements/deals, especially European Green Deal. Science and the accelerating scale of environmental degradation tells us we have to be more ambitious and strive to zero pollution. Health-based approach can be the overarching principle to deliver on these ambitions. For a healthy planet for healthy people we need to have more determined action plans that will deliver on zero pollution and have a sound health-based approach. To achieve better public health, false solutions to the current energy, unsustainable and polluting energy crisis, is to go ambitiously for zero-pollution solutions. Looking for a strong argument for Clean air deals, the researchers will present their preliminary results of costs of air pollution impact on health in the Western Balkans (WB). It is well documented that poor air quality is responsible for increased risk of mortality and morbidity. The WB region was selected for this study because it is one of the air pollution hotspots in Europe where the levels of PM2.5, PM10, NO2 and O3 are frequently above the EU Air Quality Directive guidelines. Air pollution impact on health has a relatively higher economic burden in the WB compared to EU27 due to both the higher pollution levels and the lower per capita GDP. The external costs of air pollution is a strong argument to consider health as a priority in every policy area at national level as well as international agreements. Furthermore workshop will also present an initiative regarding health experts’ voice for Healthier Choice - a call for Zero Air Pollution in the WB. Health experts in the WB have joined forces to highlight the importance of air quality actions and achieving zero air pollution as a prevention intervention for public health. Health experts highlight that in Green Agenda for the WB the most needed are clear goals of achieving zero pollution and a timeline in the near future.

Key messages:

- Planetary health should be part of all global, national but also regional and local deals to improve sustainability worldwide.
- The external costs of air pollution is a strong argument to consider health as a priority in every policy area at national level as well as international agreements.

Abstract citation ID: ckac129.142
Planetary health education: a cornerstone for international sustainable public health deals

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As stated in The Lancet Public Health editorial, "No public health without planetary health", the future health of the planet and human health are inextricably linked. For this reason, global citizens, practitioners, and professionals, especially those involved in Public Health, must be equipped to address and understand the field of Planetary Health (PH), which looks at the complex connections associated with disruptions to natural systems and resulting impacts on human health. Strategies aimed at incorporating PH education into high schools and academic curricula are required to build capacity for future national and local PH leadership. One of the most relevant tools used to achieve these goals is the PH Education Framework, designed by the Planetary Health Alliance (PHA). This framework considers five foundational domains as essential for PH knowledge, values, and practice, and has been currently applied by different institutions involved in PH. The Italian Institute for PH (IIPH) applied this framework to a school-based project for education in urban health, which will be better described in the workshop presentation. The PH Education Framework domains were used for the development of four interactive sessions oriented to raise students' interest on the topic and stimulate active participation during and after the intervention, also with simple pro-environmental behaviours. The experience was shown to be fruitful for Public Health residents as well, who were deeply involved in and led the interactive sessions held in the high school. By means of a qualitative assessment, residents demonstrated to have increased their self-confidence, knowledge and leadership skills in PH. Further research and applications of the PH Education Framework are needed in order to increase evidence and awareness in PH and strengthen PH collaboration in Europe and beyond.

Abstract citation ID: ckac129.143
The European response and transformation towards healthy energy

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The EU Green Deal is the framework to achieve carbon neutrality by 2050, and decarbonisation and sustainability in the main economic sectors. This includes a revised greenhouse gas reductions goal of at least 55% for 2030, as well as commitments on zero pollution, healthier agricultural production, sustainable mobility and energy. Moreover, as part of the EU Green Deal, the European Commission has established a Just Transition Mechanism (JTM), to ensure that the transition towards a climate-neutral economy happens in a fair way, leaving no one behind. The aim is to mobilise at least €100 billion over the period 2021-2027 for carbon-intensive industries. But health costs of pollution are absent in Just Transition considerations. The Green Deal includes all the right "buzz words" and commitments for a healthy planet for healthy people. However, policy-makers also need to walk the talk when it comes to adopting the right laws and measures. The science and the acceleration of the climate change, environmental and health crises show us that we need to step up. HEAL believes a zero pollution- and health-based approach can be the overarching principle to deliver on these ambitions. The war in Ukraine as the latest crisis has brought up once again the need for the swift, without any delay, phase-out of all fossil fuels. In Europe, the recently proposed RePower EU plan aims to set a pathway for increased renewables, energy savings and diversification well before 2030. However, with a holistic view of the problem under a health lens, it is clear that in this transition from fossil fuels inequalities and social considerations need to be placed central. Of particular importance is to not give space for false solutions such as replacing Russian imports with fuels from other authoritarian regimes or economies which will only continue to perpetuate Europe's energy dependence, or to build up infrastructure that will continue the pollution (gas and biomass included).

Abstract citation ID: ckac129.144
Costs of air pollution impact on health in the Western Balkans: preliminary results

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Air pollution is the main environmental driver associated with health. It is well documented that poor air quality is responsible for increased risk of mortality and morbidity. The social cost of mortality in 2015 was estimated in 3 trillion (OECD, 2016). The Western Balkans (WB) comprise Albania, Bosnia and Herzegovina, Kosovo*, North Macedonia, Montenegro and Serbia covering area of 218 750 km2 and a population of 19.9 million with total GDP of €94.2 billion (Banja et al., 2020). The WB was selected for this study because it is one of the air pollution hotspots in Europe where the levels of PM2.5, PM10, NO2 and O3 are frequently above the EU Air Quality Directive guidelines. This situation has been associated with a higher proportion of premature deaths attributable to air pollution exposure (4-19% of total deaths) in this region compared to EU member states (EEA, 2021). The health impacts including mortality and morbidity were estimated for particulate matter PM2.5, ozone (O3) and nitrogen dioxide (NO2) at country and city level on the basis of exposure in 2019 derived from monitoring stations and model estimations. Mortality impacts were parameterised using the number of premature deaths. Morbidity costs included: chronic bronchitis, hospital admissions due to respiratory diseases, hospital admissions due to cardiovascular diseases, bronchitis in children, asthma in children, reduced activity days and work lost days. The costs of mortality attributable to air pollution were estimated on the basis of non-market welfare based methods (WTP approach) while morbidity costs were estimated mainly with market based methods combining both direct and indirect costs. The 2019 health costs, both per capita and as share of the GDP, associated with air pollution in the WB were considerably higher than those in EU27.

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Health Experts' voice for Healthier Choice – a call for Zero Air Pollution in the Western Balkans

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In 2019, the European Environment Agency has shown that the fine particulate matter PM2.5 caused more than 25 000 premature deaths in six Western Balkans countries alone, namely Albania 4 000, Bosnia and Herzegovina 5 900, Kosovo* 2 800, Montenegro 900, North Macedonia 3 400 and Serbia 11 400. In the same year, more than 2 200 lives were lost due to nitrogen dioxide (NO2) and ozone (O3) pollution. Air pollution and climate change are major health problems in the region. Health experts in the Western Balkans region have joined forces to highlight the importance of air quality actions and achieving zero air pollution as a prevention intervention for public health. We brought together a call for the Western Balkans policy-makers to invite them to commit to full alignment of all national air quality standards with the World Health Organization guidelines, to establish regional inter-sectoral cooperation to accelerate the moving to zero pollution, to including health authorities, public health institutes, and medical societies, patient representative and all health care experts and providers; to end direct or indirect public subsidies of polluting processes, especially fossil fuel activities such as coal power plants; to finalise the process of the ratification of the Convention on Long-range Transboundary Air Pollution and its protocols; to support modelling to establish economy-wide emission reduction commitments for the five main pollutants; to develop and implement Air Quality Strategies; to increase the uptake of Best Available Technologies (BAT) in accordance with the Industrial Emissions Directive; to establish an adequate air quality monitoring system, and to including through accreditation of air quality monitoring networks. Public health experts from the WB, united in the regional call, highlight the urgent need for improvements in air quality in the region together with a zero air pollution objective and a timeline to reach it.

Abstract citation ID: ckac129.146
How much global climate adaptation finance is targeting the health sector?

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Climate change seriously threatens health and wellbeing with projected health burdens estimated to cost USD 2-4 billion a year by 2030. Adaptation in the health sector is critical to keep pace with the ongoing consequences of the climate crisis and the impacts projected to occur in the next decade and beyond. Yet estimates by the WHO indicate that climate finance targeting the health sector to date is extremely low: less than 0.5% of multilateral climate adaptation funding has targeted the health sector. In this study, we trace and quantify the amount of adaptation financing targeting the health sector from both multilateral and bilateral sources using publicly available information on the OECD-DAC database and Climate Funds Update. We find that between 2009-2019 only 0.39% of multilateral and bilateral climate adaptation funding targeted health-related efforts specifically. Despite the relatively higher number of health-related projects in Sub-Saharan Africa compared to other regions, a smaller amount of funding is allocated per project compared to other regions. Regional variations in funding are concerning as the countries with the most vulnerability to the climate crisis coincide with regions getting the least amount of funding per project. There is a significant gap in globally financed adaptation efforts in the health sector. Swift and committed remediation is needed to minimise the spiralling risk of high negative health outcomes.

Key messages:

- Between 2009-2019 only 0.39% of multilateral and bilateral climate adaptation funding targeted health-related efforts specifically.
- The countries with the most vulnerability to the climate crisis coincide with regions getting the least amount of funding per health project.

3.F. Round table: Better DiPH – To plan, implement, evaluate, and the future of digital public health interventions

Abstract citation ID: ckac129.147

Organised by: Leibniz ScienceCampus Digital Public Health Bremen LSC (Germany), EUPHA-DH
Chair persons: Laura Maass (Germany), Chen-Chia Pan (Germany)
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The potential of digital technology for improving the health of individuals, communities, and populations is unprecedented. Technological advancements empower individuals to engage in self-monitoring and self-management of their chronic conditions or health and well-being. There is an unparalleled opportunity to reform prevention, health promotion, and healthcare services with lower cost and better reach and accessibility. However, health technologies are often developed without supportive evidence or a user-centred design. This leads to a lack of long-term user engagement in digital public health interventions. Our workshop aims to facilitate a mutual understanding of the specific properties of digital public health tools by creating a space for discussing the various perspectives of such technologies. We want to start a conversation of essential steps for conceptualising, implementing, and evaluating needs-based and society-centred digital public health interventions to improve the acceptability and sustainability of such interventions in users. The workshop will address digital public health tools on different steps and describe the progression as an iterative approach to highlight where these aspects are linked. The first speaker will provide a theory-guided overview of digitalisation in health to create a shared understanding of the terminology for the workshop. This includes the differentiation between digital health and digital public health. The talk will highlight the importance of digital tools for surveillance, monitoring, healthcare, health promotion, and their significant meaning for society. Following this input, the other panellists will guide us through different aspects of digital public health tools: The second speaker will discuss the importance of society-centred designs based on users' needs rather than on technological advancements for interventions. Our third speaker will present a meta-framework of extended criteria for developing and evaluating digital technologies for public health. The fourth panellist will share Malta's COVID-19 contact tracing app as a case study. He will discuss the challenges and facilitators in implementing and evaluating digital public health interventions. The last presentation will cover the need for governmental support in the future to ensure the success of digital public health interventions and holistic systems. The workshop will take place as a round table discussion. Each panellist will give a short (7 minute) input talk on the specific properties of digital public health tools. After the panellists present their opinion, we will open the floor for a discussion. Here, the audience is invited to share their knowledge and experiences to build a mutual understanding of the crucial steps in digital public health interventions. After the workshop, we will create a white paper on digital public health based on the panellists' input and the discussion results.

Key messages:

- A mutual understanding of digital public health may facilitate public sector cooperation and aim towards needs-based and society-centred technology development to improve the population's health.
- Digital public health offers unique challenges, and there is an opportunity to outline these specific nuances to ensure maximum success in implementing such projects.

Abstract citation ID: ckac129.148
Highlighting the 'public 'in digital public health – a critical reflection

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What is the appropriate differentiation of digital public health versus digital health - or is there none? This is an essential question when pondering digitalisation and public health, especially with a view to the potential development of the field. Digital health seems to be a general term related to information and communication technology in health care. Putting a public health lens on this general descriptive term can be done by simply expanding it towards public health as a population science and practice field, rather than the narrow medical and health care arena. However, a more specific approach towards outlining similarities and differences will also focus on digital technologies and their challenges in the core areas of prevention and health promotion. Considering the leading public health functions, their relationship with digitalisation and their specific requirements towards digitalisation can be a valuable path to describe and discuss what digital public health is all about. We will also highlight where interfaces and interrelations with digital health need to be considered for research and practice. This contribution will aim to provide such a perspective.

Abstract citation ID: ckac129.149
Moving from human-centred to society-centred design of health technologies

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The digitised society promises technological solutions to support mental and physical health and well-being. Amongst others, the consumer market, health insurance providers, and companies offer technologies to, among other things, track one's mood, improve diet and fitness habits, foster healthy sleep patterns or track our brain waves to enhance relaxation. However, while the potential benefits of such technologies are apparent and technologies might increase individual and public health, long-term engagement with health technologies is comparably low. This hints at ineffective solutions and insufficient knowledge of user needs. Understanding the specific context of use and user needs is vital to increasing technology adoption, personal benefits, and profitability of health technologies. Taking the user perspective into account when designing technologies is essential to support health and well-being. To foster long-term engagement with health technologies, we argue for considering the broader social context of digital health tools and reflecting on ways how we can empower society to design better and more inclusive health technologies. Hence, when developing digital public health tools, it is essential to go beyond conceptualising people as users and instead shift the focus to humans as part of society and embed such consideration in the design process.

Abstract citation ID: ckac129.150
A framework for developing and evaluating digital and public health tools

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To paraphrase a classic, evaluating digital technologies in health is a bit like eating spinach - no one is against it in principle because it is good for you. However, no one would do it unless being asked to. In recent years, the sheer number of digital health technologies that potentially fulfil public health purposes has increased tremendously. The basis for evaluating such tools for public health purposes however has not met this pace, and in particular frameworks for the systematic development and evaluation of digital technologies in public health are rare. Existing frameworks for digital technologies focus on clinical aspects of digital health applications (e.g., NICE Evidence standards framework for digital health technologies), thus lacking both a population and prevention focus. Generic frameworks such as the Health Technology Assessment (HTA) methodology do not contain items specific to digital technologies and public health purposes. Here, we describe the process of developing a framework specific for the development and evaluation of digital public health technologies based on the core HTA model. We conduct a scoping review of frameworks for the development and the evaluation of technologies in public health and digital health, following PRISMA-SCR guidelines. The identified frameworks are then mapped onto the core HTA model to develop additional items specific for the development and the evaluation of digital technologies in public health. These additional items can be used to integrate the development and evaluation of digital technologies for public health purposes within the wider HTA context, making this process both transferable and scalable.

Abstract citation ID: ckac129.151
Implementing a digital public health project - lessons learned?

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The demand for the digitalisation of public health has been ongoing for more than a decade. The COVID-19 pandemic was the tipping point that accelerated the ideation, implementation, and scale-up of such public health projects. Despite the well-needed push, the same challenges that face every similar implementation will nonetheless be the same if not accentuated. The scope of the presentation is to highlight the difficulties and facilitators that such implementations and evaluations bring forward. We will also see what we can learn as public health professionals to ensure that present and future information systems are well-planned. We have to ensure that they do not succumb to the pressure of well-intended stakeholders who are yearning for such solutions to help their business workflows. This presentation will be enhanced with the lessons learned from implementing, monitoring, and following up on Malta's national contact tracing app and Customer Relationship Management systems based on Microsoft Dynamics 365 technologies that tackled the Test, Track and Trace workflows that were integral to the COVID response in Malta.

Abstract citation ID: ckac129.152
Making the case for the governance of (digital public) health futures

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Digital and data tools are fundamentally changing approaches to health and the design of health systems, but governance models have neither followed nor kept up with the pace of innovation. In response to this challenge, The Lancet & Financial Times Commission on Governing health futures 2030: Growing up in a digital world explores the convergence of digital health, artificial intelligence, and other frontier technologies with universal health coverage to support attaining the SDG 3. Children and young people are crucial groups requiring particular attention to ensure that no one is left behind in achieving universal health coverage and SDG 3 amidst the digital transformation in health. Today, there are 1.8 billion people between the ages of 10 and 24 - the largest youth population in history - 90 percent of whom live in developing countries. This cohort represents an unprecedented powerhouse of human potential and digital engagement that could transform health to reach sustainable development goals. This presentation introduces several key findings from the Commission's report which pertain to the governance of (digital public) health futures amidst digital transformations in health. It will highlight how human-centred approaches to health are vital to navigating the digital transformations and maximising their benefits for population health and well-being. Further, it will provide an action plan for meaningful youth engagement in the design, development, implementation, and evaluation of digital public health policies, programmes, and services.

3.G. Pitch presentations: Data for health services research

Abstract citation ID: ckac129.153
Association of hospital/ICU characteristics with HAIs: findings from the SPIN-UTI project

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Background:
Preventing the spread of healthcare-associated infections (HAIs) in Intensive Care Units (ICUs) constitutes a priority for Public Health. In a country with decentralized healthcare system, the comparison between and within regions might represent a useful approach to identify what hospital and ICU indicators are associated with HAIs.

Methods:
Using data from the SPIN-UTI (''Sorveglianza attiva Prospettica delle Infezioni Nosocomiali nelle Unità di Terapia Intensiva'') network, the present analyses aimed to identify the main hospital and ICU indicators associated with HAI incidence at national level, and to stratify the analyses between Italian regions.

Results:
No associations between hospital/ICU characteristics and HAIs were evident at national level. However, ICUs in Southern Italy showed the highest incidence density of HAIs if compared with those in Central and Northern Italy ($p < 0.001$). Stratified analyses found a positive association of incidence density of HAIs and total days in ICU in Northern Italy ($\beta = 0.3$; SE = 0.1; $p = 0.002$); a positive associations with ICU size ($\beta = 1.8$; SE = 0.7; $p = 0.020$), total days in hospital ($\beta = 0.06$; SE = 0.02; $p = 0.037$) and total days in ICU ($\beta = 0.5$; SE = 0.1; $p = 0.006$) in Center Italy; a positive association with hospital size in Southern Italy ($\beta = 20.3$; SE = 9.4; $p = 0.033$).

Conclusions:
Although our study confirms that HAIs still represent an important issue in Italian ICUs, there is some variation between regions from Northern, Central and Southern Italy. In general, we found that HAI incidence increased with increasing number of beds in hospital and in ICU, as well as with the the increasing number of patient-days. However, further research is necessary to better understand if additional hospital and ICU characteristics could motivate the observed regional differences.

Key messages:
- There is a large regional variation in the incidence of HAIs in Italian ICUs and hospitals.
- This difference that could be motivated by specific hospital and ICU characteristics.

Abstract citation ID: ckac129.154
Association between socio-economic deprivation and AHRQ composite indicator during pandemic

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Background:

The Agency for Healthcare Research and Quality (AHRQ) identifies preventable hospitalizations as proxy of potentially low-quality of care. Previous studies showed as socio-economic status was associated to poor diseases outcomes and to the performance of health services. Recently a particular attention was focused on the effect of the pandemic on this context. The aim of this research is to analyze the association between poor quality of primary care and socio-economic status before and during the pandemic.

Methods:

A retrospective observational study was conducted in Abruzzo Region, Italy. Hospital discharge records (HDR) of two different periods were selected: from April to December for 2019 and 2020. The aggregate Prevention Quality Indicator 90 (PQI-90) has been coded according to the indications of the AHRQ. The Italian socioeconomic deprivation index (DI), divided in quintiles (from 1st less deprived to the 5th most deprived) was attributed to all patient, based on the municipality of residence. A multivariate logistic regression model was performed to evaluate the association between PQI-90 and DI.

Results:

Totally were analyzed 253,063 HDR, of which 14,845 attributable to the PQI-90. By correcting for gender, age and number of comorbidities, the DI was not associated with the PQI-90 during 2019. During 2020 the PQI-90 was associated to 4th DI quintile (aOR 1.19;95%CI 1.09-1.30) and 5th DI quintile (aOR 1.13; 95%CI 1.03-1.23), compared to the 1st quintile.

Conclusions:

The impact of the pandemic on primary care has been substantial. Compared to the pre-pandemic era, during the pandemic, an association between potentially poor quality of care and the most disadvantaged socio-economic areas has been shown in Abruzzo. This evidence must be an interesting starting point for health planning in order to fight against inequalities in health services access.

Key messages:

- The reduction in the primary care quality during pandemic caused potentially preventable hospitalizations and it was associated to socioeconomic deprivation.
- The analysis of hospital admission linked to context indicators such as the deprivation index, can be a useful tool for the policy maker in order to reduce healthcare inequalities.

Abstract citation ID: ckac129.155
Factors influencing general practitioners' decisions in migrant patients with mental health disorder

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Background:

Patients with a migration background (MB) have more mental health disorders than those without migration background. Yet, those patients are still underrepresented in mental healthcare services and have more unmet medical needs. Although providers' bias has been well studied, up to date, little is still known about the factors explaining those biases. We assessed the effect of general practitioners' (GPs') individual and organizational factors on their decision-making regarding diagnosis, treatment and referral recommendations for patient with MB with symptoms of major depression.

Methods:

An experimental study staged a video-vignette of a depressed patient with or without MB. GPs had to make decision about diagnosis, treatment and referral. We then assessed the influence of several factors on their decisions such as age, ethnicity, workload and patient confidence. ANOVA and MANOVA were used for analyses.

Results:

Overall, we found more unfavourable decisions in GPs diagnosis and treatment recommendations regarding the patient with a MB ($F = 3.56$, $p < 0.001$). In addition, they considered the symptoms of the patient with a MB as less severe ($F = 7.68$, $p < 0.01$) and would prescribe less often a medical treatment to these patients ($F = 4.09$, $p < 0.05$). Nevertheless, few factors explained these differences, except the age, the workload and the patient trustworthiness.

Conclusions:

This paper highlighted GPs biases based on apparent migration background of a patient with major depression that perpetuates ethnic inequalities in mental health care. Further research into the origins of discrimination in primary mental health care are needed to explain how and when those discriminations arise.

Key messages:

- This paper shed light on pervasive unintentional discrimination still persist in mental health care among migrants in Europe.
- These findings may help us to further understand the role of general practitioner behaviour in primary mental health care discrimination.

Abstract citation ID: ckac129.156
Socio-economic inequalities in mental health: a new framework and analysis across 113 countries

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Background:

Socio-economic inequalities in common mental health disorders (CMDs) cut across each step in the cascade of care: (1) Less affluent individuals have a higher prevalence of CMDs, (2) are less likely to utilise treatment and (3) might benefit less from treatment when they do receive it. Here, we propose a new framework for distinguishing between these three types of inequalities in CMDs and test if such 'triple inequalities' exist globally and how they vary across countries.

Methods:

We use the Wellcome Global Monitor 2020 ($N = 119{,}088$ in 113 countries) to test if socio-economic factors, psychological factors (stigma and trust) and country-level factors (GDP, GINI and health expenditure) predict CMD lifetime prevalence, utilisation and perceived helpfulness of talking therapy and medication. Multi-level logistic regression models were used.

Results:

As predicted, people with higher household income are less likely to experience anxiety or depression ($OR = 0.90$ for each income quintile, $p < 0.01$), more likely to talk to a mental health professional ($OR = 1.05$; $OR = 1.34$ for higher education, $p < 0.01$) and more likely rate this treatment as very helpful (OR = 1.06, p = 0.02) across countries. In contrast, income is not linked with utilisation (OR = 0.99, p = 0.18) and helpfulness of 'taking medication' for CMDs (OR = 1.02, p = 0.26). In LMICs, the highly educated take less medication (OR = 0.74, $p < 0.01$). Local stigma reduces utilisation (OR = 0.95) and helpfulness of talking therapy (OR = 0.77), while trust in health practitioners increases both (OR = 1.07 util. and OR = 1.31 helpf., $p < 0.01$ in all cases).

Conclusions:

Three types of socio-economic inequalities for CMDs (in prevalence, talking therapy utilisation and helpfulness) deepen disadvantages for the less affluent across 113 countries. For pharmacological treatment, inequalities in utilisation and helpfulness are weaker and have a different social gradient in LMICs. Here, less educated people are more likely to take medication.

Key messages:

- Three types of socio-economic inequalities in common mental health disorders (in prevalence, talking therapy utilisation and helpfulness) exacerbate disadvantages for less affluent individuals.
- These Inequalities in CMD treatment utilisation and helpfulness are stronger for talking therapies than for medication, and depend on country contexts, stigma and trust in health practitioners.

3.H. Pitch presentations: Social inequalities and health

Abstract citation ID: ckac129.157
Adapting and testing a tool to map digital health resources use by older adults in Israel and Taiwan

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Background:

Despite the potential of digital health tools for improving health outcomes, older adults are known to use digital health tools differently than younger adults. Focusing on needs of older populations is critical, as their numbers and proportions are projected to increase dramatically in the coming decades, both in Israel and in Taiwan. A bi-national collaboration was developed to map existing digital health resources available to older adults, as part of a larger study on digital health services use among older adults.

Methods:

A mapping tool was adapted from the WHO classification of digital health interventions, based on the experience in the Taiwanese and Israeli health systems. The areas included public health, prevention, self- monitoring and self-care information and services in primary and tertiary care. The mapping documented digital resources offered by governmental/ Ministry of Health, public primary care (HMOs), hospitals, and non-governmental organizations. Sources of information were institutional websites, evaluated by two specially trained reviewers for each organization who assigned a dichotomous value (yes/no) for each category. Interrater reliability was computed using a Kappa coefficient.

Results:

The instrument included 17 categories and 44 sub-categories of digital resources, ranging from public health information for emergency situations to specific health service characteristics. To date, the Kappa coefficients range from 0.59-0.68 for NGO, MOH and hospital resources, considered substantial; for 3 HMOs, the values ranged from 0.41-0.49, considered moderate.

Conclusions:

The mapping tool adapted to the countries' digital resources allowed for bi-national research to compare/contrast the countries' experience. The next stage of the study will validate the results through expert interviews, followed by an end user survey with older adults to assess both reported use of services and enabling digital health literacy skills.

Key messages:

- To meet the needs of aging populations, attention needs to be given to their engagement with digital health services and resources.
- Mapping digital health resources is essential for estimating how health needs are met nationally.

Abstract citation ID: ckac129.158
Sexual health inequalities among women aged 16-24

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Introduction:

Gonorrhoea is the second most commonly diagnosed sexually transmitted infection in England, and diagnoses among young women increased 31% between 2018 and 2019. Understanding the patterns of testing and diagnosis among young women is likely to aid prevention among the most vulnerable segments of this population.

Methods:

Data on gonorrhoea diagnoses at sexual health services among women aged 16-24 in England were obtained using the GUMCAD STI Surveillance System. We investigated the relationship between two exposure variables (deprivation and ethnicity), and two outcome variables (number of gonorrhoea tests and number of gonorrhoea diagnoses). Poisson regression was used to calculate rate ratios for the relationship between the exposure and outcome variables. The testing analysis was offset for the size of the population, and the diagnosis analysis was offset for the number of tests within the population.

Results:

Between 2012 and 2019, gonorrhoea testing and diagnosis rates were highest among women living in the most deprived areas. The rate of testing in the least deprived 10% of neighbourhoods was significantly lower than that seen in the most deprived 10% of neighbourhoods (rate ratio (RR) 0.79; 95% confidence interval 0.79 - 0.80), and the rate of diagnosis in the least deprived 10% of neighbourhoods was around a third of that seen in the most deprived 10% of neighbourhoods (0.35; 0.33 - 0.36). When compared to White British women, the rate of gonorrhoea diagnosis was lower among Bangladeshi (RR 0.89; 0.75 - 1.05), Indian (0.76; 0.68 - 0.84), Pakistani (0.87; 0.77 - 1.00) and Chinese women (0.60; 0.51 - 0.71) and was highest among Black Caribbean (2.26; 2.18 - 2.33) and Black African (1.40; 1.34 - 1.45) women.

Conclusions:

This analysis found inequalities in the distribution of gonorrhoea among young women in England that may indicate structural barriers to STI prevention that are affecting Black women and those living within the most deprived populations.

Key messages:

- Gonorrhoea testing rates among young women in England are highest among women from deprived areas and Black women.
- Gonorrhoea diagnosis rates among young women in England are highest among women from deprived areas and Black women.

Abstract citation ID: ckac129.159
Diabetes Prevention Programme and socioeconomic inequalities in Type 2 Diabetes in England

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The National Diabetes Prevention Programme (DPP) in England is a behavioural intervention for preventing Type 2 Diabetes Mellitus (T2DM) among people with non-diabetic hyperglycaemia (NDH, HbA1c 42-47 mmol/mol or 6.0-6.4%). How this programme affects inequalities by age, gender, disability, ethnicity, or deprivation is not known. We used multinomial logistic regression models to compare population characteristics at three stages along the prevention programme pathway: prevalence of NDH [using survey data from UK Household Longitudinal Study (N = 794) and Health Survey for England (N = 1,383)]; identification in primary care and offer of the programme [using administrative data from the National Diabetes Audit (N = 1,267,350)]; and programme participation [using programme provider records (N = 98,024)]). Younger adults (aged under 40) [4% of the NDH population (95% CIs 2%-6%)] and older adults (aged 80 and above) [12% (95%CIs 10%-14%] were both under-represented amongst DPP participants [2% of DPP participants (95%CIs 1.8%-2.2%) and 8% (95%CIs 7.7%-8.3%) respectively]. People with disabilities were underrepresented in the DPP [15% (95%CIs 14.9%-15.1%) vs 60% (95%CIs 58%-62%)] compared to the general population. People living in more deprived areas were under-represented [14% (95% CIs 13.7%-14.3%) vs 20% (95%CIs 16%-24%) in the general population]. Ethnic minorities were overrepresented [36% (95%CIs 35.8%-36.2%) vs 13% (95%CIs 9%-17%) in the general population] among DPP referrals, though the proportion dropped at programme completion stage [19% (95%CI 18.5%-19.5%)]. The DPP has the potential to reduce ethnic inequalities but may widen socioeconomic, age, and disability-related inequalities in T2DM. Whilst ethnic minority groups are overrepresented at identification and offer stage, efforts are required to support the completion of the programme. Programme providers should target underrepresented groups to ensure equitable access and narrow inequalities in T2DM.

Key messages:

- The DPP intervention may result in a widening of socio-economic and disability related inequalities amongst people with NDH as the programme had fewer adults in deprived areas and with a disability.
- The programme has the potential to reduce ethnic inequalities, but efforts are required to support the completion of the programme by minority ethnic groups.

Abstract citation ID: ckac129.160
A community-based participatory approach to engaging Congolese migrants in intervention co-design

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Issue:

The World Health Organization has called for tailored, community-based interventions to address disparities in vaccination uptake affecting migrant and minoritised populations, however few exist. This study directly responds to global calls for community-centred and participatory approaches to engaging migrants in routine and COVID-19 vaccination.

Problem description:

Black and African migrants are known to be at risk of under-immunisation and have lower COVID-19 vaccine uptake rates in high-income countries. This UK study will use community-based participatory approaches to engage Congolese migrants in co-developing a tailored intervention to increase vaccine uptake. A community-academic coalition will lead the study. Community members will be trained as peer researchers and financially compensated. The final output will be an intervention strategy tailored to and embedded within the Congolese migrant community.

Preliminary results:

The coalition held 20 hours of planning meetings and peer researcher training in 2021 and co-developed a phased study involving 1) community days with poster walls and qualitative in-depth interviews with Congolese migrants, 2) interviews and workshops with local stakeholders, and 3) co-design workshops with Congolese migrants. Following outreach and pre-engagement, approximately 80 migrants attended the community days, with more than 50 interviews and 100% left positive feedback (including: felt valued, welcomed, Congolese language recognised).

Lessons:

Community-academic partnerships are resource-intensive but can be an effective means to build and maintain trust required to deliver a community-based research study. Academic partners should support community partners in understanding the research process to help manage expectations and provide financial compensation for their time and effort. This study offers an innovative engagement model and study design that can be adapted to other underserved populations.

Key messages:

- Global policy-setting organisations have called urgently for participatory research that engages migrants in the co-production of tailored initiatives to address vaccination inequalities.
- This study uses a novel, theory-driven, participatory approach to engage with and identify barriers to vaccination in Congolese migrants and co-design a tailored strategy to increase uptake.

Abstract citation ID: ckac129.161
How can school-based interventions reduce health inequalities? Results from two reviews

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Background:
Even in young people the chances to grow up healthy are unequal, depending on their socioeconomic position (SEP). In order to reduce these health inequalities, the school is an important field of action for health promotion. However, the evidence is limited regarding interventions focusing on health inequalities. Thus, the aim of the current research is to investigate 1) which school-based interventions contribute to the reduction of socio-economic inequalities in health and health behaviour of children and adolescents and 2) how and under what conditions they are successful.

Methods:
A systematic and a realist review were conducted. Some steps of the methodological approach were used synergistically for both reviews: development of the search strategy, selection of the databases (MEDLINE, SSCI, SCIE, DoPHER and TRoPHI) and some inclusion and exclusion criteria. The search covered the years 2000-2020. The screening and subsequent steps were applied specific to each review design.

Preliminary results:
The search resulted in 10,524 hits of which 37 publications were included for the systematic review. Most of the interventions focused on nutrition (14), followed by mental health (8) and substance use (5). The results indicate that structural preventive interventions are more likely to reduce health inequalities compared to behavioral preventive interventions. For the Realist Review 7 studies were included. Intrapersonal, interpersonal, and institutional factors were extracted that are relevant for school-based interventions focusing on adolescents with low SEP.

Conclusions:
The systematic review showed that school-based interventions are able to reduce health inequalities, but also to increase them. Structural preventive measures seem to be helpful in increasing health equity. The Realist review identified mechanisms of interventions which help to address students with lower SEP.

Key messages:
- The evidence regarding interventions with focus on health inequalities is limited. We present two reviews analysing what interventions are needed and how and why they work.
- Structural preventive measures seem to be helpful in increasing health equity. Factors on the intrapersonal, interpersonal, and institutional level are important to address students with low SEP.

Abstract citation ID: ckac129.162
School tobacco policies and social inequalities in adolescent smoking

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Background:
Adolescents of lower socio-economic status initiate smoking earlier and smoke more frequently than those of higher socio-economic status. Tobacco control policies, such as school tobacco policies, aim to reduce adolescent smoking, but their implementation has been found to vary greatly from one school to another. Such differences in the implementation might therefore contribute to social inequalities in smoking. This study examines whether school tobacco policies are implemented where they are most needed, and how this implementation according to needs has changed over time.

Methods:
Student (n = 18,805) and staff surveys (n = 438) were conducted in 2013 and 2016 in 38 schools from six European cities in six countries. School tobacco policies were measured as a 10-point score taking into account their multidimensionality, and the perceptions of both students and staff. We used concentration curves and indices to measure the inequality in the implementation of these policies depending on the smoking prevalence and on adolescents' socio-economic status.

Results:
A concentration curve below the perfect equity line indicated a concentration of school tobacco policies where smoking prevalence was lower. Moreover, this inequality was larger in 2016 compared to 2013 (concentration indices of .038 in 2013 and .041 in 2016). On the contrary, a concentration curve overlaying the perfect equity line indicated no inequality in the implementation of these policies depending on adolescents' socio-economic status (concentration indices of .016 in 2013 and -.013 in 2016).

Conclusions:
School tobacco policies have been developed to reduce adolescent smoking. They, however, seem to be less implemented in schools where they are most needed. This confirms that smoking prevention is still driven by the inverse prevention law. Next to evaluating the impact of such policies on smoking outcomes, research should also focus on their contribution to social inequalities in adolescent smoking.

Key messages:
- School tobacco policies, developed to reduce adolescent smoking, might contribute to social inequalities in smoking.
- School tobacco policies are less implemented where they are most needed.

Abstract citation ID: ckac129.163
The role of gender equity in healthy life expectancy in 27 European countries

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Background:
The number of years - and healthy years - a person is expected to live differs according to gender: women tend to live longer than men, but with a shorter healthy life expectancy (HLE). Power imbalance, such as income, prestige, or autonomy gaps, may lead to an unequal health distribution across gender in the older ages. The association between gender equality and longer life expectancies has been described, but little is known about its association with HLE. We aimed to study the association between gender equality, and its components, and HLE in Europe, in the last decade.

Methods:
We combined HLE estimates from Eurostat with the Gender Equality Index (and its components) for 27 European countries, from 2013 to 2019. The associations between gender equality and HLE, and its gender gap, were assessed using regression analyses adjusted for Gross Domestic Product, number of medical doctors per 1000 inhabitants (as proxies of economic wellbeing and access to healthcare), and year.

Results:
Higher gender equality was associated with longer HLE in men ($\beta = 0.22$ $p < 0.01$), but not in women. Yet, higher equality in education was associated with longer HLE in both genders (βmen = 0.49, βwomen = 0.40, $p < 0.001$), as was access to financial resources (βmen = 0.27, βwomen = 0.20, $p < 0.005$),

and social power (βmen = 0.09, βwomen = 0.07, $p < 0.05$). Differently, equality in participation in full-time work was associated with shorter HLE in both genders (βmen = -0.33, βwomen = -0.30, $p < 0.001$) and a higher HLE gender gap (β = 0.05, $p < 0.05$). The HLE gender gap was smaller in contexts with higher equality in access to financial resources (β = -0.06, $p < 0.001$) and education (β = -0.04, $p < 0.01$).

Conclusions:

These results point to a country-level relation between gender equality and HLE. Beyond the social issue, gender inequalities in education, income and social power seem to play a role in the health of women and men through their aging course.

Key messages:

- Higher gender equality in education, income and social power are associated with longer healthy life expectancies in 27 European countries.
- Gender equality benefits not only women's healthy life expectancies but also men's, and is reflected in smaller gender gaps.

3.J. Oral presentations: Performance of health care systems

Abstract citation ID: ckac129.164
Social context matters: the role of social support and social norms in healthcare solidarity

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Background:

In many European countries, including the Netherlands, the healthcare system is based upon solidarity. It is important that public support for solidarity-based systems is sufficient, to ensure that people remain willing to contribute to them. Although support is generally high, as indicated by high levels of willingness to pay for the healthcare costs of others, there are differences between groups. Previous research has focused on individual and institutional characteristics when explaining these differences. However, people's social context may also play a role. Little research has been conducted into this. To fill this gap, we examined the role of perceived social support and social norms in order to explain differences in the willingness to pay for other people's healthcare costs.

Methods:

A questionnaire was sent to a representative sample of 1,500 members of the Dutch Healthcare Consumer Panel in November 2021 (56% response rate, N = 837). The relationship between the social context of people and their willingness to pay was studied via logistic regression analysis.

Results:

Higher levels of perceived social support are associated with higher levels of willingness to pay for other people's healthcare costs ($p = 0.038$). We also found that willingness to pay is higher when someone's social context is more supportive of the solidarity-based healthcare system ($p = 0.001$). Contrary to our expectations, the effect of social norms does not differ between people who perceive low and high levels of socials support.

Conclusions:

The degree to which people feel connected to others and the degree to which someone's social context supports the solidarity-based healthcare system affect the willingness to contribute to the healthcare system. Our results suggest that the social context of people has to be taken into account in both policy and research that addresses healthcare solidarity, next to individual and institutional characteristics.

Key messages:

- Social support and social norms play a role in the willingness to pay for healthcare costs of others.
- People's social context must be taken into account in policy and research on healthcare solidarity.

Abstract citation ID: ckac129.165
How do countries plan, purchase and use imaging technologies to prevent over-purchase and overuse?

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Background:

The adoption of new and expensive technologies is one of the main causes of the growing expenditure on health. Regulators are concerned that health care providers purchase (and use) imaging technologies in quantities that exceed the need, increasing expenditure with little value. We review how countries regulate the purchase and use of imaging technologies.

Methods:

Qualitative. We collected data using a questionnaire completed by researchers from 17 high-income countries purposefully selected based on variation of policies. We built and compared case studies.

Results:

Eleven of the 17 countries analyzed have clear criteria for planning and purchasing imaging technologies. Countries plan different areas, such as supply of specialist care, hospitals by level and type of services, quantity or type of equipment, as well as expenditure on health services and resource allocation. Most countries combine three mechanisms that manage the purchase or use of imaging technologies: (1) seven countries regulate by requiring certificates of need, licenses, or purchase approvals; others regulate by directly limiting the amounts, types and quality of technologies. (2) All countries use financial tools such as activity-based payment, limited and conditional budgets, and caps on income or volume of services. (3) Nine countries centralize purchase by a government agency. The literature provides inconclusive evidence regarding the impact of these mechanisms on expenditure on health and access to imaging services.

Conclusions:

Planning the imaging technologies market with clear criteria is essential to avoid abuse. Most countries combine the three mechanisms (regulation, financial tools, centralized purchase). Financial tools are more common and effective. Countries with single payers implement more regulation than countries with multiple, competing, payers. In the later, regulated competition seems to replace regulation. There is a trend of adopting centralized procurement.

Key messages:

- Planning the imaging technology market is a precondition to avoid abuse.
- Regulation, financial tools, and centralized purchase can be combined to manage the use of imaging technologies.

Abstract citation ID: ckac129.166
Exploring the link between cancer policies and cancer survival: a comparison of seven countries

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Background:

Disparity in cancer survival across countries has been linked to variation in cancer policy delivery but there is lack of empirical evidence for this association. We traced the evolution of cancer policies in 20 jurisdictions in Australia, Canada, Denmark, Ireland, Norway, New Zealand and the UK since 1995 and present the findings of an exploratory analysis linking cancer policy consistency to cancer survival.

Methods:

We systematically searched and analysed national/regional cancer plans and strategies, mapping timelines of cancer policy evolution. For 10 jurisdictions, evidence was synthesised into five categories: oversight function; cancer plan; implementation plan; budget for plan implementation; and evaluation. We assigned scores evaluating whether a category was present or absent, and weighted scores for consistency. Summed scores were correlated with trends in survival from seven cancers between 1995-2014.

Results:

All ten jurisdictions had implemented a high-level structure overseeing, steering or delivering cancer control policies (1995 - 2014); all had also published at least one major cancer plan. There was great variation in oversight mechanisms, ranging from institutionalising cancer control (New South Wales, Ontario) to cancer steering groups or taskforces (Denmark, Northern Ireland, Wales). Frequency and consistency of cancer plans also varied, from a succession of plans that build on each other (Denmark, New South Wales, Ontario) to the publication of isolated plans (New Zealand, Northern Ireland). We found a positive, albeit weak, correlation of cancer policy consistency and improvements in survival over time for six of the seven cancers.

Conclusions:

Jurisdictions that have implemented consistent cancer control policies over time tended to be more successful in improving survival for a wide range of cancers. Our findings can help guide policymakers seeking approaches and frameworks to improve cancer services and, ultimately, cancer outcomes.

Key messages:

- Sustained and consistent strategic cancer planning and investment are crucial for ensuring better patient outcomes, and this requires strong and sustained commitment at all levels.
- The findings can help guide policymakers seeking approaches and frameworks to improve cancer services and, ultimately, cancer outcomes.

Abstract citation ID: ckac129.167
Hospital admissions in Austria during the COVID-19 Pandemic – a rapid analysis for 2020 and 2021

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Background:

The COVID-19 pandemic posed a substantial shock to health service provision, in particular regarding hospital services. The reasons and also rationales for reduced health service provision were manifold ranging from limited supply due to resource restrictions, limited demand in order to avoid infections or due to reduced incidence of various diseases, and postponement of elective services. Nevertheless, the provision of services for acute care at an adequate level is paramount to avoid patient harm.

Methods:

Hospital admissions were analysed via administrative DRG data reported by Austrian hospitals. We compared health service provision on a monthly basis between 01/2018 and 12/2021. Services were classified according to ICD-10 and encompassed admissions due to acute heart failure, stroke, accidents, knee and hip surgery and breast cancer surgery.

Results:

Our findings show that hospital admissions for acute heart failure decreased by up to 25% between 03/2020 and 05/2020. In contrast, no significant difference to the initial pre-pandemic levels could be observed in the later stages of the pandemic. Stroke admissions remained at the initial levels throughout the whole period of analysis, while a substantial decrease (up to 50%) in admissions because of accidents was observed whenever severe NPIs were in place. Knee and hip surgery levels dropped in line with increasing ICU occupancy rates caused by COVID-19 patients. Decreases in breast cancer surgery could only be observed (up to 20%) during the four months of the pandemic (03-06/2020).

Conclusions:

Our analysis provides an aggregated insight into service provision management in Austrian hospitals throughout the pandemic. While acute care was continuously provided for most areas of diseases and elective surgeries were widely postponed in line with pressure on ICU capacities, the decline in breast cancer surgery demands attention and further clarification of whether this decline was supply- or demand-driven.

Key messages:

- During the pandemic inpatient acute care services were continuously provided for most diseases in Austrian hospitals while elective surgeries were postponed in line with pressure on ICU capacities.
- The pandemic posed a substantial challenge to service provision management in hospitals and unwarranted levels of service provision so far indicate areas of action for future (pandemic) preparedness.

Abstract citation ID: ckac129.168
Barriers for using amoxycillin dispersible tablet in pediatric pneumonia treatment in Bangladesh

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World Health Organization recommends guideline for integrated management of childhood illnesses (IMCI) where Amoxicillin Dispersible Tablet (DT) appears as the first drug of choice for treating childhood pneumonia. The Government of Bangladesh adopted the IMCI strategy in 1998, and scaled it up nationwide by 2014. But, even today, the use of Amoxicillin DT, either in public or private sector, for managing childhood pneumonia is a rare event in Bangladesh. We conducted this exploratory study to understand the existing barriers, both in public and private sector, those have influences on reduced availability of Amoxicillin DT and non-compliance of health service providers to follow IMCI guideline by using Amoxicillin DT for treating a child with pneumonia, in Bangladesh. We conducted desk review of relevant strategy and policy documents, key informant interviews with 19 key individuals from Ministry of Health and national / international NGOs. Collected information were analyzed and interpreted using thematic analysis method. Identified barriers through this study pointed to inadequate policy level focus on IMCI implementation, non-inclusion of Amoxicillin DT in the national essential drug list, single source of Amoxicillin DT producing pharmaceutical in the country coupled with bureaucracy and procurement procedural complexity, lack of training of health service providers and abundant availability of antibiotic over the counter. Study respondents recommended for policy level strengthening of IMCI program, increasing coverage of training for health care provider, including practicing pediatricians both at public and private sectors, facilitating production and procurement procedures and prohibiting antibiotic sell over the counter.

Key messages:

- Facilitation of production and procurement procedure coupled with enforcement of law prohibiting antibiotics availability over the counter are urgent needs.
- Policy level support emphasizing full compliance of service providers for quality of implementation of IMCI program in Bangladesh (and similar other settings) is also important.

3.K. Oral presentations: Healthy food choices

Abstract citation ID: ckac129.169
The fish paradox: people with low socio-economic status are not consuming the right type of fish

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Background:

Fish intake is included in several national food-based dietary guidelines as a component of healthy diet because of its rich source of beneficial omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). However, heterogeneity among types of fish intake is rarely studied. We investigated the associations of socio-economic status (SES) with total and types of fish intake and validated whether types of fish intake was associated with plasma EPA and DHA.

Methods:

From the Lifelines cohort study, 94 246 participants aged 44 ± 13 years old were included to test the association of two SES indicators, i.e., education level and income level, with dietary intakes of total, fatty, lean, fried, and other types of fish. Plasma EPA and DHA were measured in a minor subset of 575 participants (mean age: 50 ± 13 years old). Total and types of fish intake was assessed using Food Frequency Questionnaire. Linear regressions were applied, adjusted for relevant covariates.

Results:

After adjusting for covariates, middle and low education were negatively associated with total, fatty, lean, and other fish intake ($p < 0.001$ for all), and positively associated with fried fish intake (β (SE): 0.04 (0.04), $p < 0.001$ for middle education; 0.07 (0.04), $p < 0.001$ for high education), with high education as the reference group. Similar results were observed for income level. In the subset population, total and fatty fish were positively associated with plasma EPA and DHA ($p < 0.02$ for all). Lean and other fish intake were positively associated with only DHA ($p < 0.008$ for all), but not EPA, while fried fish was not associated with either EPA or DHA in plasma ($p > 0.1$ for all).

Conclusions:

Lower SES was associated with higher intake of fried fish, which did not seem to be associated with the fish-based EPA and DHA in plasma. Both nutrition education and food price policy could be implemented to increase the awareness and shape people's choice on types of fish.

Key messages:

- People with low socio-economic status are consuming the type of fish that is not associated with fish-based omega-3 fatty acids, so nutrition education focusing on avoidance of fried fish is needed.
- Food subsidy programs promoting intake and increasing affordability of healthier fish are needed to improve the nutritional awareness and status of our population.

Abstract citation ID: ckac129.170
Whole grain intake, overall diet quality and key components of sustainable diets in Finnish adults

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Background and objectives:

Whole grains have been deemed a core component in diets promoting human health and environmental sustainability. Yet, research is scarce on whole grain intake in relation to overall diet quality and diet sustainability. We aimed to examine the association of whole grain intake with overall diet quality and key components of sustainable diets (fruits, vegetables, legumes, red and processed meat, plant-based and animal-based proteins) in Finnish adults.

Methods:

Our data comprised 3127 adults (58% women, energy underreporters excluded) aged $18-74$ years participating in the population-based FinHealth 2017 Study. Dietary intake was assessed by a validated 134-item food frequency questionnaire. Food, nutrient, energy and whole grain intakes were calculated utilizing the Finnish Food Composition Database. Overall diet quality was examined by the modified Baltic Sea Diet Score (excluding cereals). Associations were assessed by linear regression analysis adjusted for relevant confounders.

Results:

Whole grain intake was positively associated with overall diet quality and fruit consumption ($p < 0.001$) in women and men.

A positive association also occurred with plant-based protein intake ($p < 0.001$, women and men). Yet, whole grain intake was inversely associated with legume consumption in women ($p = 0.001$), while no association was found in men ($p > 0.05$). The association between whole grain intake and the intake of animal-based proteins and red and processed meat was inverse ($p < 0.001$) in both sexes. No association was found between whole grain and vegetable intakes ($p > 0.05$).

Conclusions:

Our results suggest that whole grain intake is associated with healthier diets and more sustainable protein intake in Finnish adults. However, challenges in furthering healthy and sustainable diets in the population may occur regarding legume consumption. Legumes are especially important in plant-based diets as they complement cereals as a source of essential amino acids.

Key messages:

- Higher whole grain intake may indicate higher overall diet quality and more sustainable protein intake in Finnish adults.
- Legume consumption requires further attention among Finnish adults with high whole grain intake despite their generally higher overall diet quality and more sustainable protein intake.

Abstract citation ID: ckac129.171
Food choices characterized by the Nutri-Score nutrient profile and risk of cardiovascular diseases

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Background:

Nutrition is a well-established risk factor for cardiovascular diseases (CVD) that can be leveraged by public health prevention strategies. In addition to dietary guidelines, front-of-pack nutrition labels (FoPNL) can help consumers make healthier food choices. Nutri-Score, a scientifically validated 5-color FopNL based on the nutrient profile FSAm-NPS has been adopted by several European countries but remains optional under current EU labeling regulation, which is to be revised end of 2022. Scientific evidence is therefore needed on the relevance of the Nutri-Score at the European level. Our objective was to study the association between the consumption of food as graded by the FSAm-NPS and CVD risk in a large European population.

Methods:

This prospective analysis was conducted on a case-cohort comprising 13,308 participants without CVD risk factors at baseline, among which 5,326 first incident cases of CVD from the EPIC-CVD study (8 European countries). Food intakes were assessed using country-specific dietary questionnaires. The FSAm-NPS was calculated for each food based on its 100g content in energy, sugar, saturated fatty acid, sodium, fibre, protein, and fruits/vegetables/legumes/nuts. Multi-adjusted Cox models were computed.

Results:

Overall, associations were observed between the consumption of foods with a higher FSAm-NPS score (lower nutritional value) and a higher risk of myocardial infarction (MI; HR1-SD = 1.12 [1.05,1.21]; HRQ5/Q1 = 1.23 [1.00,1.52]). Associations with stroke were not significant. Overall, associations were more particularly observed in men.

Conclusions:

In this large European population, a higher risk of MI was observed in individuals consuming on average a diet with higher FSAm-NPS foods (reflecting consumption of foods with a lower nutritional value/less favourable Nutri-Score). This adds to the evidence on the relevance of Nutri-Score as a public health tool to help consumers choose healthier food products.

Key messages:

- The consumption of foods with a lower nutritional quality as graded by the Nutri-Score was associated with a higher risk of myocardial infarction in the large European EPIC-CVD case-cohort study.
- This adds to the evidence supporting the relevance of the Nutri-Score as a complementary tool to dietary guidelines to help consumers make healthier food choices.

Abstract citation ID: ckac129.172
Not all plant-based diets are associated with benefits on mortality: the Moli-sani Study

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Background:

Vegetarians diets are characterized by the absence of some animal foods (e.g. red and processed meats), and a high consumption of plant-based foods. However, plant-based foods can include foods with varying nutritional value and health effects. We examined the association of three different pro-vegetarian (PVG) food patterns defined as general (gPVG), healthful (hPVG) and unhealthful (uPVG), with the risk of all-cause and cardiovascular disease (CVD) mortality in Italians.

Methods:

Longitudinal analysis on 22,912 men and women (mean age 55±12 y) from the Moli-sani Study (2005-2010) followed up for 11.2 y (median). Food intake was assessed by a 188-item FFQ. A provegetarian food pattern (FP) was constructed by assigning positive scores to plant foods and reverse scores to animal foods. A healthful and an unhealthful pro-vegetarian FP, which distinguished between healthy (e.g. fruits, vegetables, legumes) and less-healthy plant foods (e.g. fruit juices, potatoes, sugary beverages), were also built up.

Results:

In multivariable-adjusted analyses controlled for known risk factors, higher adherence to a gPVG was associated with lower all-cause (HR = 0.83; 95%CI 0.73-0.94) but not CVD mortality (HR = 0.90; 0.72-1.12). Increasing adherence to a hPVG was associated with reduced all-cause mortality risk (HR = 0.82; 0.72-0.95) as well as lower risk of CVD mortality (HR = 0.75; 0.59-0.95). Finally, the uPVG was directly associated with both all-cause (HR = 1.17; 1.03-1.33) and CVD mortality risks (HR = 1.23; 0.99-1.53).

Conclusions:

A general pro-vegetarian food pattern was associated with longer survival in Italians. Preferring healthful vegetarian foods provided protection against CVD mortality too. Consistently, a large dietary share of unhealthful vegetarian foods, mostly highly processed, was associated with increased risk mortality. Thus the quality of the plant food consumed is paramount to achieve diet-related benefits on mortality.

Key messages:

- A pro-vegetarian food pattern was associated with longer survival but preferring healthful vegetarian foods provided protection against CVD mortality too.

- The quality of the plant food consumed is paramount to achieve diet-related benefits on mortality.

Abstract citation ID: ckac129.173
Ultra-processed food consumption and survival in older Italians from the Moli-sani Study

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Background:

Ultra-processed food (UPF) is a major public health concern being reportedly associated with increased risk of non-communicable diseases and lower survival. However, most of the epidemiological evidence has been almost exclusively provided by research conducted in populations of youths or middle-aged adults. We tested the hypothesis that a large dietary share of UPF could be a risk factor also for vulnerable groups, as older adults (≥65 years).

Methods:

Longitudinal analysis on 5,215 men and women (mean age 72±5 y) from the Moli-sani Study (2005-2010, Italy) followed up for 10.9 y (median). Food intake was assessed by a 188-item FFQ. UPF was defined using the NOVA classification according to degree of processing, and categorized as quartiles of the ratio (%) between UPF (g/d) and total food consumed (g/d; weight ratio). The overall nutritional quality of the diet was measured by the Food Standard Agency nutrient profiling system dietary index (FSAm-NPS DI).

Results:

UPF contributed to 8% (min-max 0.0-58.4%) of the total food eaten daily and represented 14.4% (0.0-70.0%) of daily energy intake. In multivariable-adjusted analyses controlled for known risk factors, higher intake of UPF (Q4, ≥10.2% of total food), as opposed to the lowest (Q1, UPF<4.3%), was associated with increased all-cause mortality (Hazard ratio [HR] = 1.19; 95%CI 1.03-1.39); these results remained unchanged after adjustment for the FSAm-NPS DI (HR = 1.21; 95%CI, 1.04-1.41). A linear dose-response relationship of 1% increment in UPF intake with all-cause mortality was also observed (p = 0.017; p for non-linearity = 0.85).

Conclusions:

A large dietary share of UPF was associated with lower survival in older Italians consuming relatively low amounts of these foods. Expanding on previous studies on different age groups, these findings provide further justification to advise people to limit consumption of UPF even at older age.

Key messages:

- A large dietary share of ultra-processed food was associated with lower survival in older Italians consuming relatively low amounts of these foods.
- These findings provide further justification to advise people to limit consumption of ultra-processed food even at older age.

Abstract citation ID: ckac129.174
An exploration of reformulation efforts by the food industry in Ireland

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Background:

Previous research conducted in 2020 by our team examined the progress made by food manufacturers in reformulation between 2014 and 2017 (i.e., improving the nutrition profile of food staples by reducing salt, sugar, saturated fat and overall energy contribution). Our previous study showed improvements in salt and sugars levels across many food staples, but we found rising energy levels, total fat, and saturated fat in many food categories.

Methods:

This study aimed to explore the ongoing progress in reformulation between 2017 to 2021. We photographed the labels of food staples in supermarkets with the leading market share in the Republic of Ireland (Tesco's, Dunnes, SuperValu, Lidl, Centra, Aldi, and M&S). We extracted the data, collated it in an excel spreadsheet, and analysed it to examine the nutrients of interest to the study (i.e., salt, sugar, fat, saturated fat, energy, carbohydrates, protein, fibre, and micronutrients). We compared the levels captured at this time point with those previously recorded in 2017.

Results:

Eight hundred and seventy-two products were directly compared, including 80 spreads, 34 cereal snacks, 87 fruit juices, 193 cereals, 210 breads, 88 milks, and 169 yoghourts. This study shows that previously reported improvements in salt and sugar levels now appear to be going in the wrong direction.

Conclusions:

Fat and saturated fat levels that were once on the increase now appear to be reducing, possibly implying that as salt and sugar go up, fat levels go down and vice versa. This may relate to product taste and palatability.

Key messages:

- This study shows that previously reported improvements in salt and sugar levels now appear to be going in the wrong direction.
- Fat and saturated fat levels that were once on the increase now appear to be reducing, as salt and sugar go up, fat levels go down.

3.L. Pitch presentations: Health of health care workers

Abstract citation ID: ckac129.175
Mental health of healthcare workers during the first year of the COVID-19 pandemic in the Netherlands

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Purpose:

In March 2020, the WHO declared COVID-19 a pandemic. Previous virus outbreaks, such as the SARS outbreak in 2003, appeared to have a great impact on the mental health of healthcare workers. The aim of this paper is to study to what extent mental health of healthcare workers differed from non-healthcare workers during the first year of the COVID-19 pandemic.

Methods:

We used data from a large-scale longitudinal online survey conducted by the Corona Behavioral Unit in the Netherlands. Eleven measurement rounds were analyzed, from April 2020 to March 2021 (N = 16,657; number of observations = 64,316). Mental health, as measured by the 5-item Mental Health Inventory, was compared between healthcare workers and non-healthcare workers over time, by performing linear GEE-analyses.

Results:

Mental health scores were higher among healthcare workers compared to non-healthcare workers during the first year of the pandemic (1.29 on a 0-100 scale; 95%-CI = 0.75-1.84). During peak periods of the pandemic, with over 100 hospital admissions or over 25 ICU admissions per day and subsequently more restrictive measures, mental health scores were observed to be lower in both healthcare workers and non-healthcare workers.

Conclusions:

During the first year of the COVID-19 pandemic, we observed no relevant difference in mental health between healthcare workers and non-healthcare workers in the Netherlands. To be better prepared for another pandemic, future research should investigate which factors hinder and which factors support healthcare workers to maintain a good mental health.

Key messages:

- During the first year of the COVID-19 pandemic, we observed no relevant difference in mental health between healthcare workers and non-healthcare workers in the Netherlands.
- During peak periods of the pandemic, mental health was observed to be poorer in both healthcare workers and non-healthcare workers.

Abstract citation ID: ckac129.176

Health workers' perception vs medically approved COVID-19 infection risk: the risk communication gap

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Background:

This study analyses how healthcare workers (HCWs) perceived risks, protection and preventive measures during the COVID-19 pandemic in relation to medically approved risks and organisational measures. We aim to explore 'blind spots' of pandemic protection and identify mental health needs.

Methods:

A German multi-method hospital study at Hannover Medical School serves as an 'optimal-case' scenario of a high-income country, well-resourced hospital sector and an organisation with low HCW infection rate serves to explore governance gaps in HCW protection. Document analysis, expert information and survey data (n = 1163) were collected as part of a clinical study into SARS-CoV-2 serology testing during the second wave of the pandemic (November 2020-February 2021). Selected survey items included perceptions of risks, protection and preventive measures. Descriptive statistical analysis and regression were undertaken for gender, profession and COVID-19 patient care.

Results:

Our study reveals a low risk of 1% medically approved infections among participants, but a much higher mean personal risk estimate of 15%. The majority (68.4%) expressed 'some' to 'very strong' fear of acquiring infection at the workplace. Individual protective behaviour and compliance with protective workplace measures were estimated as very high. Yet only about half of the respondents felt strongly protected by the employer; 12% even perceived 'no' or 'little' protection. Gender and contact with COVID-19 patients had no significant effect on the estimations of infection risks and protective workplace behaviour, but nursing was correlated with higher levels of personal risk estimations and fear of infection.

Conclusions:

A strong mismatch between low medically approved risk and personal risk perceptions of HCWs brings stressors and threats into view, that may be preventable through improved information, risk communication and inclusion of mental health support in pandemic preparedness.

Key messages:

- Healthcare workers' perceptions of COVID-19 infection risks are much higher than medically approved infection risk.
- Pandemic preparedness and protection plans must pay greater attention to information, risk communication and mental health needs.

Abstract citation ID: ckac129.177

Nurses' coping with patients' relatives: Attachment style, burnout, and intentions to leave nursing

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Background:

Conflictual interactions with patients' relatives are prevalent in the work of hospital nurses. These situations may increase burnout and result in intentions to leave the nursing profession and high rates of turnover. It is important to understand the coping mechanisms and behaviours that nurses employ in such conflicts, to help them develop more adequate strategies that could prevent these outcomes. This study aimed at revealing how nurses' attachment styles colour their behavioural coping mechanisms when dealing with such interactions with patients' relatives, and how they are related to burnout and intentions to leave the profession.

Methods:

An online survey was completed by 140 hospital nurses that included three scenarios of typical conflicts with patients' relatives. Each scenario was followed by questions that assess stress and inadequacy when handling such situations, and behaviours: problem-solving responses, emotional support seeking, avoidance, and escalating responses. The survey also included self-reports of attachment styles, burnout, and intentions to leave nursing. Data were analysed using SEM (Amos 23).

Results:

The model shows an acceptable fit ($\chi 2(24) = 39.33$, $p = .025$; CFI = .963; RMSEA = .068). Higher anxious attachment was associated with higher stress and feelings of inadequacy in handling the situation, which in turn were associated with more emotional support seeking, avoidance, and escalating responses. Escalating responses were indirectly associated with intentions to leave the nursing profession via higher burnout. Higher avoidant attachment was associated with fewer problem-solving responses.

Conclusions:

Evaluating nurses' attachment style, cognitions, and behaviours in conflicts with patients' relatives is imperative for understanding burnout and intentions to leave nursing. Nursing training should include simulations of conflictual interactions with patients' relatives to help modify maladaptive coping.

Key messages:

- Evaluating nurses' attachment style, cognitions, and behaviours in conflicts with patients' relatives is imperative for understanding burnout and intentions to leave nursing.
- Training for nursing staff should consider nurses' awareness of their attachment style to modify maladaptive cognitions and behaviours in conflicts with patients' relatives.

Abstract citation ID: ckac129.178
Improving communication with hard of hearing and D/deaf patients: a capacity-building intervention

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Background:

D/deaf and hard of hearing (D&HoH) populations are disproportionally affected by physical and mental health problems while facing barriers to accessing health services. These barriers stem from communication challenges with healthcare providers, who are often unprepared to meet their specific needs. This study aimed to develop and evaluate an intervention to improve healthcare providers' skills to communicate with these patients.

Methods:

This study featured a participative action research design. Consistently, the intervention was developed through iterative phases together with the target populations and key stakeholders. The finale version was tested in healthcare workers in Canton of Vaud in Switzerland. Participants completed a questionnaire before (T0) and 6 months after (T1) the intervention, assessing perceived knowledge of deafness and hard of hearing and tools to improve communication, self-efficacy on how to communicate with D&HoH patients and institutional benefits (application frequency of communication rules and tools).

Results:

The final intervention aimed to increase participants' 1) awareness of D&HoH experience and communication needs, 2) knowledge of the tools and basic rules to improve communication. Two D&HoH trainers led one half-day intervention among 28 healthcare providers (e.g., nurses, pharmacists; mean age = 43.6). Paired-sample t-tests revealed significant increases in knowledge between T0 and T1, t (23) = -7.81, $p < .001$ and in self-efficacy, t (24) = -10.23, $p < .001$, whereas there was no significant difference between institutional benefits at T0 and T1.

Conclusions:

Although findings suggest the intervention is a promising means to increase perceived knowledge and self-efficacy on how communicating with D&HoH patients, complementary approaches, such as a resource person within the institutions providing day-to-day support to the teams besides the intervention, may be necessary to induce institutional changes.

Key messages:

- Future research should implement the intervention more broadly within inpatient and outpatient settings in Switzerland to increase knowledge on how communicating with D&HoH patients.
- Intervention implementation should be complemented by an additional structural approach to induce sustainable changes in practice and evaluated over 12 months to ensure sustainability.

Abstract citation ID: ckac129.179
Hospital nurse understaffing and short work experience: associations with mortality among patients

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Background:

Determining and maintaining optimal staffing level in hospitals is crucial, as understaffing may have serious consequences and even increase mortality risk among patients. There is no consensus, however, on the optimal way to determine staffing requirements in hospitals as patients' care needs vary between wards and days. Nurse work experience may also affect quality of care and ultimately patients' survival but research on this topic is scarce.

Methods:

Administrative register data on patients (N = 254,308) and employees of 40 hospital units was used in one hospital district in Finland from years 2013-2019. Both nurse understaffing and nurse work experience were measured with two different indicators in each unit-day. Mixed-effects survival models were used to analyse the associations of these exposures with mortality at patient-level, when adjusted for patients' characteristics, such as age, sex and comorbidities.

Results:

Preliminary results showed that every one percent increase in the cumulative proportion of understaffed days - measured as low nursing hours relative to planned - was associated with 1.002-fold mortality risk among patients (95% CI, 1.000-1.004, p-value = 0.044). Short work experience was not associated with increased risk of death.

Conclusions:

This study supports previous findings on the associations between nurse understaffing and increased mortality risk among patients in Finland although no association with mortality was found for the other three staffing characteristics. However, the average daily shares of actualized nursing hours relative to planned hours were quite high in hospital units. An indicator based on actualized relative to planned working hours in routine administrative data could be useful in evaluating understaffing in hospitals.

Key messages:

- Adequate level of nursing professional in hospitals is related to patient survival.
- It is also crucial of develop efficient ways to evaluate understaffing in hospitals.

Abstract citation ID: ckac129.180
Opportunities to increase the attractiveness of the German Public Health Service as an employer

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For decades, the public health service in Germany (PHS) experienced shortages of young professionals and challenges in recruiting qualified personnel. To sustainably counteract this challenge, it is necessary to understand the reasons of the perceived low attractiveness of PHS as a potential employer among students and young professionals. Two cross-sectional online surveys were conducted to assess the attitudes of medical, public health, and health science students towards the PHS as a potential employer. Wave 1, conducted from 2019-12 to 2020-04, focused on factors associated with high and with low interest in working for the PHS. Wave 2 was conducted from 2020-06 to 2020-09 to capture changes that may have resulted from the newfound attention of the PHS during the SARS-CoV-2 pandemic. Participants in both waves were asked about opportunities to increase the attractiveness of the PHS, which were analyzed using qualitative content analysis. In total 3040 students participated. Low interest in the PHS was associated with limited knowledge about public health, primary interest in clinical medicine, and a negative image of the public service. The qualitative analysis indicated as major obstacles: low visibility of and low awareness about the PHS, a perception of hierarchical and bureaucratic workplaces, and perceptions of repetitive occupations, among others. The participants suggested: improving awareness about the PHS in the population, including PHS in curriculum, and reducing entry barriers for non-medical students. The results of the largest survey of students on the attractiveness of the ÖGD in Germany provide valuable insights for ongoing reform processes. In addition to approaches to increase external visibility, existing processes and procedures within the ÖGD should be considered.

Key messages:

- To counteract the shortage of skilled workers, the PHS must become more attractive to young professionals. This requires both, greater external visibility and modernization of internal structures.
- Successful inclusion of the perspective of young professionals in the current modernization processes introduces opportunities to increase the attractiveness of the PHS in the long-term.

Abstract citation ID: ckac129.181
Workplace health promotion programs for employees in long-term care facilities - a systematic review

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Background:

Employees in long-term care facilities (LTC) are exposed to physically and mentally demanding workloads. Due to the specific working conditions and processes in LTC, recent literature recommends that care setting-specific health promotion is required. The objective was to systematically review the current evidence of workplace health promotion programs among employees in LTC.

Methods:

A systematic review was conducted in accordance with the PRISMA 2020 Statement. The literature search was applied in the online databases PubMed, Web of Science, Cochrane Central Register of Controlled Trials, and APA PsycArticles (Jan 2000 - Feb 2022). Studies were included if (1) participants worked in any occupational setting in LTC, (2) personal health and outcomes related to occupational health were measured as primary outcome, and (3) studies were randomized controlled trials. Methodological quality was assessed using the Cochrane risk of bias assessment tool (RoB 2).

Results:

The literature search yielded 23.007 articles, resulting in 24 included studies and 21 unique interventions with a total of 6.625 participants at baseline. Most participants were female (85.2% to 100%). Interventions were grouped into person-directed (n = 4), person/work interface-directed (n = 10), work-directed (n = 0), and combined approaches (n = 7). Of these studies, two studies (2/4) using a person-directed approach, four studies (4/10) using a person/work interface-directed approach, and four studies (4/7) using a combined approach demonstrated significant improvements in personal health-related outcomes and occupational health-related outcomes. Methodological quality can be rated as some concerns.

Conclusions:

Interventions that incorporate a combination of intervention approaches appear promising for improving health and work-related outcomes among employees in LTC. There is a lack of evidence for only work-directed approaches to health promotion in LTC. High-level quality studies are still needed.

Key messages:

- Combined intervention approaches to workplace health promotion in long-term care facility settings appear to be beneficial.
- High-level quality studies on workplace health promotion in long-term care facilities are still needed.

Abstract citation ID: ckac129.182
Hospital hand hygiene after COVID-19: has the pandemic heightened healthcare workers' awareness?

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Background:

Hand hygiene (HH) is the leading measure for preventing the transmission of healthcare-associated infections (HAI), and a cornerstone to prevent COVID-19 spread. Aim of the research was the assessment of HCWs' adherence to the application of WHO optimal practices, with the goal to promote a culture of safety and quality infection prevention and control (IPC) activities.

Methods:

Fondazione IRCCS Policlinico San Matteo, Pavia, Italy, implemented a HH monitoring plan in which HCWs' adherence to HH procedures is evaluated using WHO guidelines, technical manual and observation form. Direct field observations took place in March and April 2022 by trained personnel. Process index was HH adherence, stratified by profession, opportunity and unit, which has been visited at least twice.

Results:

Overall, 302 HCWs were observed from 18 hospital units (105 physicians, 108 nurses, 84 healthcare assistants and 5 students). Out of 1382 opportunities, global adherence was 52% with 190 handwashing and 598 hand rubbing. The indication with the highest adherence was ''after body fluid exposure risk'' (76%), whereas the lowest were ''after touching the patient's setting'' (40%) and ''before touching a patient'' (43%). Adherence was higher in specialistic surgeries and haematology units, while the worst performances were reported in general medicine ward (29%). Physicians' and nurses' adherence was respectively 45% and 61%. Audits occasionally revealed nonconformities in glove use (i.e., unnecessary use, not changed between patients, hand rubbing on gloves).

Conclusions:

These preliminary findings could be directly linked to habits acquired during the pandemic, when HW tended to consider COVID-19 patients as a unique block to shield themselves from infections, rather than safeguarding individual patient units. HH awareness could have changed in the wake of COVID-19 pandemic and our study described how HCWs' adherence to optimal practices needs specific initiatives to promote correct HH.

Key messages:

- The COVID-19 pandemic reinforced the importance of handwashing and IPC, showing the key role of the HCWs' adherence to hand hygiene (HH) procedures.
- HH audits play a leading part in clinical governance and IPC, aiming at enhancing the quality of care and patient safety, particularly to strengthen health system resilience in post-COVID era.

3.M. Workshop: Health system barriers to vaccination in underserved communities: a tale of four countries

Abstract citation ID: ckac129.183

Organised by: EUPHA-IDC, EUPHA-MIG

Chair persons: Bernadette Kumar (EUPHA-MIG), Maria Gańczak (EUPHA-IDC)

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The literature highlights low vaccination coverage among most minority or ethnic pediatric communities in EU, including migrants. In addition to being less likely to get a vaccine, such communities may be vulnerable to developing certain infectious diseases. It is particularly important in the context of the current humanitarian crisis connected with Russia's aggression towards Ukraine. Identification of potential barriers to vaccination and system gaps is crucial to further ensure that underserved pediatric communities benefit from the same level of protection as the general population in terms of disease prevention and control, including those diseases which can be prevented by routine vaccinations. The proposed workshop moderated by well-known experts of the subject (Bernardette Kumar and Maria Ganczak) will be based on the results from qualitative data collected as a part of the 5-year RIVER-EU (Reducing Inequalities in Vaccine uptake in the European region - Engaging Underserved communities) project which tackles health system barriers among selected underserved communities living in four countries: Ukrainian migrants in Poland, females with a Turkish and Moroccan migration background in the Netherlands, marginalized Roma communities in Slovakia and migrants/refugees in Greece. This interactive workshop will provide short (5 minutes per country) comparisons of the health system barriers to vaccination against MMR (measles, mumps, rubella) and Human Papillomavirus (HPV) in children living in different underserved communities, and contrast barriers to vaccination experienced by the community members with barriers perceived by the health care professionals. International comparisons of in-depth information collected during qualitative studies (interviews and focus groups) will help to provide an increased understanding of the health system determinants of low vaccine uptake in their specific multi-factorial contexts that will vary in terms of geography, size, wealth, health sector structures, culture and vaccination law. Such qualitative research is particularly valuable regarding its potential for producing comprehensive and refinement analyses adjusted for understanding the voices of underserved communities. The session will go beyond describing those. Based on the presentations the participants will be divided into 4 groups to discuss (15 minutes) the Key Barriers; Key Facilitators to vaccination; Main lessons Learnt; Ways forward for the future to increase vaccine uptake among underserved pediatric communities to reduce the burden of vaccine preventable diseases. These 4 groups of workshop participants will be led by experts from the MEMH and IDC sections. Then, concluding remarks will be presented by each group (5 minutes per group). The final resume delivered by session chairs will end the workshop.

Key messages:

- The health system barriers to child vaccination among underserved communities vary among European countries, and the optimal way to adequately address them is likely to be context specific.
- The RIVER-EU project gives an opportunity to discuss lessons already learnt around the different components of the vaccination process and to pinpoint ways forward for the future to reduce the VPD.

Abstract citation ID: ckac129.184
Health System Barriers for HPV-vaccine uptake in females with a Turkish or Moroccan Migration background in the Netherlands

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Background:

HPV vaccine uptake in female adolescents with a Turkish or Moroccan migration background in the Netherlands is lower as compared to the national average. This study aimed to study health system barriers for HPV vaccine uptake in these groups.

Methods:

Semi-structured interviews with Turkish/Moroccan (2nd and 3rd degree migrants) female adolescents (12-18 years old), their parents and grandparents were conducted. In addition a focus group discussion with healthcare providers with particular experience with HPV immunization and the target groups was organized. Data was collected between November 2021-April 2022.

Results:

22 interviews were conducted among twenty-three individual participants. Sixteen participants with a Turkish migration background were recruited and seven participants were having a Moroccan migration background. In thirteen cases young women in the families did not receive an HPV vaccination. Health system barriers identified were: language barriers in the information provided, focus on HPV being a sexually transmitted disease in information campaigns, lack of knowledge and awareness on HPV among participants and healthcare providers and inability to reach the target groups with tailored immunization programs. Similar health system barriers were mentioned by the healthcare providers, but also included a lack of trust in the government and healthcare institutions, insufficient coordination and collaboration between different healthcare providers. National

immunization programs with mass campaign vaccination is mentioned as a barrier to reach families with a Turkish/Moroccan migration background.

Conclusions:

Various health system barriers were addressed to be related to HPV vaccine uptake in females with a Turkish/Moroccan migration background in the Netherlands. Despite similarities concerning health system barriers among community members and healthcare providers, different health system barriers were also mentioned.

Abstract citation ID: ckac129.185
Health system barriers to vaccination among Ukrainian economic migrants in Poland

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Background:

Before Russia's aggression, Ukrainians were the largest migrant group in Poland. However, data on health system barriers to vaccination in this vulnerable group were not collected. The study aimed to explore barriers to child MMR/HPV vaccination and related access to Polish healthcare services.

Methods:

Between December 2021-January 2022, a qualitative study of Ukrainian migrants (UM) living in Poland, recruited through a snowball sampling method, was conducted as a part of RIVER-EU project. 8 focus groups were held with 49 UM aged 16-44 years, followed by interviews with 12 health care providers (HCP).

Results:

UM and HCP experienced communication barriers despite language similarities. HCP reported that since a UM is not willing to register at a GP practice he cannot be reached by the Polish vaccination system. UM experienced challenges in navigating the system and accessing credible information in Ukrainian, no official local health authority vaccination material existed either. UM complained that there are no translated versions of vaccination materials accessible at the PHC facilities and they are not adequately informed about the possible side effects of vaccines; HCP reported the lack of time provided by the system for health promotion. UM were not familiar and rather hesitant regarding self-paid vaccines, such as HPV vaccine. In Poland and Ukraine this topic is not targeted at school curriculum neither by information campaigns. UM reported that HPV vaccine is not of interest for them due to the high cost, however they might consider it for their daughters, if the cost was fully refunded.

Conclusions:

The study identified main health system barriers to child vaccination regarding economic UM in Poland, seen from the perspective of migrants and HCP and pinpointed issues for improvement. This can serve as a starting point to confront vaccination related challenges in the context of Ukrainian refugee crisis Poland is currently dealing with.

Abstract citation ID: ckac129.186
Health system barriers to HPV vaccination in marginalized Roma communities in Slovakia

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Background:

People from marginalized Roma communities often experience poverty, limited access to education, employment, housing, and health care (HC). The aim of the study was to explore the perceptions of people from marginalized Roma communities and health professionals regarding health system (HS) barriers to HPV vaccination.

Methods:

A qualitative study was conducted in the Kosice region as a part of the RIVER-EU project. Semi-structured interviews with marginalized Roma parents (N = 18), children (N = 15), and health professionals (N = 18) were audio-recorded and thematic analysis of the transcripts was performed in MAXQDA.

Findings:

Four main themes were identified regarding HS barriers: 1. Lack of information (lack of culturally and linguistically appropriate information, lack of information provision from HC providers, unreliable and conflicting information on the internet), 2. Restricted access to HC providers (lack of capacities, work overload, long wait in the waiting room, distance, traffic connection), 3. Financial and organizational barriers (limited coverage of vaccination expenses from health insurance, picking up prescribed vaccines in a pharmacy by parents, parental consent), 4. Attitudes and behaviours of HC providers (neglect of care, double standard, inappropriate behaviour and communication, prejudices, racism).

Conclusions:

The reasoning and perception of several barriers to HPV vaccination differ among groups of respondents. Nevertheless, HPV is not viewed as a priority by both - marginalized Roma and health professionals. HS fails to reach marginalized Roma with appropriate information about HPV and HPV vaccination. Moreover, the lack of capacities and motivation of HC providers to address these topics lead to a lack of awareness. Organization and health insurance coverage of vaccination pose additional barriers to HPV vaccination.

Abstract citation ID: ckac129.187
Health system barriers to HPV and MMR vaccination in recent migrants/refugees in Greece

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Background:

Migrants have lower vaccination rates compared to the general population and report multiple barriers in accessing related services. We explored practices and perceptions regarding MMR & HPV vaccinations in migrant children & adolescents from third countries to inform the development of tailored interventions to increase vaccination coverage. Third country nationals for the RIVER-EU project are migrants arriving to the EU from countries beyond Europe (the Middle East, Asia & Africa) escaping civil conflict, war, and poverty.

Methods:

A qualitative study was conducted in the wider Athens area as part of the RIVER-EU project. Four Focus Groups and 23 semi-structured interviews were conducted with health care professionals, children and parents with a migrant background. Data were analysed using thematic content analysis. Findings: Identified barriers relate to the lack of standard operational procedures at system level that would define a schedule of vaccinations for migrants. Migrant vaccinations are subject to availability of vaccines (MMR as opposed to HPV) and potential threat of outbreaks (MMR vs HPV). There is no consistent, unified recording system of vaccinations while at system level there is a lack of trained cultural mediators. Targeted health promotion campaigns are rare while the few related activities that do exist are not systematically evaluated.

Conclusions:

MMR vaccination is more frequent compared to HPV which is not prioritised by the target group or health professionals. Nevertheless, the target group is open to learning more about HPV while the important role of mothers concerning vaccinations emerged as crucial. Health professionals focus more on MMR due to the availability of the vaccine and the threat of outbreaks. The vaccination system has flaws and inconsistencies with a lack of vaccination related data. There is urgent need for culturally appropriate vaccination and appropriately evaluated vaccination campaigns.

3.N. Workshop: IMAgiNE EURO: Quality of maternity care in the WHO European Region during the COVID-19 pandemic

Abstract citation ID: ckac129.188

Organised by: IMAgiNE EURO Study Group
Chair persons: Céline Miani (Germany), Marzia Lazzerini (Italy)
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From 2020 the COVID-19 pandemic has deeply affected maternal and neonatal care. The implementation of governmental policy responses to limit the spread of the disease and the development of new hospital protocols have forced healthcare workers and women alike to adapt. The perception of the quality of hospital care by both groups has been at the core of the IMAgiNE EURO project, led by the WHO Collaborating Center for Maternal and Child Health (Trieste, IT). With a network of 18 countries and more than 40 institutions, this collaborative project has gathered so far data from more than 50 000 births and 5000 health workers, through two validated online surveys. It allows monitoring the quality of maternal and newborn care in four domains: the three domains of the WHO Standards for improving quality of maternal and newborn care in health facilities (namely provision of care, experience of care, and availability of human and essential physical resources) and the additional domain of key organisational changes related to the COVID-19 pandemic. Following multi-country analyses, and analyses at the regional and national level, the project findings show major gaps in the perceived quality of maternal and neonatal care in hospitals during the pandemic, as well as large variations in practices across different countries of the WHO European Region. In this workshop, Dr. Emanuelle Valente (WHO Collaborating Center for Maternal and Child Health, Trieste, IT) first introduces the methodological development of the project and the two validated data collection instruments. Dr. Marzia Lazzerini (WHO Collaborating Center for Maternal and Child Health, Trieste, IT) then presents the main results of the women's questionnaire for all countries. The focus will be on the Quality of Maternal and Newborn Care Index (QMNC Index) and how the different countries perform with regard to the four above-mentioned dimensions. Then, we carry on with two presentations focusing on specific topics relevant to maternity and newborn care. Dr. Ilana Chertock (College of Health Sciences and Professions, Ohio University, Athens, Ohio, USA) and Dr. Rada Artzi-Medvedik (Ben-Gurion University, Beersheva, Israel) will present findings on the factors influencing exclusive breastfeeding in healthcare facilities during the pandemic. Dr. Céline Miani (Institute of Public Health, Bielefeld University, Bielefeld, Germany) will discuss the topic of medicalisation, looking at the potential associations between individual and country-level factors and medicalisation of birth. We will conclude the workshop with a panel discussion on the implications of our research for policies and practice, and examples of the first steps already taken to bridge the gap between monitoring and implementation.

Key messages:

- This workshop will present two new, validated tools to monitor the quality of maternal and newborn care in WHO European Region, from the perspective of the women and of the healthcare providers.
- It will also provide an overview of key findings so far, highlighting inequalities and gaps in the quality of maternal and neonatal care at hospital level in the WHO European Region.

Abstract citation ID: ckac129.189

Quality of facility-based maternal and newborn care around the time of childbirth during the COVID-19 pandemic

Marzia Lazzerini

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Background:

Multi-country studies assessing the quality of maternal and newborn care (QMNC) during the COVID19 pandemic, as defined by WHO Standards, are lacking.

Methods:

Women who gave birth in 12 countries of the WHO European Region from March 1, 2020 - March 15, 2021 answered an online questionnaire, including 40 WHO Standard-based Quality Measures.

Results:

21,027 mothers were included in the analysis. Among those who experienced labour (N = 18,063), 41.8% (26.1%- 63.5%) experienced difficulties in accessing antenatal care, 62% (12.6%-99.0%) were not allowed a companion of choice, 31.1% (16.5%-56.9%) received inadequate breastfeeding support, 34.4% (5.2%-64.8%) reported that health workers were not always using protective personal equipment, and 31.8% (17.8%-53.1%) rated the health workers' number as ''insufficient''. Episiotomy was performed in 20.1% (6.1%-66.0%) of spontaneous vaginal births and fundal pressure applied in 41.2% (11.5% -100%) of instrumental vaginal births. In addition, 23.9% women felt they were not treated with dignity (12.8%-59.8%), 12.5% (7.0%-23.4%) suffered abuse, and 2.4% (0.1%-26.2%) made informal payments. Most findings were significantly worse among women with prelabour caesarean birth (N = 2,964). Multivariate analyses confirmed significant differences among countries, with Croatia, Romania, Serbia showing significantly lower QMNC Indexes and Luxemburg showing a significantly higher QMNC Index than the total sample. Younger women and those with operative births also reported significantly lower QMNC Indexes.

Conclusions:

Mothers reports revealed large inequities in QMNC across countries of the WHO European Region. Quality improvement initiatives to reduce these inequities and promote evidence-based, patient-centred respectful care for all mothers and newborns during the COVID-19 pandemic and beyond are urgently needed.

Funding: The study was financially supported by the Institute for Maternal and Child Health IRCCS Burlo Garofolo, Trieste, Italy.

Abstract citation ID: ckac129.190
Exclusive breastfeeding during the COVID-19 pandemic in 17 WHO European Region countries

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Background:

Maternal experience of labour and delivery is multidimensional and is influenced by a variety of factors.

Aim:

to report maternal childbirth experience as described by the women themselves during the COVID-19 pandemic in Sweden using a WHO Standards-based tool adapted for an online survey (Quality of maternal and newborn care-QMNC).

Methods:

Women $\geq$ 18 years of age who gave birth from March 1, 2020 to June 30, 2021 were asked to give voluntary consent to participate in an online survey. The survey included 40 questions on four key domains: provision of care, experience of care, availability of human and physical resources and organisational changes due to COVID-19.

Results:

5003 women were included in the analysis. Among those who underwent labour (n = 4528), 46.7% perceived a reduction in QMNC due to the COVID-19 pandemic, 50.7% were not allowed a companion of choice, 62.5% reported that health workers were not always using protective personal equipment and 36.5% rated the number of health workers as ‘‘insufficient’’. Fundal pressure was applied in 22.2% of instrumental vaginal births and 36.8% received inadequate breastfeeding support. In addition, 18.4% of women did not feel treated with dignity and 6.9% reported some form of abuse. In general, findings were significantly worse among women who did not undergo labour (n = 475).

Conclusions:

Swedish mothers’ satisfaction of care provided during childbirth was strongly influenced by many variables. Actions to promote high-quality, evidence-based, patient-centered respectful care for all mothers and newborns are urgently needed.

Abstract citation ID: ckac129.191
Individual and country-level variables associated with the medicalization of birth

Céline Miani

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Introduction:

According to the World Health Organization, the medicalisation of birth tends ‘‘to undermine the woman’s own capability to give birth and negatively impacts her childbirth experience’’. The COVID-19 pandemic has disrupted maternity care, with potential increase in the medicalisation of birth and in occurrences of disrespectful maternity care. We aim to investigate potential associations between individual and country-level factors and medicalisation of birth in 15 European countries during the COVID-19 pandemic.

Methods:

We collected data through an online, anonymous survey for women who gave birth in 2020-2021. We ran multivariable, multi-level logistic regression models estimating associations between indicators of medicalisation (caesarean section (CS), instrumental vaginal birth (IVB), episiotomy, fundal pressure) and proxy variables related to care culture and contextual factors at the individual and country-level.

Results:

Among 27173 women, 24.4% had a CS, and 8.8% an IVB. Among women with IVB, 41.9% reported receiving fundal pressure. Among women with spontaneous vaginal births, 22.3% had an episiotomy. Less respectful care, as perceived by the women, was associated with higher levels of medicalisation. For example, women who reported having CS, IVB and episiotomy reported not feeling treated with dignity more frequently than women who didn’t have those interventions (respectively: OR: 1.37; OR: 1.61; OR: 1.51; all: $p < 0.001$). Country-level variables contributed to explaining some of the variance between countries.

Conclusions:

We recommend a greater emphasis in health policies on the promotion of respectful and patient-centered care approaches to birth to enhance women’s experiences of care, and the development of a European-level indicator to monitor the medicalisation of reproductive care.

Speakers/Panellists:

Emanuelle Pessa Valente

WHO Collaborating Centre, Institute for Maternal and Child Health IRCCS, Trieste, Italy

3.O. Workshop: Structural stigma shapes LGBTQ+ mental health and well-being across countries

Abstract citation ID: ckac129.192

Organised by: University of Exeter (UK)
Chair persons: David Doyle (UK)
Contact: d.doyle@exeter.ac.uk

Lesbian, gay, bisexual, transgender and queer (LGBTQ+) people around the world have been shown to suffer from disparities in mental health and well-being relative to cisgender heterosexual people. Past research aiming to explain these gaps has referenced the added stress experienced by LGBTQ+ people in the form of, for example, interpersonal discrimination, rejection, and harassment (i.e., minority stress). While these phenomena exist at the interpersonal level, emerging evidence suggests that discriminatory structural-level factors, such as policies, norms and rules (i.e., structural stigma), may be just as influential in shaping LGBTQ+ mental health and well-being. Given the passage of a slate of bills limiting sexual and gender minority rights and banning open speech around these issues across many different countries, this is an extremely timely issue for sexual and gender minority health. This workshop will give examples of cutting-edge research on the ways in which structural stigma affects mental health and well-being for LGBTQ+ people. Dr. Dinah Gutermuth (University of Exeter, UK) will discuss findings from a global study (conducted in partnership with the BBC) including older and younger LGB individuals from 113 different countries, showing that structural stigma impairs social capital and creates disparities in loneliness between younger and older LGB individuals. Berk Can Ünsal (Eötvös Loránd University, Hungary) will present data from Europe highlighting structural stigma as a risk factor, and community participation as a protective factor, for depression in sexual and gender minority people. Dr. John Pachankis (Yale University, USA) will present results on how migration from countries of varying levels of structural stigma shapes depression and suicidality in sexual minority men. Finally, Dr. Richard Bränström (Karolinska Instituet, Sweden), will discuss how average life satisfaction improved from 2012-2019 for sexual minority people across Europe, with greater increases in countries with higher levels of structural stigma. Together, these presentations will demonstrate the far-reaching effects of structural stigma on LGBTQ+ mental health and well-being around the world.

Key messages:

- Lesbian, gay, bisexual, transgender and queer (LGBTQ+) people around the world have been shown to suffer from disparities in mental health and well-being relative to cisgender heterosexual people.
- Structural stigma is an important factor determining risk for poor mental health among LGBTQ+ individuals across countries.

Abstract citation ID: ckac129.193

The impact of country-level structural stigma on loneliness and social capital in older and younger LGB individuals in 113 countries

Dinah Gutermuth

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Background:

The mental health gap between sexual minorities and heterosexuals remains a pressing issue for policy makers and scholars. In past years, numerous studies from the US found support for the vast impact structural stigma on a state level can have on the lives of LGB individuals. However, most research has been conducted within a US context and research capturing structural stigma on a country level remains scarce. In the current study we aim to close this gap by examining whether country-level structural stigma can explain loneliness and social capital among sexual minorities across the world and testing whether these relationships are different for LGB individuals from different age groups.

Methods:

The current study analysed a sample of over 7000 LGB people from across 113 European and non-European countries to examine the influence of country-level structural stigma on individual level loneliness and social capital.

Results:

Multilevel models showed that the greater structural stigma present in a country, the lower social capital was experienced by LGB respondents (b = -0.05, 95% CI: -0.07, -0.02, $p < 0.001$). This relationship was unaffected by respondent age. Further, multilevel models showed the following for loneliness as an outcome: The greater structural stigma present in a country, the more loneliness was experienced by LGB individuals (b = .01, 95% CI: .01, .21, p = .048). Furthermore, this relationship was moderated by respondent age (b = -.03, 95% CI: -.06, -.01, p = .01), in the sense that younger LGB people showed significantly higher levels of loneliness than older LGB people in countries with greater, but not lesser, levels of structural stigma. These effects remained robust to adjustment for demographics as well as adding country-level covariates.

Conclusions:

The findings of this study demonstrate the impact structural stigma on a country level can have on LGB individuals' loneliness and social capital, differing for older and younger individuals.

Abstract citation ID: ckac129.194

Stronger together: Community participation, structural stigma, and depressive symptoms of sexual and gender minority individuals living across 28 European countries

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Background:

Although previous studies demonstrated that structural stigma (i.e., discriminatory state laws, public policies, and attitudes) predicts adverse mental health outcomes among sexual and gender minority (SGM) populations, less is known how protective factors interact with structural stigma. Thus, we aimed to examine the associations between structural stigma, community participation, and depressive symptoms in a large sample of SGM adults.

Methods:

Discriminatory laws, policies, and attitudes affecting SGM people were assessed to measure each country's structural stigma levels (i.e., sexual and gender). Data from the 2019 EU-LGBTI-II-Survey assessing community participation levels and depressive symptoms of sexual minority men (n = 62.825), women (n = 38.912), and gender minority adults (n = 15.801) in 28 European countries were analyzed by using multilevel models.

Results:

The results demonstrated that structural stigma was positively, and community participation was negatively associated with depressive symptoms of sexual minority men (β = .147, p < .001; β = -.020, p < .05), women (β = .149, p < .01; β = −.040, p < .01), and gender minority adults (β = .085, p < .05; β = -.088, p < .001), respectively. Unlike sexual minority women and gender minority adults, for sexual minority men, a statistically significant interaction was found (β = .018, p < .05) such that participating to the community predicted lower depressive symptoms only in lower-stigma countries.

Conclusions:

The results highlight the need for changes in discriminatory laws, social policies, and negative attitudes that impact depressive symptoms of SGM individuals. Although community participation protects individuals from depression, these findings suggest that sexual minority men in higher-stigma countries benefit less from community participation. Thus, interventions aiming to increase SGM individuals' community participation should consider structural factors and gender differences.

Abstract citation ID: ckac129.195

Structural stigma and sexual minority men's depression and suicidality: A multi-level examination of mechanisms and mobility across 48 countries

John Pachankis

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Background:

Sexual minority men are at greater risk of depression and suicidality than heterosexuals. Stigma, the most frequently hypothesized risk factor for this disparity, operates across socioecological levels-structural (e.g., laws), interpersonal (e.g., discrimination), and individual (e.g., self-stigma). However, there is limited data on whether changes in structural stigma, such as when a stigmatized person moves to a lower stigma context, affect mental health, and on the mechanisms underlying this association

Methods:

The current study uses data from the 2017/18 European Men-who-have-sex-with-men Internet Survey (n = 123,428), which assessed mental health and psychosocial mediators. We linked these data to an objective indicator of structural stigma related to sexual orientation in respondents' countries of origin (N = 178) and receiving (N = 48) countries

Results:

Among respondents who moved from higher-to-lower structural stigma countries (n = 11,831), longer exposure to the lower structural stigma environments of their receiving countries was associated with a significantly: 1) lower risk of depression and suicidality; 2) lower odds of concealment, internalized homonegativity, and social isolation; and 3) smaller indirect effect of structural stigma on mental health through these mediators.

Conclusions:

This study provides evidence that structural stigma is associated with the mental health of sexual minority men, both through proximal experiences and as a function of length of exposure to structurally diverse contexts, at least for those who move higher-to-lower structural stigma contexts. Findings suggest the importance of routinely assessing life-course structural influences on mental health and deploying interventions to address those influences.

Abstract citation ID: ckac129.196

Structural stigma and 7-year improvement in life satisfaction: A repeated cross-sectional study of sexual minority individuals across 28 countries

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Background:

Structural stigma toward sexual minority individuals varies widely across countries and is associated with psychosocial health outcomes. Yet, the association of changes in country-level structural stigma over time, as has recently characterized many European countries, with such outcomes is largely unknown. The current study examined the association between change in structural stigma from 2012 to 2019 across European Union countries and change in life satisfaction among sexual minority individuals during the same period. Secondary analyses examined whether changes in structural stigma differentially benefitted some subgroups of sexual minority individuals more than others.

Methods:

The current study analyzed data from sexual minority respondents (2012: n = 82,668; 2019: n = 96,576) living in 28 European countries.

Results:

Adjusted multilevel models showed that life satisfaction had improved among sexual minority individuals in all countries between 2012 and 2019 (β = 0.32, 95% CI: 0.29, 0.35), but the improvement was stronger among those living in higher stigma countries compared to those living in lower stigma countries. Changes also varied by relationship status; the strongest improvement in life satisfaction as a function of improvement in structural stigma was found among sexual minority individuals in a relationship.

Conclusions:

Although life satisfaction has increased during the past decade among sexual minority individuals living in Europe, significant variation in this change exists across countries as a function of country-level structural stigma and individual sociodemographic characteristics. The findings support the relevance of structural stigma for sexual minority individuals' life satisfaction and call for further research to understand the differential impact of structural stigma across sexual minority subgroups.

3.P. Round table: The Commercial Determinants of Health: Industry tactics shaping science, policy and our environment

Abstract citation ID: ckac129.197

Organised by: LSHTM (UK)
Chair persons: Mark Petticrew (UK)
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Prevailing narratives on health and illness emphasise individual choice and product 'misuse' for the disease and environmental burdens associated with harmful industries, deflecting from the wider environment in which these choices are made. Public Health frameworks such as the Dahlgren and Whitehead model enable us to consider the broader socio-economic, cultural and environmental conditions that influence these choices (or lack thereof). Until recently, the influence of multinational corporations on these broader conditions has often been ignored, despite the global impact these corporations have in shaping science, policy and our environment. Increasingly Public Health academics and advocates are calling for an enhanced focus on these 'commercial determinants of health' (CDoH) to understand the ways through which corporate interests affect health, sustainability, and health inequities. The concept of CDoH considers (among other things) the harmful or damaging nature of certain products and the tactics employed by industries to protect their commercial interests. The harmful tactics employed by the tobacco industry are well documented, but there is growing evidence that similar tactics are employed by other harmful industries more generally, from alcohol, gambling and food, to agrichemical and fossil fuel industries. In addition to driving consumption (with resulting population and planetary ill health), these tactics have a cross-industry, complementary, cumulative effect; spreading misinformation, shaping 'personal responsibility' and 'nanny state' narratives, weakening regulation and undermining science and policy-making. The impact of these harms accumulates across the life-course, with differential exposure to both harmful products and tactics driving health inequities. We argue there is a need to make visible, or 'resurface' these tactics; at present, Public Health often fails to challenge corporate strategies and, more concerningly, can be complicit in reinforcing industry framings of issues. This session will outline how a life-course, complex systems approach can support this endeavour, exploring a range of industry strategies through a series of case studies and discussing actions needed to safeguard public understanding and policy from commercial interests. This workshop will include 3 short presentations to illuminate some of the more insidious and less overt tactics, with opportunities for questions and panel discussion.

The CDoH is an emerging field in Public Health and this session will give audience members an introduction to industry strategies and influences within a life-course framework, focusing on less overt channels of influence and some of the lesser-known industries.

Key messages:

- The commercial determinants of health present a significant threat to public and planetary health but are conspicuously absent in the majority of public health conceptual frameworks.
- Framing these hidden harms and exposures within the life-course model can support awareness of CDoH and facilitate public health professionals to counter corporate influences.

Speakers/Panellists:

Claire Mulrenan
LSHTM, London, UK

May Van Schalkwyk
LSHTM, London, UK

Nason Maani
LSHTM, London, UK

3.Q. Workshop: Using foresight to anticipate future public health challenges

Abstract citation ID: ckac129.198

Organised by: RIVM (Netherlands), Sciensano (Belgium), PHIRI, EUPHA-PHMR, EUPHA-FS
Chair persons: Henk Hilderink (EUPHA-FS), Petronille Bogaert (EUPHA-PHMR)
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The COVID-19 pandemic brought great uncertainty about current and future health impacts. Uncertainty about how the virus would directly impact our health. And uncertainty about indirect impacts of COVID-19 on long-term health and wellbeing, including consequences due to delayed prevention, diagnosis, and medical treatment. At this point in time, we know a lot more about the immediate mortality and morbidity aspects. How we fare on the wider impacts on the longer term is more difficult to say. A structured tool for gaining in sight in this, is foresight. We use this tool within the Population Health Information Research Infrastructure (PHIRI). PHIRI supports research across Europe through the identification, access, assessment and reuse of population health and non-health data to underpin public health policy decisions. PHIRI is a practical use case and lays the foundation for ultimately developing a Distributed Infrastructure on Population Health (DIPoH). The joint workshop aims to show ways to better understand the complexity of the wider impacts of the SARS-COV-2 virus on population health across Europe; show how a research infrastructure might help researchers in Europe build capacity and helping each other to achieve higher goals. The workshop will begin with a presentation providing a brief overview of the PHIRI foresight work. This will be followed by two researchers who participated in the PHIRI foresight training program and undertook their own Public Health Foresight study. In the last presentation of the session foresight will be reflected on from a policy perspective. How can researchers and health policy makers better interact to have better foresight-informed policy making. Interaction with the audience will be guaranteed using Mentimeter questions. With this interactive element, insights art obtained what people find the most important trends to act upon, what they consider most important future challenges and how researchers and policymakers can better interact.

Key messages:

- Foresight studies are essential to be better prepared for and to anticipate to future challenges.
- With foresight-informed policy making direct and indirect health impacts of COVID-19 are addressed.

Abstract citation ID: ckac129.199
Using foresight methodologies to tackle SARS-COV-2 related health impacts

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Background:

A better understanding of possible future developments is essential for policy makers to anticipate and influence these trends. Public health foresight studies (PHFS) are tools to support this. The current health crisis makes clear that PHFS are necessary more than ever to target possible future impacts resulting from SARS-COV-2 induced changes in e.g. regular health care services, lifestyle and socio-economic developments. To support European countries in doing their own foresight studies, PHIRI aims to strengthen foresight capacity.

Methods:

PHIRI follows a 4-step approach: 1. Making an inventory of current PHFS capacities and capacity needs across European countries using desk research and an online survey; 2. Providing PHFS capacity building via a training course and workshops; 3. Supporting the development of public health scenarios for the short term (0-5 years) and longer-term (5-20 years); 4. Supporting the identification of promising policy strategies, using policy dialogues.

Results:

The online survey was completed by participants of 21 countries and shed light on existing national PHFS and needs for capacity building. It also provided a basis for the development of a professional network on PHFS within the project. A PHFS capacity building course was developed, including videos posted on the PHIRI website and a template structuring the different foresight elements. Around 15 researchers undertook their own PHFS, covering a wide range of public health topics, using the material provided during the course. In addition, a compact guide was developed and provided, explaining the different foresight elements. Based on these studies, common challenges and promising policies are identified.

Conclusions:

Foresight in public health is gaining more and more interest, especially now in these times of crisis. PHIRI provides more insight in the wider public health impacts of the SARS-CoV-2 pandemic and in translating this into policy options.

Abstract citation ID: ckac129.200
The future of health digitalization: The case of Primary Health Care in Portugal

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Background:

The sustainability of Healthcare Services will depend on the proper implementation of the digital transformation of Primary Health Care (PHC) Services. COVID-19 Pandemic have shown precisely this, where there was pressure from health Professionals and managers for the integration of teleconsultations within the health work processes. This study aims at developing scenarios for the digitalization of PHC in the Portuguese Health System.

Methods:

This study follows the methodology of scenario development, similar to the future of community pharmacy services scenario study. A conceptual model of PHC services was developed, based on the literature and a set of interviews. The target group was the primary healthcare professionals: family doctors, nurses, and operational assistants. The time horizon was 2032 and, by selecting actors from different regions of Portugal, it was possible to achieve broad representativeness.

Results:

Three focus groups were conducted. The first enabled to identify the two driving forces that may influence the digitalization of PHCs in the next 10 years: 1) service innovation and 2) Governance and Regulations. These two driving forces enabled to design three plausible scenarios: a) Innovate or Fade-away; b) Isolated PHC and c) Digital PHC. These scenarios were developed, and their impacts were reflected upon. It was found that the role of human Resources is critical.

Conclusions:

The process of reflection and discussion for the identification of the different driving forces made the different actors discuss the different points of view and find a meeting point to reach a conclusion. Furthermore, this study allowed the different stakeholders to understand the measures and actions to be taken for PHC digitization to be implemented in the most effective way, allowing the sustainability of the National Health Service in Portugal, which until this point were only ideas discussed at the institutional and individual level.

Abstract citation ID: ckac129.201
Potential gains by effective early detection of diseases: proposal to approach informing public health policy in the Czech Republic

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Background:

Significant amount of disease burden could be averted by early detection and treatment of diseases. In the Czech Republic, National Screening Centre (NSC) of the Institute of Health Information and Statistics is responsible for informing public health policy in the field of early disease detection. The objective of the proposed early detection public health foresight study (PHFS) is to gather evidence, use available computational tools, utilise knowledge and opinions of stakeholders, and summarize it in a systematic manner to inform public health policies. The presentation outlines the approach undertaken within the proposed early detection PHFS.

Methods:

The key source of data for monitoring of population health status and healthcare system in the Czech Republic is the National Health Information System (NHIS). The study will also utilise external sources of data, namely demographic projections and data on global burden of disease, as well as qualitative data from stakeholders. The study will also utilise analytical tools and outputs developed by NSC (situational analyses, decision modelling, etc.). The conceptual model of the study will cover important underlying aspects like public policies, driving forces, population health and healthcare system, and health impact variables.

Results:

The proposal for early detection PHFS has been developed within the PHFS capacity building course, utilising the experience and insights of tutors and fellow participants. The development of study methodology was accompanied by gathering of evidence and consultations with relevant stakeholders.

Conclusions:

PHFS is a very useful approach to assess possible future developments of public health system, achieve participation of stakeholders, and to inform public health strategies. Following finalisation of the early detection PHFS protocol, governing board of the NSC will decide on the degree of implementation of the study.

Abstract citation ID: ckac129.202
Foresight methodologies to unravel the indirect health economic impact of the COVID-19 pandemic on cancer care and management in Belgium studied in the HELICON project

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Background:

The COVID-19 pandemic had indirect effects on segments of the population affected with non-COVID-19 diseases e.g. through delayed care and management of cancer patients. Early diagnosis and appropriate treatment are key to improving patient outcomes and reducing societal and health care costs. Tio support policymakers to anticipate these trends a public health foresight study (PHFS) was done.

Methods:

The PHFS follows a structured approach provided through a compact guide and is supervised by PHIRI team members. Its evolution is measured through a template gathering data on the study's contextual information, objective, main target groups, conceptual model, indicators, driving forces, time horizon, spatial unit, identifying uncertainties, scenario logics, scenario type, stakeholders, data, tools and instruments, projection methods, communication strategy/products, and the uptake of results and evaluation.

Results:

Several foresight elements were identified. Contextual information on the resources and governance structure were elucidated. The objective was made clear by identifying the topic, general issue, and sub-issues of the initial study. A conceptual model was developed to analyse the interaction of the topic with other aspects that could influence it. The main driving forces, which are factors that influence the studied topic, were then determined through the DESTEP method. Stakeholders were identified and classified through the power-interest matrix.

Conclusions:

Establishing a foresight study on the indirect impact of the COVID-19 pandemic on the care and management of cancer patients allows exploring potential and unsuspected issues that may affect society, health care systems, and patients. Those groups should not be considered individually but as an ecosystem continuously interacting, where a decision may affect everyone. This type of information may be of high relevance to policy- and decision-makers in their public health interventions.

Abstract citation ID: ckac129.203
Foresight for policy – addressing the challenges for policy impact

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Background:

The role of policymaking is to create the future that we want. In its communication on Better Regulation, the European Commission recognises the need for strategic foresight to play a key role in helping to 'future-proof' EU policymaking. The aim is to ensure that decisions are grounded in a longer-term perspective. In times of rapid change, EU policymaking needs to have impact assessments, fitness checks and major regulatory evaluations informed by foresight. Strategic foresight is also a powerful way to engage with stakeholders and not only capture their perspectives, but also generate collective intelligence in the areas of policy interest.

Lessons from EU policy making:

This fits within a broader effort at the Commission to be at the forefront of excellence in policymaking in Europe and worldwide. This is why the EU Policymaking Hub was launched 2020. It offers a platform for policymakers to learn, collaborate and share knowledge in EU policymaking, introducing new capacity building offers. It aims at strengthening the Commission's policymaking capacity through anticipating, developing, implementing, monitoring, and evaluating policies in an evidence-informed, transparent, and collaborative way with stakeholders, citizens and experts. Providing the policymaking community with a framework for long-term competence development will strengthen the profession, make it fit for the future, contribute to colleagues' motivation and help the Commission to achieve its goals.

Conclusions:

Being futures literate covers a range of skills from anticipation to the ability to run in-depth foresight processes. It spans a range of abilities from having an anticipatory mindset to scanning for change, understanding change and being able to influence change. Since its inception, this competence framework is at the base of an effort to train European civil servants in foresight and to increase foresight literacy for application in policymaking.

4.A. Workshop: Lessons from the response to COVID-19 to inform strengthening of Essential Public Health Functions

Abstract citation ID: ckac129.204

Organised by: Health Information and Quality Authority, WHO, Department of Health in Ireland
Chair persons: Michelle O'Neill (Ireland), Ronan Glynn (Ireland)
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Internationally, the COVID-19 pandemic has increased disease burden and mortality, impacted mental health and wellbeing and delayed diagnosis and treatment of non-COVID care. It has been argued that, had sufficient funding of Public Health, including pandemic preparedness, been in place historically, many shortcomings of the pandemic response could have been mitigated. Thus, strengthening Public Health systems is on the agenda of governments internationally. Areas of specific interest are, emergency preparedness, international cooperation and solidarity, promoting vaccination uptake, health equity and community engagement, health literacy and misinformation (particularly online), planning for future workforce requirements and harnessing digitalization in health to address communicable and non-communicable disease threats. The Essential Public Health Functions (EPHFs) provide a comprehensive, cost effective and operational approach to strengthening Public Health and are recognized by the WHO as key to building health system resilience. In a recent report, the WHO has proposed an approach to operationalizing the EPHFs, identifying key enablers that can be applied within specific country contexts. This workshop will describe the national and international research undertaken by the Irish Health Information and Quality Authority (HIQA) and the WHO at the request of the Department of Health to inform reform of the delivery model of Public Health in Ireland. HIQA and WHO will present the evidence base in terms of the value of EPHFs for health system strengthening, the findings of research to describe changes in Public Health structures and lessons learned in Ireland and across 12 countries during the COVID-19 pandemic, a description of the current state of delivery of the EPHFs within Ireland, and the results of a consultation survey distributed by the Department of Health in Ireland, investigating the experiences of organisations involved in the delivery of Public Health in light of the pandemic. The presenters will allow ample time for audience engagement and discussion with the expert panel to enable shared learning and to discuss the applicability of these findings to the reform and strengthening of the delivery of the EPHFs.

The workshop objectives are to:

- Describe the current evidence base in terms of the value of EPHFs for health system strengthening and the key enablers to support their application at country level.
- Describe the recent changes and lessons learned regarding the delivery of the EPHFs during the COVID-19 pandemic in 12 countries.
- Describe the delivery of the EPHFs in the Irish system in light of experience with COVID-19 and with awareness of current and future health system stressors.
- Describe Public Health organisations' experiences of delivering the EPHFs in Ireland in light of the pandemic.
- Provide insights into how the delivery of the EPHFs could be reformed and strengthened for the future.

Key messages:

- Lessons from the Public Health response to COVID-19, internationally and in Ireland will be discussed.
- The workshop will provide a space to share ideas on reform and strengthening EPHF delivery.

Abstract citation ID: ckac129.205

Applying Essential Public Health Functions in building health systems' resilience globally

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Background:

The COVID-19 pandemic has exposed Public Health system weaknesses due to chronic underinvestment in Public Health. In this context, Essential Public Health Functions (EPHFs) have been revitalized as an integrated, cost effective and sustainable approach to operationalising Public Health. The World Health Organization's recent position paper on building health systems resilience towards universal health coverage and health security recommended investing in EPHFs as a key mean for countries' health systems recovery and transformation during COVID-19 and beyond. There is a need for conceptual and operational clarity of EPHFs to support countries to build back better, fairer and more resilient health systems.

Methods:

A rapid review of peer-reviewed and grey literature regarding the EPHFs was conducted to identify different actors' understandings of EPHFs and key lessons of applying the EPHFs at the global, regional and national levels, in order to identify the added value and key enablers to operationalising EPHFs. A crosswalk analysis of different authoritative lists of EPHFs was conducted to develop a common list of EPHFs as a reference for countries in response to Public Health challenges.

Results:

A consolidated list of 12 EPHFs derived from the crosswalk analysis of different authoritative lists is presented, underpinning the consideration of health systems components and pressing health challenges. Six key enablers are identified from evidence and experience. These enablers are fundamental for countries to build holistic and strong Public Health capacities.

Conclusions:

The EPHFs provide a clear and integrated framing to operationalise Public Health in countries that can be adapted to country contexts to build resilience. Health authorities and other Public Health stakeholders must seize the opportunity brought by COVID-19 recovery to continue advocating for and strengthening Public Health as a priority in health systems' reconstruction and reform.

Abstract citation ID: ckac129.206

High level review of configuration and reform of Public Health systems in selected countries

Karen Cardwell

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Background:

The impact of the COVID-19 pandemic has prompted governments internationally to consider reform and strengthening of their Public Health systems. To support this work in Ireland, we undertook a review Public Health systems internationally (research question [RQ] 1), and identified lessons learned from the COVID-19 pandemic (RQ2).

Methods:

Data relating to Public Health systems (RQ1), and lessons learned (RQ2) for a select group of 12 countries were identified from organisations' websites, an electronic database and grey literature search and representatives from key national-level organisations. Data for RQ1 were extracted, mapped to the 12 Essential Public Health functions (EPHFs) at national, regional and local levels, and verified by participating representatives. For RQ2, thematic analysis of semi-structured interviews with participating representatives was undertaken and.

Results:

Typically, across all included countries, there is national strategic oversight of all EPHFs and, for certain functions, there is regional and local level implementation. Lessons learned from the COVID-19 pandemic broadly related to the themes of legislation and decision making; data collection, surveillance, evidence synthesis and collaboration; public

health interventions; public participation, public messaging and communication; continuation of healthcare services; and workforce capacity and resilience.

Conclusions:

When structuring Public Health systems, there is a need to identify which functions, and or which elements of a function, should be delivered at a national, regional or local level to ensure a sustainable and comprehensive Public Health system. Appropriate IT infrastructure, strong communication and an established evidence synthesis function are key to timely and informed decision making. Ideally, these functions should be established during periods of relative stability to permit a faster response during a pandemic or emergency situation.

Abstract citation ID: ckac129.207
Essential Public Health Functions in Ireland: Perspectives to strengthen capacities and stewardship

Geraldine McDarby

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Background:

COVID-19 has caused unprecedented disruptions to health, social and economic systems in countries worldwide including Ireland. Weaknesses in Public Health capacities have undermined health system resilience compounding the effects of the pandemic. The Essential Public Health Functions (EPHFs) provide a comprehensive, cost-effective approach to operationalising public health and a means to build health systems resilience. As Ireland looks to recovery, the Department of Health engaged the World Health Organization (WHO) to undertake a mapping of the current state of delivery of EPHFs to identify opportunities for improvement and support wider health system strengthening towards resilience.

Methods:

A strategic review of the delivery of EPHFs in Ireland was conducted with respect to policy, infrastructure, service provision and coordination and integration. Findings were reported in the context of international lessons identified through experience with COVID-19 and major health system challenges within the Irish context.

Results:

There are significant capacities present within the Irish context to support the delivery of the EPHFs though they are limited in strategic cohesion, coordination and implementation. These include a high level of Public Health expertise, an agile and resourceful workforce, a strongly engaged community and significant evidence generation and synthesis capacities. Gaps recognised included ICT infrastructure and capacity, workforce resourcing and support, pandemic planning and public health governance, visibility, legislation, strategy and resourcing. COVID-19 has led to the development and strengthening of mechanisms to leverage a whole-of-government and -society approach to health that should be sustained to tackle ongoing and future stressors.

Conclusions:

The use of the EPHFs within the Irish setting provides a comprehensive approach to strengthening capacities for public health and enhanced population health and wellbeing.

Abstract citation ID: ckac129.208
Organisational perspectives on Public Health delivery in Ireland: Lessons learned from COVID-19

Michelle Norris

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Background:

The COVID-19 pandemic has placed healthcare systems worldwide under unprecedented pressure, with the Irish Public Health system no different. To strengthen delivery of Essential Public Health Functions (EPHFs) and increase future pandemic preparedness, Public Health leaders are now focused on identifying learnings from the pandemic. Within Ireland, given their experience, organisations situated within the Public Health system may be in a unique position to provide valuable information around the delivery of EPHFs, both prior to and in light of the COVID-19 pandemic, and how this can be improved in the future.

Methods:

An online survey was distributed by the Department of Health, from 2 March 2022 to 25 March 2022, amongst organisations situated within the Public Health domain in Ireland. The survey consisted of six open-ended questions around the delivery of EPHFs prior to and in light of the pandemic, success stories that could provide scalable solutions to EPHF delivery and current health system barriers, key areas in the public health system that require strengthening, and barriers to achieving these actions. Thematic analysis to identify key themes was conducted on survey responses.

Results:

Twenty-eight organisational responses were received. Themes around the workforce were apparent throughout, with staff training, staff diversity and staff morale, identified as areas for strengthening EPHF delivery. Themes around ICT, data collection and research were frequently identified with a lack of adequate ICT identified as a key lesson from the pandemic, while the Public Health ICT strategy was identified as key to strengthening future EPHF delivery.

Conclusions:

In general, themes around the workforce; leadership, management and governance and ICT, data collection and research were reoccurring across organisational responses and therefore may be key areas for consideration when strengthening delivery of the EPHFs in Ireland.

Speakers/Panelist:

Louise Hendricks
Department of Health, Ireland

Sohel Saikat
WHO, Geneva, Switzerland

4.B. Workshop: Addressing backlogs and managing waiting lists during and beyond the COVID-19 pandemic

Abstract citation ID: ckac129.209

Organised by: European Observatory on Health Systems and Policies
Chair persons: Ewout Van Ginneken (Germany), Sarah Reed (UK)
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As COVID-19 cases started to rise in early 2020 and hospitalisation rates increased, health systems began to postpone non-emergency (elective) procedures to keep capacity available for COVID-19 patients, and to avoid elective patients being infected. This has subsequently led to longer waiting lists and waiting times in virtually all countries. Issues around staff recruitment and retention, which have been exacerbated by the COVID-19 pandemic, have further aggravated the problem. For patients with common elective surgeries, such as hip and knee replacements, the backlog in care means that improvements in health and quality of life are postponed. For urgent care, such as missed chemotherapy sessions for cancer care, the delays can have more severe consequences. For other patients, the postponement of specialist appointments may lead to missed referrals for serious ailments. Increasingly also primary care has become affected leading to late diagnosis of chronic diseases, as well as inadequate follow up and control of these patients. Each delay in diagnosis and treatment may worsen health problems, prolong recovery and decrease the patients' chances of survival. Countries are now left playing catch-up on these backlogs. There is however great uncertainty regarding the size of the backlogs, how much current and future capacity will be required to address them, and how much provider and workforce capacity will be needed for COVID-19 patients which will detract capacity for non-COVID patients. If health systems do not manage to reduce the backlog, they risk worsening health outcomes and wasting important health gains made in the last years. This workshop will discuss what we know about (1) the level of service disruptions and resulting backlog, (2) the drivers of backlog, and (3) which policies countries are using to address this. The workshop will conclude with an audience discussion about how to measure the true size of the backlog, the policy options for overcoming backlog and key priorities for further research.

Key messages:

- The COVID-19 pandemic has led to substantial disruptions in care delivery leading to care backlogs in virtually all countries.
- Countries have various policy options to tackle backlogs and bring down waiting times in the wake of the pandemic.

Abstract citation ID: ckac129.210
Health services during Covid-19: What do we know of the degree of service disruption and size of the backlogs?

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Since the onset of the COVID-19 pandemic, there have been concerns that shifting health system capacities towards acute COVID-19 cases can affect the provision of non-COVID-19 essential health services, causing severe disruptions and lack of care. Examples of this have been seen during other epidemic outbreaks, such as the 2014-2016 Ebola outbreak in West Africa. To capture the degree of service disruption across the European and Central Asian region, we analysed data from the World Health Organization's Pulse Survey on the Continuity of Essential Health Services, conducted in three rounds in 2020 and 2021. The key findings include:

– Health service provision has been heavily disrupted in virtually all countries. 91% of countries reported service disruptions in late 2021, indicating that health services continue to be disrupted at large scale.

– Service discontinuation has been substantial across all levels of care and in most service areas, often resulting in delays and cancellations of elective and emergency procedures, routine visits, prescription renewals, and referrals to specialty care. This has led to growing backlogs and record waiting times for services.

– Countries have been affected to varying degrees and report different levels of service disruption, size of the backlog, recovery of services aiming for pre-pandemic levels, and interventions to manage waiting lists.

The findings indicate that even as health systems are better learning to care for acute COVID-19 patients, the pandemic's impact on essential health services is massive and likely to affect the care for people's health and well-being post the acute phase of the public health emergency. Measuring the size of backlogs and implementing innovative care solutions are urgent and paramount.

Abstract citation ID: ckac129.211
What are the drivers of waiting times, waiting lists and backlog during and following the COVID-19 pandemic?

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The COVID-19 pandemic put a halt to the number of patients being treated thus generating larger excess demand and a greater mismatch between demand for health care services and the supply of services provided. This presentation will provide a conceptual framework for understanding the dynamic interrelation between waiting times, waiting lists and the backlog over time. Data from different countries will be used to illustrate and rationalise how waiting times, lists and volumes evolved over time. It will then discuss factors driving the demand and supply of care during Covid, and emphasise the critical role of supply in absorbing the backlog and reducing the waiting list under different scenarios, as well as factors on the demand side both in the short run and the long run. Supply determinants include the availability of health workers as key factor to "bounce back", their productivity and provider capacity (hospital beds, operating theatres), the cost of providing treatment in a safe environment, financial capacity to fund additional supply both by public and private providers, interventions to minimise staff exhaustion and burnout, payment systems which are aligned with higher volumes, and technologies and digital solutions. Demand determinants include ageing and rising chronic conditions, and multi-morbidity patients (including long-COVID patients), increasing expectations, new technologies, prioritisation protocols, but also fear of infection which can leading to a temporary or permanent reduction in demand but an increase in unmet need. The framework will be used to discuss policy options both on the demand and the supply side to deal with the backlog, but also to improve the resilience and efficiency of health systems.

Abstract citation ID: ckac129.212
Health system recovery from Covid-19: What policies are health systems using to tackle backlogs and bring down waiting times in the wake of the pandemic?

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The pandemic has left even the most well-equipped health systems vulnerable and required difficult trade-offs to balance both Covid-19 and non-Covid-19 health services. Across the globe, planned and routine health services have been scaled down during peaks of the crisis to meet the needs of acute and Covid-19-related care, resulting in growing care backlogs and increase in the number of patients waiting for treatment. To identify potential policy solutions, we have consulted the Covid-19 Health System Response Monitor, interviewed experts and analysed recovery strategies in 16 OECD and EU countries. Many country responses display striking similarities despite very real differences in the organisation of health and care services. These include:

1) increasing the supply of workforce by widening the scope of authority for different roles, investing heavily in recruitment and training for key roles, and improving the terms and conditions of work;
2) boosting productivity by introducing financial incentives and targets, reconfiguring facilities to better separate planned and emergency work'', optimising referrals and waiting list management, and outsourcing more care to the private sector; and
3) investing in out-of-hospital alternatives to care, including expanding primary and community care models and developing digital, home care and rehabilitative capacity

Policymakers will need to balance the immediate pressures of clearing backlogs with long-term measures that place services on a more sustainable footing. International experience shows how these can be at odds, especially if actions taken in the short term exhaust an already depleted workforce, or resolve Covid-19-specific problems but leave services less prepared for tomorrow's challenges.

4.C. Workshop: Promoting health without borders: cross-border public health policy in the Euregio Meuse-Rhine

Abstract citation ID: ckac129.213

Organised by: EUPHA-PHPP, Gesundheitsamt Düren (Germany), Foundation euPrevent (Netherlands)
Chair persons: Sofia Ribeiro (EUPHA-PHPP)
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For more than 20 years, different public health institutions in the German-Belgian-Dutch border triangle have been involved in cross-border public health activities. The partners in the Euregio Meuse-Rhine (EMR), as this area is called, have jointly implemented studies on COVID-19 and on adolescent risk behaviour. They have established joint health reporting for various purposes and implemented prevention measures together. The special problems in the border regions during the Corona pandemic have once again impressively shown how important cross-border cooperation is - also for cross-border public health policy. In the health sector, orientation towards municipal, state and federal borders does not lead to the desired results. The results of the Euregional COVID 19 study of 2021 show that in this way a 'borderless' life - and partly also cross-border health care - cannot be adequately served. In fact, in the everyday life of a border community, there is hardly any difference between a district border and a national border. In the EMR, this is exemplary for the entire European Union, with its many national or local responsibilities. For infectious diseases, lifestyle risks, environmental toxins or climate risks, borders have no meaning. For health, however, they do. Cross-border policy and politics is the appropriate response to real European conditions. The workshop will show the possibilities and results of cross-border policy on the basis of 3 examples from the long-standing cooperation of public health actors from the Euregio Meuse-Rhine. Finally, we will present these factors and put them up for discussion. From these and other activities, the factors that enable or hinder policy along borders can be deduced. We will present these factors, classify their significance and present the possibility of generalisation for cross-border work for discussion.

Key messages:
- Cross-border policy and coordination are the appropriate responses to the current realities in the European Union.
- National differences in culture, administration and policy can be obstacles to cooperation; but are usually inspiration for new approaches and input for best practice.

Abstract citation ID: ckac129.214
Euregional Youth Survey Structure and results of the cross border youth surveys

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The Euregional Youth Study takes place at intervals of currently 4 years since 2001. The Dutch, German and Belgian municipalities of the Euregio Meuse-Rhine (EMR) can participate. Pupils in the 8th and 10th grades are asked about various topics in an online questionnaire. These include: physical and emotional well-being, physical activity, nutrition, media behaviour, drug use and school behaviour. In 2019, 88 schools with more than 13,500 participants took part. With its cross-border approach, the study provides the opportunity to compare the living conditions, behaviour and health situation of pupils in the three countries. Ideally, this would result in common policy and prevention approaches and best practice options. For example, there are differences between the regions of the EMR regarding drug use or overweight, while risky media use is rather universal. It is striking that the Dutch participants almost consistently show the best values. It is also important to stress the importance of insight in policy along the border. Changes in policy actions have a huge effect on border regions. Examples are:

The change in drinking age in the Netherlands: from 16 to 18 resulted in organizing their parties in the neighbouring countries.

The change in cannabis policy in the Netherlands in the 2000s, is clearly reflected in the purchasing behaviour of German young people.

Independent of the cross-border aspects, the Euregional Youth Survey provides a standard data set (also with trends over time) for the adolescents of the participating districts, which the local health offices could not realise on their own and which is not self-evident for German municipalities.On the other hand, it is certainly considered as problematic that there is no binding and uniform participation of the EMR partners in the study. This leads to a partial loss of comparability and significance of the Euregional Youth Study.

Abstract citation ID: ckac129.215
The Euregional policy impact of COVID 19 on the border region between the Netherlands, North-Rhine Westphalia and Belgium

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During the Coronavirus pandemic, internal European borders were temporarily re-established with the argument to mitigate the outbreak. Also in the border region between the Netherlands, North-Rhine Westphalia and Belgium (EMR). Existing evidence on the effectiveness of border control for infectious disease control (IDC) has been dominated by studies that focused on scenarios within countries with limited attention to border regions. To address this gap, we analysed the experiences of public health professionals working in European border regions. We conducted three studies: 1. seroprevalence and questionnaire study among 10.001 Dutch persons with and without cross border mobility, 2. analyses of incidence data in municipalities in 4 cross border regions to analyse cross border differences, and 3. we conducted 27 semi-structured interviews with public health professionals in the EMR. Participants were asked about their perspectives on border controls and the spread of Covid-19.

Four key-results: First, border regions are characterised by dynamic social life and cross-border movements. Incidence was mainly determined by country policy, Second, the impact of border control and closing on local infectious disease epidemics is likely marginal. Third, due to the dynamic social life, border control measures cannot be fully implemented in border regions, and thus their effectiveness is even more questionable. Fourth, border control measures may harm the social fabric of border regions more than they do in in-countries territories. Our study results highlighted the ineffective role of border control measures for regional infectious disease control. Sustainable cross-border collaboration is crucial to ensure effective pandemic management in border regions. The results of our study impacted on policy makers, to be much more reluctant with closing borders.

Abstract citation ID: ckac129.216
Euregional Health Atlas: how to use it for cross-border public health policy Building a common health monitoring platform for the Meuse-Rhine Euroregion

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Studies show that European border regions -that account for over 30% of all European citizens- are faced with more deficits. Living in a border region still means fewer possibilities in the fields of employment, mobility, care and well-being. In order to tackle this, an absolute prerequisite is to dispose of relevant and comparable data across borders. The Euregional Health Atlas is an initiative that aims to collect and to visualize validated and comparable data for the municipalities of the Euregio Meuse-Rhine (EMR: Zuid Limburg (Nl), Zweckverband Aachen (De), the provinces Limburg, Liège, Ostbelgien (Be)). Themes addressed are: demographics (population, socioeconomic status, vulnerable groups), health care (care contacts, difficulties in daily living, chronic diseases, mortality), lifestyle (use of alcohol, smoking, weight, nutrition) and quality of life (perceived health, happiness).

Data used to feed the Euregional Health Atlas are derived from registers, health surveys and from former and current Interreg projects like the Youth Euregional Scan (YES). During the COVID-19 pandemic, data on the daily number of cases and 7-day incidence, the number of tests performed, the hospitalisation rate and the number of reported deaths related to Covid-19 were processed and presented on our dashboard and this not only for the Euregio Meuse-Rhine, but also for other Euregios. The Euregional Health Atlas is a work in progress: existing data are continuously being updated to improve their suitability for comparison purposes and new data are added to broaden the perspective. It contributes to knowledge-sharing, mutual understanding and cross-border policy development. The Atlas is a free, easily accessible platform, available for everybody; health care professionals, policy makers and citizens, see www.euregionalhealthatlas.eu!

Abstract citation ID: ckac129.217
Concept of cross border policy in public health: what is it and how does it

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Cross-border cooperation depends on many factors. Not least because of the perception of a border and its influence. Literature shows that the perception of a border is different for different stakeholders. A citizen has a different perception of a border than a policy worker of the government. This influences the effects of cross-border policies. The first three presentations already show this indirectly. Apart from the perception of a border, it is important to look at how cross-border policy in the field of public health is actually made in Europe. On the basis of European policy documents, it has been analysed how policy and policy issues concerning cross-border public health care in Europe are established and what can be deduced from this for policy in cross-border regions such as the EMR. Elements in this are the 'existence', 'genesis', 'influencers' (+/- stakeholders) of cross-border policy and the potential relation with public health. Questions that will be addressed during the presentation are: What does cross-border policy look like? Is this also available in the field of public health? When yes how has this come about (genesis)? How is this concept of cross-border policy influencing the current way of looking at cross-border public health? Are there currently main 'influencers' that have impact on creating cross-border public health policy?

4.D. Workshop: The interaction of environmental impact and chronic diseases: from theory to practice

Abstract citation ID: ckac129.218

Organised by: EUPHA-CHR, EUPHA-ENV
Chair persons: Sarah Cuschieri (Malta), Marija Jevtic (EUPHA-ENV)
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Both chronic diseases and environmental change are growing global public health challenges even amidst the ongoing Covid-19 pandemic. Every country is faced with these challenges, although small states and islands have an additional burden imposed on their sustainability, however this is rarely investigated. The intertwined relationship that exists between both epidemics is acknowledged, yet seldom explored or tackled together on a public health research level with bleak effect on policies outcome. People's lifestyles are a contributing factor to the progressive deterrent relationship between chronic diseases and environmental change. Indeed, many public health interventions promoting a healthier life will also produce the double benefit of tackling climate and the environment. For example, promoting more active transportation such as through the increase in bike lanes accessibility and incentives to promote active commuting will both reduce the dependency of carbon-based motor vehicle transportation, with a positive impact on the environment and climate, and on health. In fact, increase in physical activity is a well-known preventive and management action for most chronic diseases. Similarly, lower levels of pollution are also associated to decreases in many chronic diseases. Many other examples exist including the relationship between the food production, food security and carbon emissions. It is therefore imminent that urgent public health action is taken targeting the dominating urbanization and obesogenic environment that concomitantly have a role in the progressive development of chronic diseases and negative environmental impact. The aim of this workshop is to follow a multidisciplinary approach by bringing together different stakeholders to discuss the relationship between chronic diseases and the environment with a focus on small island states. While addressing the need to ensure that both public health and economic sustainability along with decelerating environmental change are on the imminent agenda. The workshop will be composed of four presenters discussing the various impacts on the environment from food production and security, sustainable dietetic models, the impact of city design on healthy living and finally the link between change in climate change and chronic diseases from a small state perspective. This will be followed by an engaging discussion between the presenters and the audience.

Key messages:

- An intertwined relationship exists between environmental change (ranging from food security to city planning) and chronic diseases.
- A One Health approach and public health interventions are required to halt the dual epidemic.

Abstract citation ID: ckac129.219
Food Production as a challenge for One Health Approach and Public Health

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A sustainable food production is essential for human sustainability. According to available data, the world's diets and food habits must evolve and change intensely. Nowadays, more than 800 million people suffer from deficient food. On the other hand, more consumers have an unhealthy diet contributing to premature death, obesity, food related non-communicable diseases. Diets must provide an appropriate calorie intake, different of plant-based food, low amounts of animal-based food, unsaturated fats, vitamins and minerals (rather than saturated, refined grains, highly processed foods, and added sugars). It is needed adjustment to various agro-systems, cultural traditions, and individual dietary preferences. However, production must also be sustainably adjusted to meet the global population's growing food demands, as well as using the doughnut economy principle. A sustainable food production requires a One Health approach, and also evolving towards a decarbonized agricultural production by eliminating the use of fossil fuels and land use change losses of CO2 in agriculture. Policies to encourage people to choose healthy diets are needed. Those should include the improvement of the availability and accessibility to healthy food through improved logistics and storage, increased food security, policies that promote buying from sustainable sources, as well as reducing food waste. The mindset change regarding to the agro-system, food production and food usage in a healthy way at individual level, community level, national level and global level are essential for sustainable human population. Healthy eating should be the highest priority of food consumers, as well as its mindset shift from 'live to eat' to 'eat to live'. Consumers should feel safe and healthy, but also think about future generations, respecting agriculture and food production. Sustainable, equitable, healthier, and more inclusive food systems have the power to catalyze the achievement of all 17 SDGs by 2030.

Abstract citation ID: ckac129.220
Sustainable dietetic models: strategies for communication and promotion

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Global Burden of Disease identifies the makeup of diets as a significant risk factor for mortality and morbidity, with 11 million deaths and 255 million disability-adjusted life years attributable to dietary risk factors. 690 million people lack sufficient food and economic projections suggest that COVID-19 pandemic may add an additional 83 to 132 million people to the ranks of the undernourished, as the outbreak has exacerbated the global food flaws and insufficiencies, impacting the most vulnerable populations. Diets and related food systems also contribute to significant environmental degradation and climate change. Demand for animal-source foods is also increasing, particularly in emerging economies, which entails risks for the environment. 1.3 billion tons of food are wasted globally yearly, utilizing 38% of total energy consumption in the global food system. The real cost of acquiring enough nutrient-rich food to meet national dietary guidelines for a healthy diet exceeds available income for ∼38% of the world's population. A balanced diet that meets food-based dietary guidelines calls for even larger quantities of more costly food groups than would be needed just for nutrient adequacy, owing to their many functional attributes beyond just the essential nutrients that they contain. Faced with this scenario, there is urgent need for an appropriate strategy to increase people's awareness of the relationship between specific food choices and health and to facilitate the educational environment on this issue. Actual examples of current strategies for communication and promotion of healthy and sustainable diets will be discussed. With awareness and knowledge, clear and precise information, a supportive social environment, available and accessible healthy and sustainable food items, and the implementation of related policies, individuals have a great potential to achieve healthiness and environmental sustainability by choosing healthier and more sustainable foods.

Abstract citation ID: ckac129.221
Rethink cities to promote an active lifestyle and tackle climate change: best practices from the OECD

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Background:
City design can have major health and environmental implications. The overall layout of cities influences air quality, as urban sprawl can encourage the use of motorised vehicles and decrease active travelling. Furthermore, lack of trees has a negative impact on particulate matter levels and contributes to the urban heat island effect. There is a growing interest for creating an urban environment conducive of healthier lifestyles.

Methods:
The analysis uses the five OECD criteria to assess best practices in public health - Effectiveness, Efficiency, Equity, Evidence-base, and Extent of coverage - to carry out a systematic assessment of selected candidate best practices to improve the public health potential of cities. The impact of scaling up these interventions within and across countries is evaluated by using the OECD SPHeP-NCD microsimulation model.

Results:
Interventions such as Superblocks in Barcelona, which reshapes the city layout to make them more people centric and less vehicles reliant, or Cycle Superhighways from Denmark, which develops cycling networks, have a the potential to avoid a significant number of chronic diseases by promoting an active lifestyle and decreasing transport-related pollution. Such interventions can also decrease healthcare expenditure and, if well designed, health disparities.

Discussion:
While many urban design interventions are a good investment for countries and, in general, there is good support, a number of implementation hurdles exist. First, extent of coverage is still relatively limited across European countries. Second, changes take time to be implemented and some of the health impact materializes in the longer-term. Third, the implementation of such interventions is generally competence of other authorities, other than the health authorities. Building strong multi-stakeholder approaches and making a strong case for such investments can promote change.

Abstract citation ID: ckac129.222
Strengthening resilience to address climate change and chronic diseases: evidence from small states

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Background:
Climate & environmental change are disproportionally impacting small states, given higher costs per capita associated with coping with the immediate risks of environmental & climatic events. Climate change has been identified as a serious public health threat. This is especially true for heatwaves in the Mediterranean Basin, with poor air quality worsening the health impacts during periods of extreme heat, often affecting already high levels of chronic diseases. Promoting climate change adaptation measures is crucial to address the negative socio-economic impacts brought by heatwaves, & its interactions with poor air quality. While awareness about the link between poor air quality & heat-waves is gaining momentum, there is still a gap in policy responses, especially in small states. This research assesses the level of preparedness of the European Union, with a focus on adaptation to heat-waves since the extreme European heat-wave of 2003. A case study on Malta is also presented, aiming at discovering what measures the island is adopting to tackle the problems arising from the interaction between poor air quality & heatwaves.

Methods:
A systematic literature review is conducted, investigating the links between heat-waves & air pollution post 2003, followed by a qualitative content analysis to assess the preparedness of climate change adaptation measures in this regard.

Results and conclusions:
The findings of this research show that the link between heat waves & poor air quality has not been sufficiently acknowledged by academia, with evident gaps in applied small states research. Also, a closer look at key adaptation policies & measures in Malta finds that heat waves & poor air quality are hardly been linked, leaving much scope to introduce policy & economic instruments to tackle both public health risks to address growing chronic diseases, & not to compromise current & future socioeconomic wellbeing.

4.E. Workshop: The role of National Public Health Institutes and IANPHI as Key Climate Actors

Abstract citation ID: ckac129.223

Organised by: Robert Koch Institute, IANPHI (France)
Chair persons: Angela Fehr (Germany), Sébastien Denys (France)
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Climate change is arguably the greatest threat to population health worldwide. Urgent action is needed to mitigate and adapt to the impacts. National public health institutes (NPHIs) are key actors in preventing illness and improving the health and wellbeing of their populations. They therefore have a crucial role to play in addressing climate change and making it central to their agendas. They can contribute to a better understanding of how climate change affects health, translate this knowledge into policy advice, and identify health co-benefits and possible harms of mitigation and adaptation measures to support the implementation of healthy measures within and beyond the health sector. NPHIs are also responsible for reducing their own footprint through "greening" and can role model and support other organisations in this regard. The International Association of National Public Health Institutes (IANPHI) recognises the threat that climate change poses and, to this end, published the "IANPHI Roadmap for Action on Health and Climate Change" in November 2021. This roadmap highlights the essential role of NPHIs' as "key climate actors". NPHIs are at different stages of progress on climate change and health, and there is therefore need and opportunity to learn from best practices and to liaise and work together to address shared challenges. It is also essential that NPHIs have an ongoing collaboration with other actors, such as academics, civil society, NGOs and other non-state actors, within and beyond the health sector, in order to learn from other perspectives and sources of knowledge and to ensure coherence and joint action on climate change and health across the system. This workshop therefore aims to promote discussion and exchange and to raise the visibility of NPHIs as key climate actors in order to strengthen their individual and shared contribution. The workshop will also ensure that the IANPHI Roadmap remains front of mind a year after publication. It will also give the opportunity to NPHIs to share their progress since then, as well as promote coherence and exchange in their continued efforts. The workshop will start with a presentation of the IANPHI Roadmap, followed by three examples from NPHIs on their progress on climate change strategy development and implementation. It will then be followed by an interactive session and discussion on NPHIs' priorities in this area, on how NPHIs and other actors can best exchange and work together, and on how IANPHI as a global network of NPHIs can promote and support NPHI and stakeholder cooperation. The presentations are coherent together in offering the Roadmap's vision as well as a set of diverse examples that illustrate the role of NPHIs on climate change and health in practice.

Key messages:

- Emphasis of the important role that NPHIs have in addressing climate change and health, as well as the value of their partnerships and intersectoral working, which can be supported by IANPHI.
- Promotion of discussion and new ideas between the presenters and the audience on how to ensure health is at the forefront when tackling climate change.

Abstract citation ID: ckac129.224
Engaging and supporting national public health institutes as key climate actors

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The International Association of National Public Health Institutes (IANPHI) collectively builds public health capacity by connecting, developing and strengthening national public health institutes worldwide. IANPHI recognizes climate action as a critical global public health intervention and acknowledges that public health interventions on environmental and socio-economic determinants of health are essential drivers of climate adaptation and mitigation. Recovery from the COVID-19 pandemic also provides a unique opportunity to reset business as usual and strengthen actions on climate change, biodiversity and health, while reducing social and health inequities in the long term. However, effective contributions of National Public Health Institutes (NPHIs) to adaptation plans and mitigation strategies for climate change have remained limited, with a primary focus on health surveillance to date. In this context, IANPHI developed a roadmap to support and reinforce the role of NPHIs in climate change mitigation and adaptation policies. Five priority actions were identified:
1. Advocate for strengthening NPHIs capacities to contribute effectively to climate and biodiversity research, policies, and action
2. Enhance capacity, competence and training through peer-to-peer support and knowledge sharing between NPHIs
3. Increase collaboration with international and regional organizations active in the fields of public health and climate change
4. Support the greening of public health services
5. Monitor progress in the NPHIs' involvement in climate change policies through key indicators
In addition to discussing the roadmap, the presentation will focus on actions that IANPHI's Climate Change and Health committee initiated to reinforce the role of NPHIs in climate change mitigation and adaptation policies. This presentation will also provide information on how IANPHI can engage and support national public health institutes as key actors in the fight against climate change.

Abstract citation ID: ckac129.225
How RIVM is responding to the challenge of protecting human health from the effects of climate change – now and in the future

Lisbeth Hall

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In 2020 the Dutch National Institute for Public Health and the Environment (RIVM) published its vision on climate change and health. This vision reflects the position of RIVM in society and highlights the transdisciplinary and collaborative nature of our work on this topic. We define this societal challenge as: protecting and promoting the health of people throughout society with regard to climate change and climate measures. The purpose of our work on this challenge is to support all levels of Dutch government with policy development and implementation and to forge links with both national and international organisations to further knowledge and expertise. The focus of our work, in collaboration with the aforementioned actors, is as follows:
1. Knowledge translation of the health impacts of climate change for the public and government.
2. Developing instruments to promote health in relation to climate change and mitigation and adaptation measures.
3. Implementation research on solutions to mitigate and adapt to climate change.
4. Strengthening national and international cooperation to enhance synergies in our work.
In the workshop we will present examples of our work:

- Quantifying the health impacts of climate change, now and in the future under different global warming scenarios.
- Developing a set of indicators to monitor the health impacts of climate change and mitigation and adaptation plans and actions.
- Collating and disseminating easily digestible information for public health services on evidence-based, effective adaptation measures.
- Developing tools and instruments to ensure health benefits and limit unintended consequences of adaptation measures, such as green and blue spaces.
- Prioritising research on climate change and health through a research agenda.

Workshop participants will be encouraged to provide feedback to inform RIVM's future work and that of other national public health institutes, and to ensure we are fully supporting our stakeholders.

Abstract citation ID: ckac129.226
The NIPH's response to the climate and environmental crisis

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The vision of the Norwegian Institute of Public Health (NIPH) is better health for all. Climate changes and health are among our main strategic priorities. The NIPH aims to become a key actor in questions relating to climate, environment, food and health. An action plan on climate changes and environmental health is under development and will be presented. Climate and environmental changes affect the mental and physical health in several ways. The NIPH will in the coming years develop new knowledge on health consequences of climate changes: causes, risks, health effects and measures, based on our methodological expertise, research activities and infrastructures, such as health registers, health examinations, laboratories and biobanks. A key issue, and a main priority of the NIPH, is sustainable and climate-adapted food systems. There is a strong need to strengthen knowledge on healthy, safe and globally sustainable food. We will present and discuss our action plan for addressing climate and environmental health: Priorities, experiences, and challenges in implementation regarding e.g. competence and capacity building.

The following examples will be given:

– Research that addresses the food problem, and how to ensure a sustainable diet.

– The development of the MoBa Human Environmental Biobank to understand how climate and environmental changes affect exposure and public health, and how to follow the changes over time and help prevent disease.

– Examples of activities relating to clean air, clean and safe drinking water, and safe products from a One Health perspective: Achievements, projects, networks.

– Challenges in communicating health risks associated with the climate, environmental and pollution crisis to the public.

We encourage feedback and suggestions on NIPH's efforts to address the climate crisis, to ensure good knowledge sharing and that we are fully supporting our stakeholders.

Abstract citation ID: ckac129.227
The German national public health institute's journey to becoming a Key Climate Actor: The Robert Koch Institute's strategy development process

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The Robert Koch Institute (RKI) is Germany's national public health institute. It has been working for a number of years on One Health topics such as zoonotic diseases and antimicrobial resistance, as well as wider areas relevant to climate change such as environmental health. Climate change has, however, only been a specific area of focus since 2019. This was signalled through the creation of a coordination role called One Health Climate Change (OHCC). In addition, a number of projects on climate change have been initiated independently of one another during this time across the RKI. Since summer 2021, RKI has been more active in its strategic development and set up a climate change and health working group of over 50 members of staff representing all departments. This offers a hub structure for pulling the relevant work and activities together under one umbrella, thereby promoting exchange, cooperation and cohesion across RKI. The RKI is currently at an early and dynamic phase in its journey as a key Climate Actor. It is developing a strategy on the topic, guided by the "IANPHI Roadmap for Action on Health and Climate Change" in order to further strengthen its contribution in this area. This presentation will share how RKI has developed its strategy and its action plan for implementation, as well as some of the successes and challenges in their development.

The presentation aims to:

- promote shared learning between national public health institutes on climate change and health strategy development;
- provide an opportunity for shaping future planning at RKI through audience input;
- stimulate thinking on how national public health institutes can remain in exchange with key stakeholder groups and open to learning and adaptation of their strategies in order to be effective Key Climate Actors over the long term.

4.F. Skills building seminar: How can we achieve effective interdisciplinarity in digital public health practice?

Abstract citation ID: ckac129.228

Organised by: Leibniz ScienceCampus Digital Public Health (Germany)
Chair persons: Laura Maass (Germany), Chen-Chia Pan (Germany)
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Digital technology, which is driven by technical opportunities rather than by demands, can fail to realise the critical objectives of evidence-based public health and pose novel ethical, legal, sociocultural, and equity-related challenges. While individual health already needs various disciplines to be adequately addressed, even more fields gain importance when it comes to population health. Public health requires collaboration across all domains: Those that tackle an individual's health but also those that set the framework for health practices (e.g., law, medicine, psychology, ethics, or sociology), measure health outcomes on a population-level (e.g., epidemiology), or that develop interventions to improve the populations' health (e.g., health promotion, health management, implementation science). During the last years, health has become more and more digitalised. Adding the digital level to public health also brings more and increasingly important players on the stage (e.g., human-computer-interaction, computer science, or engineering), who are needed to develop and improve evidence-based digital technologies and innovations on a population level. Having various disciplines collaborating with each other can offer new opportunities but also create new challenges if there is no mutual understanding of digital public health. This skill-building workshop aims to foster awareness of interdisciplinary approaches in public health research and practice. Two short introductory presentations (10 minutes each) will form the frame for the workshop. The first talk will introduce participants to the idea of interdisciplinarity in research and practice and highlight the prerequisites for effective and sustainable interdisciplinary collaborations. The second talk will build on this understanding and present a holistic (digital) public health model that displays how different disciplines contribute to the field and how an interdisciplinary approach can be used to overcome individual challenges. Based on the talks, participants will be invited to work on a case study regarding mobile mental health apps as a digital public health intervention. We will apply the world coffee method, in which each table will display one individual discipline (epidemiology, health economics, psychology, law, ethics, and computer science). An expert in the field will support each table to assist the participants if needed. Every participant will be able to discuss their ideas at three tables (10 min. each). The goal will be to work out how one could best integrate the individual disciplines when developing, implementing, and evaluating mental health apps in the digital public health environment. We discuss what each discipline can contribute to the topic and for which aspects it needs support from other scientific fields. The final results will be collected and summarised as a chapter in a digital public health handbook published by the Leibniz ScienceCampus Digital Public Health.

Key messages:

- Considering different disciplines when developing and implementing digital public health interventions improves the interventions' outcomes and long-term acceptability in user groups.
- Interdisciplinarity in digital public health requires a mindset from researchers that is characterised by empathy/curiosity towards other disciplines and a common understanding of the intervention.

Abstract citation ID: ckac129.229
What is interdisciplinarity, and how can we apply it to research and practice?

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The concept of interdisciplinarity is an integral part of contemporary academia. Successful academic careers or innovative study programs: Interdisciplinarity is often claimed, expected, or required. Public health scientists also claim to facilitate health-related interdisciplinary research under the umbrella of public health and to apply findings from interdisciplinary research in practice. These aspects already point to one of many problems in using the term interdisciplinarity: When using the term, it is not always evident whether it is a merely descriptive term or whether normative expectations are also associated with it. We consider that successful interdisciplinary research is enabled by a shared understanding of what is meant by interdisciplinarity in concrete research projects. This urgency is re-emphasised by the participation of new disciplines in digital public health. Through this presentation, we would like to give participants a brief theoretical overview of the concept of interdisciplinarity and related concepts such as transdisciplinarity and multidisciplinarity. In this way, all workshop participants will have a shared understanding that will serve as a basis for further work in groups during the workshop. After the terminological distinctions, we will turn to the practical challenges of interdisciplinary research, which arise beyond the clarification of terms. We will outline these challenges in fundamental terms and then provide some best practice examples on how interdisciplinarity in scientific competence can be promoted among individual scientists and in research groups. In the best case, the workshop participants will draw inspiration for the subsequent group work from the best practice examples to generate new motivation for interdisciplinary work in this way. A concise summary will conclude this compact-informative presentation. Merle Freye will host the tables on law and ethics during the world coffee.

Abstract citation ID: ckac129.230
Which disciplines form digital public health, and how do they relate to each other?

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A standard public health definition, coined by Acheson in 1998 and adapted by the World Health Organization, describes public health as 'the art and science of preventing disease, prolonging life and promoting health through the organised efforts of society'. Several other definitions emphasise different foci such as living conditions, the efficient use and equitable distribution of resources, or sustainability. Yet, they all share the dual nature as a science and practice of public health, its focus on the health of entire populations, and its interdisciplinary nature. In particular, joint efforts of individual disciplines are needed to combine subject matter knowledge and approaches to protect and promote population health. Traditional core public health disciplines comprise the social sciences, humanities, natural sciences, and environmental sciences. Their key tasks are summarised in the ten essential public health services, which can be further extended to digital public health. This extension leads to increasing use and integration of technological innovation and advancement into public health functions which require intensive collaborations with disciplines from the engineering field. In this presentation, we aim to describe the transition from public health to digital public health, emphasising the disciplines needed to tackle population health challenges in a digitalised world. In a first step, we will illustrate core disciplines and their subdisciplines that are traditionally known in the public health field. In a second step, we will introduce further core and subdisciplines prominent in digital public health. Finally, we will briefly present examples of key strengths and challenges of some of the disciplines. After this presentation, workshop participants should have a first understanding of the role and importance of interdisciplinarity in digital public health. Stefanie Do will host the table on epidemiology during the world coffee.

Abstract citation ID: ckac129.231
Discussion table on health economics

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Laura Maaß is an expert in public health, health economics, and digital health. She will assist the workshop participants during the world coffee at the discussion table for health economics.

Abstract citation ID: ckac129.232
Discussion table on computer science

Daniel Diethei

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Daniel Diethei is an expert in computer science, human-computer interaction and mobile health. He will support the workshop participants during the world coffee at the discussion table for computer science.

Abstract citation ID: ckac129.233
Discussion table on psychology

Jasmin Niess

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Jasmin Niess has a background in psychology and focuses on human-computer interaction. She will support the workshop participants during the world coffee at the discussion table for psychology.

4.G. Workshop: Economic evaluations of public health interventions: from case studies to next methodological steps

Abstract citation ID: ckac129.234

Organised by: EUPHA-ECO, EUPHA-HTA
Chair persons: João Vasco Santos (EUPHA-ECO), Vanessa Gorasso (EUPHA-ECO)
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For establishing evidence-based or evidence-informed decision making in health systems, it is essential to determine which public health interventions and health policies are worth investing in, considering that public budgets are always limited. For that purpose, we can use well-established economic evaluation methods based on marginal analysis as cost-benefit and cost-effectiveness analyses. While the use of economic evaluations is a common practice in health technology assessment of drug and medical device in many high-income countries, the systematic assessment of public health interventions is marginal and non-compulsory. In fact, if conducted at all, many economic evaluations of public health interventions are performed internally without dissemination outside organisations. In general, there is already some guidance on how to perform and report economic evaluations that can also be used for public health interventions, as the recent update version of Consolidated Health Economic Evaluation Reporting Standards (CHEERS) check list. However, some methodological and implementation difficulties still persist, including insufficient or low-quality data on costs and outcomes (e.g. absence of experimental studies), complexities related to the need of measuring outcomes in the very long term an on aspects beyond the healthcare sector, or high relevance of contextual factors that are difficult to measure. This workshop will take on some examples of economic evaluations of public health interventions and explore how analyses, methods and implementation can be improved in order to allow a more evidence-based or evidence-informed decision making process.

Key messages:

- Economic evaluations of public health interventions could be performed more frequently when it comes to the decision making. Planning and implementation difficulties are highlighted in this workshop.
- Methods used in current economic evaluations of public health interventions can still be improved with a correct estimation of costs and outcomes, based on good quality data.

Abstract citation ID: ckac129.235
Economic evaluation of legislation-based public health interventions – the case of tobacco control

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Economic evaluation of public health interventions have mostly been performed for interventions whose cost and effectiveness can be well identified, such as protective interventions (vaccination or screening), clinical interventions (prevention drugs) or counselling and education programs. Yet, following the Thomas Frieden's health impact pyramid, these public health interventions are less effective than those ‘‘changing the context to make individuals' default decision healthy''. The economic evaluation of population-based interventions that modify the context is rather challenging. First, such interventions include various components, e.g., taxes and subsidies, media campaigns or bans. Second, since they correspond to political decisions applied at a wide scale, their effectiveness can hardly be measured using experimental designs. Third, the cost of such interventions is difficult to assess, since they are not represented by a specific product or service, but rather by political decisions and their implementation, whose costing is not straightforward. Using the case of tobacco control policies, we show how alternative methods can be used to assess their economic value. We show that quasi-experimental methods with country comparisons allow identify the effectiveness of specific policies, and that qualitative approaches are needed to quantify their costs. Results indicate that tobacco-control policies have low costs and are highly effective, so that their cost-effectiveness is quite favorable in light of commonly referred thresholds, and in comparison with widely financed clinical interventions. Population-based interventions that focus contextual factors must also be carefully evaluated from an economic viewpoint. Although economic evaluations are challenging, alternative approaches help obtain results that are valuable for decision making.

Abstract citation ID: ckac129.236
A perspective on the assessment of the broad value of vaccinations

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Vaccinations are considered a cost-effective public health intervention to control vaccine-preventable diseases and are commonly evaluated in respect to several domains, including efficacy, safety and cost-effectiveness, before being implemented nationwide. There are plenty of evidence of economic evaluations performed on single vaccines or vaccinations. They commonly relies on static or dynamic models and considers both direct and indirect costs, i.e., those linked to productivity loss, of vaccine-preventable diseases. Nevertheless, vaccinations are expected to provide also societal benefits that call to the development and implementation of methods to value them, also from an economic point of view. The scientific debate on the assessment of the broad value of vaccinations has pinpointed several relevant aspects that need to be paid attention in future evaluations. They include the antibiotic sparing effect of vaccination, their impact on antimicrobial resistance - which is a challenge of our days -, their effect on social cohesion, their role in avoiding the loss of school days and in ameliorating educational attainment. The economic evaluation of vaccinations need to be further developed in order to allow a quantitative exploitation of their broad value according to the aspects described above. As the experience is still scant, we need to work on several fronts, including capacity building, data production and sharing and new methods development.

Abstract citation ID: ckac129.237
Challenges in economic evaluation of public health interventions: the example of surveillance of high risk pancreatic tumour patients

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Evaluation of public health interventions raises a number of potential challenges in applying and performing economic analyses. The impact of interventions may extend beyond the health sector, and even within the health sector, the value may be difficult to estimate and extended beyond the health improvement of individuals. Screening and surveillance cancer programmes give the possibility to detect patients in a curable and treatable stage. Increasing number of expert recommendations and guidelines of cancer screening and surveillance have been recorded in the last decades. This scenario has increased the uncertainty on the most valuable and affordable approach to adopt. A case study can be provided by the premalignant pancreatic primarily cystic tumours surveillance. American, European and International guidelines for surveillance of asymptomatic cysts are available with significant differences in patients stratification, surveillance intensity (frequency of visits-exams), and duration. Further, real-world data suggest a significant variability in the surveillance approach even within Europe. However, no comparative data on different programmes efficacy are available, neither reliable medium-long term data on cancer risk. The lack of evidence must be considered with methodological issue associated to the inclusion of method to estimate inequalities created by the different programs and the indirect effect of healthcare resources consumption (e.g. CT and MRI) to access and allocation of these resources to other subjects (cancer and no cancer patients). Economic evaluations of surveillance or screening cancer program raise significant challenges, as data availability and methodological approach to apply. This scenario highlight the need of specific recommendation on data quality and type required to assess the programmes value and on methodological approach required (e.g. type of decision analytical models) to provide useful information for public health decision makers.

Abstract citation ID: ckac129.238
Methodological advancements in costing methods for (public) health economic evaluations: results from the European PECUNIA project

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(Public) health economic evaluations face significant problems regarding the standardization and comparability of their methods. In addition, at least a quarter of the total direct cost impact of healthcare interventions affects other economic sectors. International methods and tools are lacking for the rigorous and comparable assessment of the costs and outcomes of (public) health care from a societal perspective. The H2020 PECUNIA project (grant No 779292) brought together ten partners from six countries (AT/DE/ES/HU/NL/UK) between 2018 and 2021 aiming to improve the comparability and feasibility of multi-sectoral, multi-national health economic evaluations in Europe. A multi-step, mixed methods approach was used following a new harmonized costing concept to develop new methods and tools for the standardised identification, definition, measurement and valuation of costs in multiple sectors (health care, social care, (criminal) justice, education, employment and productivity, and patient, family and informal care), and for the broader, harmonised, supra-national assessment of outcomes using selected mental disorders as illustrative examples. This presentation will summarise the relevant advances in costing methods, give an overview of the developed tools that are now publicly available (www.pecunia-project.eu/tools), and discuss the lessons learned regarding how far it is possible to harmonize costing evidence with standardised tools in Europe, and what the necessary future research directions may be.

4.H. Workshop: The Commercial determinants of health: latest thinking, models, tools and solutions

Abstract citation ID: ckac129.239

This abstract has been withdrawn.

Abstract citation ID: ckac129.240

This abstract has been withdrawn.

Abstract citation ID: ckac129.241

This abstract has been withdrawn.

Abstract citation ID: ckac129.242

This abstract has been withdrawn.

4.J. Workshop: Health system performance assessment in Europe – recent developments, evidence, and challenges

Abstract citation ID: ckac129.243

Organised by: Berlin University of Technology
Chair persons: Reinhard Busse (Germany), Carine Van de Voorde (Belgium)
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Assessing the performance of health systems is essential to initiate policy processes that further strengthen health systems to improve population health. Starting with WHO's World Health Report of 2000, Health System Performance Assessments (HSPA) gained increasing attention in research and policy. By now, several comparative HSPA initiatives of international organisations (e.g., OECD's Health at a Glance) and country specific HSPA (e.g., Sweden, Netherlands, Austria, Belgium) were implemented in Europe. Further countries are currently in the process of developing or piloting an HSPA (e.g., Germany). The objective of the workshop is to foster and strengthen the interchange of different HSPA initiatives in Europe and beyond. While each health system has its specifics, initiatives likely face similar challenges in the implementation and ongoing development, which holds a lot of potential for learning from each other. The workshop is supposed to be a platform for the exchange of and about HSPA initiatives and related topics by bringing together stakeholders of different countries and professions. Participants are supposed to gain new insights into recent activities in Europe and will be able to discuss challenges and lessons learned. The presentations give insights into recent activities of selected HSPA initiatives in Europe. One presentation originates from the Belgian HSPA which is well established. This presentation will focus on the transversal dimension of equity, on which a separate report was recently published. The second presentation is about the German HSPA which is still in development and currently tested in a pilot study. Both presentations represent HSPA initiatives at different stages, which provides a good basis for the following panel and discussion with all workshop participants. The two presentations of about 20 minutes each will be combined with a panel discussion. Afterwards, there will be room for exchange and discussions between all participants and presenters.

Key messages:

- Recent developments of HSPA initiatives in Europe will be presented along two examples from Belgium and Germany and lessons learned and challenges will be discussed.
- The workshop provides a platform for the exchange of and about HSPA initiatives and related topics by bringing together stakeholders of different countries and professions.

Abstract citation ID: ckac129.244
Health System Performance Assessment: how equitable is the Belgian health system?

Carine Van de Voorde

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Access to and delivery of effective, high quality and affordable healthcare are fundamental objectives that have shaped health policy and the universal health insurance system in Belgium. A health system should be evaluated against these objectives. Monitoring equity within a health system - an equitable distribution of healthcare use and of payments for healthcare - is a core component of a health system performance assessment. We use the horizontal equity principle to evaluate equity in healthcare use in Belgium. Unfair inequality in healthcare use is measured by the fairness gap, comparing actual use and expected use corrected for needs. The empirical analysis was conducted using a linked dataset which contains data from the European Union Statistics on Income and Living Conditions (EU-SILC) and administrative data. Two sets of results are reported for a selected set of indicators of use: the deviation between the average fairness gap in the population and the average fairness gap in a subgroup of interest and an assessment of systematic socioeconomic inequity in the fairness gap using the absolute concentration index. We show that important socioeconomic inequities in healthcare use exist. Inequities differ by type of care, e.g., the use of hospital care and medications is more equitable than the use of GP, outpatient specialist and dental care. When accounting for healthcare needs, we find that use among high-income groups and individuals with a high educational attainment is higher compared to financially vulnerable groups (individuals at risk of poverty or with severe material deprivation, unemployed, singles). Also, individuals who are entitled to an increased reimbursement of healthcare costs, show a lower use of outpatient specialist care than expected based on their care needs. On the other hand, increased reimbursement is effective in improving accessibility to GP care, while for other financially vulnerable individuals we find a lower use of GP care.

Abstract citation ID: ckac129.245
Piloting the first health system performance assessment for Germany: key results and learnings

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Background:
Health System Performance Assessment (HSPA) is a tool to monitor and evaluate the performance of health systems and to inform evidence-based policymaking. For the first time, a country specific HSPA is currently being piloted for Germany.

Methods:
The HSPA is based on a newly developed conceptual framework including nine dimensions (e.g., access, quality, efficiency, population health). Indicators were selected based on a systematic search of (inter)national studies and HSPA initiatives. Where possible, indicators were analysed in their development over time (2000-2020), in comparison to eight European countries (e.g., Austria, Denmark, France), and along up to seven equity dimensions (e.g., sex, age, income, education, region).

Results:
Overall, 90 indicators were included in the HSPA. Trend and equity analyses were possible for almost all and country comparisons for most indicators. A few indicators could not be analysed at all due to missing data. The overall HSPA provides an in-detail picture of Germany's health system. Access, for example, can be rated as good in Germany compared to the other countries, as insurance coverage and physician density are high, and unmet needs and waiting times for elective surgery are low. Results for quality are not as good, e.g., cancer survival rates, but most indicators show a positive trend. While population health outcomes are average in country comparison (e.g., fetal and infant mortality), resource input is comparatively high. Consequently, overall efficiency can still be improved (e.g., amenable mortality per total health expenditure).

Conclusions:
This first HSPA for Germany allows new insights to the performance of the German health system which are important for policy and research. While the pilot benefitted a lot from previous HSPA initiatives, data availability remains one of the biggest challenges.

4.K. Workshop: Promoting and enhancing health literacy through school interventions

Abstract citation ID: ckac129.246

Organised by: EUPHA Working Group Health Literacy, EUPHA-HP, EUPHA-CAPH, Technical University Munich
Chair persons: Orkan Okan (EUPHA-HP), Julia Dratva (EUPHA-CAPH)
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The promotion and enhancement of health literacy in school-aged children is an important public health and education goal. To ensure healthy behaviours and attitudes in adulthood, children and adolescents have to learn about health and well-being early in life. Toward this goal, schools are considered the most important setting to address health literacy. Interventions delivered in schools can reach all children regardless of their social, cultural or development background. In the education sector, health literacy interventions can address not only the skills, attitudes and knowledge of students, but that of teachers, principals, health and education staff, as well as the whole school setting. Health literacy is linked to education, while it mainly addresses how people manage health information. In this context, health literacy enables children and adolescent to find, understand and critically appraise health information and use it to guide informed health decisions and promote health behaviour. While this understanding targets personal competencies of individuals, health literacy is also directed towards the environment. For example, the concept of organizational health literacy aims at increasing health literacy capacities of the environment and within settings, such as schools. This makes health literacy an important concept at the intersection of behaviour change (agency: personal health literacy) and social change (structure: organizational health literacy). While the behavioural approach is most promising to equip students with the necessary skills to act as their own agents of health information management and improve their health agency capacities, the social approach further includes consideration of social determinants of health to provide child- and adolescent-friendly environments and conditions. Therefore, effective health literacy interventions should aim at combining behavioural and social approaches, especially in such vulnerable groups as children and adolescents. The purpose of this workshop is to present and discuss four interventions on health literacy drawing on behavioural and social sciences. (i) The first presentation will introduce the Health Literacy Toolbox for Schools (Tool-HLCA). (ii) The second presentation will introduce a school curriculum for classroom based Mental Health Literacy (HLCA-IMPRES). (iii) The third presentation will provide the organizational health literacy school intervention: Health Literate Schools (HeLit-Schools). (iv) The fourth will present applied data on mental health literacy in teachers and an instrument to measure action competencies of teachers with respect to promoting their students' mental health (MHAC). Each project will be given ten minutes to present their interventions and main findings, including time to discuss with the audiences and get feedback. The participants in turn will learn about recent empirical findings they can use in health literacy practice and policy.

Key messages:
- Children and adolescent will benefit from early interventions to develop healthy behaviours and lifestyles in their life-course.
- Health literacy is an important school topic and should be addressed within behavioural and social approaches.

Abstract citation ID: ckac129.247
Tool-HLCA: An intervention to promote the health literacy of school-aged children

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Background:
In the age of 'infodemic,' children and young people encounter health-related information in digital environments at an early age. They should therefore learn how to deal with these in a health-competent way while still at school. Above all, it is relevant that they learn how to distinguish good health information from false. This can be achieved by promoting health literacy. The intervention "Toolbox" combines areas of media education in schools and health literacy to be implemented in schools and curricula in the long term.
Methods:
The intervention was designed to address existing health topics in the classroom while strengthening digital health literacy in grades 7 to 10. The Toolbox was piloted in three school classes in Germany and the feedback provided by teachers and students was implemented in a new version of the intervention.
Results:
The basic understanding of health literacy in the Toolbox is finding, understanding, evaluating and using digital health information. These steps are followed through using quality criteria for good health information. Students learn that they need to find out the type of information, analyze the author, investigate the media provider, and also the sources given. If they are unsure, they can conduct an adapted questionnaire regarding identify misinformation and disinformation. In addition, the students and teachers receive working materials for group work.
Conclusions:
Recognizing disinformation is a relevant skill already for children and adolescents. The intervention should make it easier for students to recognize good health information. For teachers it should be made easier to address health literacy in school without additional effort.

Abstract citation ID: ckac129.248
Results from a systematic review of interventions promoting mental health literacy in youth

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Background:
Mental illnesses are amongst the leading causes of ill-health and disability, with most onset of many mental health problems (ca. 75%) emerging before the age of 25 years. Thus, adolescence is an important time period for preventive measures, such as strengthening mental health literacy (MHL). This review aims to give an overview of those interventions which promote MHL on the long run.
Methods:
Five databases were searched for English or German articles published between January 1997 and May 2020, leading to a total of 4,375 original articles. Interventions were included only if they had measured MHL and/or stigma on three different time points, had a control group, and delivered an intervention program. Studies reporting means and standard deviations for the outcomes of interest were further included into a meta-analysis using a random effects model. The analysis was carried out with STATA 16.
Results:
25 studies were included into the review, and 13 of them were suitable for the meta-analysis. The great majority of studies (76%) were conducted within schools and the addressed topics were general mental health, depression, and schizophrenia. Interventions mostly used psychoeducation or a combination of educational elements and contact as delivery method. The combined use of educational and contact components led to worse results for mental health literacy, but not stigmatizing attitudes or social distance. Generally, interventions led to positive outcomes. The changes were sustained for mental health literacy d = 0.48, as well as for stigmatizing attitudes d = 0.30, and social distance d = 0.16, after an average follow-up of about 5 months.
Conclusions:
MHL-interventions targeting adolescents are mostly conducted within schools and generally have a brief follow-up period. They show a stable improvement in mental health literacy and are to a smaller degree able to destigmatize mental illness or improve social distance.

Abstract citation ID: ckac129.249
Health Literate Schools: Organizational Health Literacy in the School Setting

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Background:
Fostering health literacy is considered an important objective within school-based strategies of health promotion. To effectively strengthen health literacy in the school setting the approach of organizational health literacy can be transferred to and implemented in schools. This approach combines behaviour-focused measures (providing individual learning opportunities) and environment-orientated measures (changing school's framework conditions). The HeLit-Schools project aims at developing a school-based concept of organizational health literacy and tools to support schools in becoming health-literate schools.
Methods:
Existing concepts of organizational health literacy of other setting are analysed and adapted to the school setting. The concept development includes the expertise of actors from the school field, health literacy research and health sector. They contribute by commenting, reviewing and validating the conceptualization at different stages in the development process. A quantitative assessment of schools' organizational health literacy is planned to further validate the concept. Furthermore, a screening of existing materials and programs for schools to use to foster health literacy is being conducted.
Results:
The developed HeLit-Schools concept describes eight standards of a health-literate school. Every standard focuses on a specific area within the school's organization that can be addressed and changed in order to strengthen everyone's health literacy at school more effectively. To additionally support schools in fostering health literacy in school as well as in the classroom, a structured collection of existing (teaching) materials and programs was assembled.
Conclusions:
Enhancing schools' organizational health literacy and thus promoting school development by optimizing schools' structures, processes and conditions in a health-literate matter can lead to an effective and sustainable strengthening of health literacy of every individual at school.

Abstract citation ID: ckac129.250
Teachers' mental health literacy and action competencies

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Background:
Teachers are very important in mental health promotion and early recognition of mental health burden (disorder, illness). Teachers' surrogate mental health literacy (MHL) may be key to improving mental health in youth but has been little investigated. We assessed surrogate MHL in Swiss teachers and tested a measure of mental health action competencies (MHAC).

Methods:
In 2020, all teaching and support staff at compulsory school level were invited to an online survey covering individual and professional characteristics, MHL (finding, understanding, critical appraisal of information) and action competencies (adapted scale Ahnert et al. 2016, range 17 - 68) personal experience with students' MHB. Data was explored descriptively and with multivariate regression. Item response theory analyses were conducted to examine internal psychometric MHAC scale properties, and group-mean differences tested between school levels.

Results:
Participation rate was 38% (N = 459). Nearly all participants had taught at least 1 mentally burdened student in the past year (average 4.7). 77% felt experienced to very experienced regarding these students. Only 32% felt they had sufficient tools and teaching resources. Participants felt it was difficult to very difficult to find (47%), understand (53%) and appraise (90%) information on students' mental health. Kindergarden teachers and teachers without class responsibility showed significantly lower MHL. Internal psychometric properties of the MHAC measure support the use of a 1-factor scale and indicates discriminant validity with respect to age; experience and school level, median score was high (P50 48, P25 44, P75 53), but single items, e.g. on suicide signs, were rated low.

Conclusions:
While overall subjective MHAC are high, teachers are insecure regarding MHL and report a lack of tools and resources. Targeted training could strengthen surrogate mental health literacy with a focus on critical appraisal and certain action competencies.

4.L. Round table: Mobilising coping and support strategies: learning from healthcare workers' experiences of COVID-19

Abstract citation ID: ckac129.251

Organised by: Robert Koch-Institute, EUPHA-HWR
Chair persons: Heide Weishaar (Germany), Ellen Kuhlmann (EUPHA-HWR)
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Background:
During the COVID-19 pandemic, health care workers (HCWs) have experienced considerable stress and shown great resilience. Multiple organisations advocate for better support for the health workforce, both during pandemics and in routine health care. Effective interventions aimed at supporting HCWs should be based on evidence stemming from HCWs' coping strategies and support needs. This workshop highlights coping mechanisms and support strategies for HCWs during public health emergencies. It is chaired by the Robert Koch Institute (RKI), Germany's national public health institute, who played a major role in the pandemic response over the last two years, and the EUPHA Health Workforce Research Section. While the workshop's primary geographical focus is Germany, the roundtable participants will explore, from an international perspective, what lessons can be learned from HCWs' experiences during the COVID-19 pandemic and discuss the relevance to researchers, health professionals, health managers, politicians, and other decision makers.

Objectives:
The aims are to: (i) introduce an analytical framework for coping mechanisms and support strategies for HCWs during public health emergencies, (ii) present reported coping mechanisms among, and support strategies provided to, HCWs during the COVID-19 pandemic, and (iii) discuss the coping mechanisms and support strategies that have been reported to be most effective in improving the situation of HCWs in the future.

The panel workshop starts with two 10-minute presentations followed by a moderated panel and subsequent discussion with the audience. The presentations introduce the workshop topic using a scoping literature review conducted at RKI on HCWs' experiences during the COVID-19 pandemic, and a summary of key findings of a mixed-method study on coping strategies and support needs of HCWs during COVID-19 in Germany, highlighting support needed and received and crucial sources of support. The panel highlights the most effective reported coping mechanism, addresses gaps in support strategies, and collects suggestions for how to make use of the suggested solutions. These as well as lessons to be learned for policy and practice will be discussed with panel members and attendees, connecting the perspectives of health policymakers, management. and professionals. The aim of the workshop is to contribute to the wellbeing of HCWs, who represent one of the most important pillars of a health system.

Key messages:
- Healthcare workers' coping mechanisms and support strategies during the COVID-19 pandemic are an important source of health workforce resilience.
- Lessons learned from the COVID-19 pandemic on supporting health care workers must be jointly implemented across sectors.

Speakers/Panellists:
Megan Evans
Robert Koch Institute, Berlin, Germany

George Valiotis
European Health Management Association, Brussels, Belgium

Bernhard Gibis
Kassenärztliche Bundesvereinigung, Germany

Véronique S Grazioli
Center for Primary Care and Public Health, University of Lausanne, Lausanne, Switzerland

Ber Oomen
European Specialist Nurses Organisation, Brussels, Belgium

4.M. Oral presentations: COVID-19 impact

Abstract citation ID: ckac129.252
Long COVID among Children: Persistence of Symptoms 12 Weeks and More in a Cohort Study from Turkey

Öykü Turunç

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Background:
COVID-19 usually cause a mild infection among children with a low fatality rate. On the other hand, increasing evidence suggests that children may have prolonged symptoms related to COVID-19. This study aims to describe the persistence of COVID-19 symptoms up to 12 or more weeks among children and to investigate associated factors including perceived socioeconomic status and parents' education level.

Methods:
The study group consisted of 759 cases aged <18 years detected as SARS-CoV-2 RT-PCR positive in DEU Hospital between March 2020, and May 2021. Interviews were conducted at 1st 3rd and 6th month of diagnosis. The ongoing self-reported symptoms 12 or more weeks after infection was the dependent variable. Multivariate logistic regression models were used to evaluate associated factors with long COVID, and robust clustering using links algorithm was used to assess long COVID symptoms clusters.

Results:
Among 759 COVID-19 cases, 22 children were hospitalized, and 4 died. 9.6% of the children had at least one symptom related to COVID-19 after 12 weeks of the diagnosis, Symptom duration was minimum 84 days, maximum 344 days (mean±SD: 160±68 days). The most frequent symptoms were fatigue, muscle-joint pain, headache, and loss of smell and/or taste. In multivariate analysis, female gender (OR:2,3 95%CI:1.1-3.6) and symptomatic onset (OR:2,7 95%CI:1.7-20.9) were related to increased risk of long COVID. Age, long-term health conditions, socioeconomic status and mother's education level did not predict the risk of long COVID. No cluster of symptoms was found.

Conclusions:
About 10% of children suffer from symptoms related to COVID-19 for up to six months. Female gender and symptomatic onset of disease increased the risk of prolonged symptoms. Socioeconomic status and mother's education level was not associated with the risk of long COVID, but the evidence of the effect of social determinants of health on the outcomes of COVID-19 among children is still needed.

Key messages:
- One out of ten children may suffer from long COVID represents symptoms such as fatigue, headache, and muscle and joint pain. Girls and children with symptomatic onset have a higher risk of long COVID.
- The effects of social determinants on the susceptibility and outcomes of COVID-19, including death, were well studied among the adult population. There is a need for sound evidence for children.

Abstract citation ID: ckac129.253
Impact of COVID-19 on emergency department use among home care recipients

Alberto Peano

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Background:
The impact of COVID-19 pandemic on Emergency Department (ED) was remarkable throughout Europe. We focused upon ED utilization among integrated home care (IHC) recipients comparing ED between pandemic period with pre-pandemic (February -December 2020 and 2019, respectively) in Piedmont, Italy.

Methods:
A retrospective observational study was conducted. All recipients of IHC during the two periods studied were enrolled and all ED visits that occurred among IHC recipients were accounted for. Several variables related to IHC admission, reason of ED visits and demographic characteristics were collected. The average of ED visits in pre-pandemic and pandemic periods were calculated. Analyses were stratified by all variables.

Results:
Patients enrolled were 11968 in 2019 and 8938 in 2020. In 2019, 3573 patients had at least one ED visit and 1668 patients in 2020. Number of ED visits was 5503 in 2019 and 2197 in 2020. The average of ED visits in 2020 has reduced in comparison with 2019 (0.464 C.I. [0.44-0.489] and 0.24 C.I. [0.227-0.252], $p < 0.001$ in 2019 and 2020 respectively). This reduction is regardless of sex, age, duration of IHC, presence of a non-family caregiver or reason for ED visits, except for abdominal pain, cardiac rhythm alteration and gynaecological symptoms. The averages of ED visits were significantly lower for IHC recipients with neoplasm (0.549 C.I. [0.513-0.585] and 0.328 C.I. [0.298-0.358], $p < 0.001$, and with low level of emergency (1.77 C.I. [1.662-1.877] and 1.397 C.I. [1.348-1.447], $p < 0.036$), but an increase in mortality rate was not registered.

Conclusions:
Our results showed a reduction of ED visits among integrated home care recipients in pandemic period in comparison with pre-pandemic period. If the reduction can be the consequence of an unprepared health service that needs of necessary changes in its organization, these results suggest a great potential of the home care system to reduce the use of the hospital especially for low-risk conditions.

Key messages:
- The COVID-19 pandemic overwhelmed health services of all European Countries. A reduced utilization of ED has been shown by literature, especially during the early phase of the COVID-19 pandemic.
- We showed a reduction in IHC recipients and a great decrease in ED visits among IHC patients in 2020 versus 2019, mainly in oncological patients, while an increase in mortality rate was not reported.

Abstract citation ID: ckac129.254
Access of Syrian Refugee Women to Sexual and Reproductive Health Services in Turkey during COVID-19

Eray Ontas

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Women and girls are more disadvantaged in times of crisis, and their chances of surviving and fleeing are limited. As the Syrian crisis enters its eleventh year, Turkey alone hosts the largest population (over 3.7 million). It aimed to evaluate essential reproductive health services in the shadow of the pandemic that deepens the crisis. The research was conducted in April 2021 with 637 married Syrian refugee women aged 15-49 living in Ankara (mean age: 29.6). The median age at first marriage was 17, and consanguinity with her spouse was 29.8%. 8.6% were illiterate. 36.3% did not/could not benefit from public hospitals free of charge, and 89.8% did not have health insurance. 96.7% had a previous pregnancy (median:4). Since the pandemic's beginning, 35.6% have been pregnant (n = 219), and 14% are still pregnant (n = 86). Of 133 women whose pregnancies ended during this period, 78.2% gave birth (n = 104) and 21.8% miscarried. 12.8% of pregnancy was terminated at home (n = 17, 14 of which could not receive support from anyone). 41.1% of those who became pregnant during the pandemic were not followed up in pregnancy; 45.1% of those whose pregnancies ended were not followed up in the puerperium. 29.5% of all the participants stated that they had not used any birth control method. The most common reason for not using family planning is fear of harm to health and their spouse's disapproval. Only 3.3% of those currently using birth control methods stated difficulty accessing birth control methods. The most used information resources about pregnancy, childbirth and contraception methods were hospitals and Migrant Health Centres.

This study is funded through the UK Research and Innovation GCRF Research for Health In Conflict (R4HC-MENA), developing capability, partnerships and research in the Middle and Near East (MENA) [ES/P010962/1].

Key messages:

- In refugee crises, women's health should be structured as a separate heading in the health system and unmet sexual health needs should be met, especially in culture-oriented primary care services.
- Women should be empowered with a health system where women can determine their own needs and make decisions about their bodies.

Abstract citation ID: ckac129.255
Disruptions of cytological screening procedures due to the COVID-19 pandemic in Slovakia

Juliana Melichová

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Background:
During the COVID-19 pandemic, most settings experienced healthcare service disruptions. The majority of cytological screening procedures were postponed to focus on assisting patients infected with COVID-19. In this study, we aimed to analyse the impact of the impact of the COVID-19 pandemic on the uptake of cervical cancer screening in Slovakia.

Methods:
Data on cytological screening procedures were obtained from two of the three health insurance companies in Slovakia for the years 2019 and 2020, covering the population of women aged 15 and older. All data were calculated stratified for age groups. Rates of cytological screenings were calculated as the number of procedures per women registered in the insurance company in the same age group and rate ratios were calculated as ratios of the rates for the years 2020 and 2019 for the same age group. Incidence rates were calculated as the number of newly diagnosed cervical cancer cases per women registered in the insurance company in the respective year.

Results:
Rate ratios of cytological screening procedures revealed that in both examined health insurance companies, the rate of cytological exams was lower in 2020 compared to 2019 (0.95 and 0.89). This was observed across all age groups. The results showed a clear and statistically significant age gradient, indicating that the level of disruption increased with age. The age group 60-69 years had the highest incidence rate of cervical cancer in 2019, at 54.3 per 100 000. In 2020, the highest rate was 48.3 in the age group 50-59 years. The lowest rates were in children and young adults (<20 years).

Conclusions:
This study confirms the significant impact of the pandemic on cervical cancer screening uptake in Slovakia, which may have delayed the diagnosis of cervical cancer into later stages of the disease with a worse prognosis. This may lead to increased mortality and years lived with disability due to this disease in Slovakia.

Key messages:

- Disruptions in cervical cancer screenings were observed in Slovakia during the COVID-19 pandemic which may result in an increase in cervical cancer incidence and mortality.
- Strategies should be implemented to maintain cancer screening programs during health emergencies to avoid excessive mortality and morbidity.

4.N. Workshop: Maternal Oral Health Models and Initiatives in Global and Public Health Perspectives

Abstract citation ID: ckac129.256

Organised by: World Federation of Public Health Association Oral Health Workgroup
Chair persons: Hyewon Lee (Switzerland)
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Achieving and maintaining good oral health is essential for both the oral and overall health of expecting mothers and the oral health of their young children. Dental caries can negatively affect daily activities, including eating, speaking, and social interaction. When expecting mothers have active dental caries, the risk for dental caries in these children becomes higher. Another common oral disease, periodontitis, was associated with systemic conditions, including cardiovascular disease, respiratory disease, diabetes, and potentially adverse birth outcomes. Some studies also showed the systemic impact of periodontal disease and the related pathogens that can lead to systemic inflammation and adverse birth outcomes, even though periodontal treatment has not been shown to improve birth outcomes. A mother's oral health status, her oral health knowledge, and beliefs also have been shown to significantly affect diet and home oral hygiene practice for young children. All the evidence suggests that pregnancy should be considered a critical period in which oral health education and dental care should be provided to improve the oral health of mothers and their young children. Despite the importance of a mother's oral health and their oral health knowledge in preventing dental caries in young children, maternal oral health is much neglected in primary and prenatal health discussions. This is even more significant in developing countries with inadequate oral health care infrastructure and workforce. In addition, with increased sugar consumption worldwide, oral disease prevention and oral health promotion are the keys to achieving oral health parity among the maternal and child population. This workshop aims to position maternal oral health as essential primary and perinatal health care and discuss the care models and initiatives in various contexts and geographical locations. At the care delivery and community-based interventions, Dr. Sophia will discuss her oral health education and tobacco cessation initiative for pregnant women in India. Dr. Irene will demonstrate her integrated oral health training model for midwives and dental providers in Indonesia. She will describe how her collaboration with the local government achieves collaborative training and care delivery to improve mothers and their spouses' oral health and oral health knowledge in rural Indonesia. Dr. Jane will showcase her material oral health model for refugee and immigrant mothers in Switzerland. Lastly, Dr. Khabiso from South Africa will present how maternal oral health can be integrated at the national policy level through the collective efforts of public health organizations. Dr. Lee, the chair of this workshop, will provide a literature review on maternal oral health studies and how maternal oral health can be an essential part of primary and perinatal care and the WHO oral health initiative set for 2030.

Key messages:

- Maternal oral health is essential in primary and perinatal health care discussion and a critical optic for global and public health agendas.
- There are various maternal oral health programs and initiatives around the globe at care delivery level, community level, and policy level.

Abstract citation ID: ckac129.257
Introducing Maternal Oral Health As Global Health And Public Health Agenda

Hyewon Lee

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Background:

Achieving and maintaining good oral health during pregnancy is essential for both the oral and overall health of expecting mothers and their young children. Dental caries can negatively affect daily activities including eating, speaking, and social interaction, and when expecting mothers have active dental caries, the risk for dental caries in these children becomes higher. Another common oral disease, periodontitis, was found to be associated with systemic conditions, including cardiovascular disease, respiratory disease, diabetes, and potentially adverse birth outcomes.

Importance:

Some studies also showed the systemic impact of periodontal disease and the related pathogens that can lead to systemic inflammation and adverse birth outcomes. A mother's oral health status, her oral health knowledge, and beliefs also have been shown to significantly affect diet and home oral hygiene practice among her children.

Problem:

Despite the importance of mother's oral health and oral health knowledge to prevent dental caries in young children, maternal oral health is much neglected in primary and prenatal health discussion. This is even more significant in developing countries where oral health care infrastructure and workforce are inadequate. With increase in sugar consumption growing worldwide with this lack of oral health care infrastructure, oral diseases prevention and oral health promotion are the key to achieve oral health parity among the maternal and child population.

Solution:

In this presentation, the author will discuss literature on maternal oral health and how to position oral health as an essential part of perinatal care along with WHO oral health initiative set for 2030. This is an introduction presentation for this workshop to set a stage and make a case why maternal oral health is a critical topic to discuss in global health and public health perspectives.

Abstract citation ID: ckac129.258
Tobacco Use Prevention and Cessation Programme For Pregnant Women Accessing Antenatal Care In Urban Public Health Facilities In Southern India

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Backgrounds and problem:

By 2030, tobacco use is estimated to kill more than 8 million people worldwide annually, with LMICs accounting for over 80% of those deaths. In India, about 4.6% of women continue to use tobacco mainly (> 80%) in smokeless (SLT) form during pregnancy. This may lead to: higher risk of anemia (∼ 70%), hypertension, and postpartum hemorrhage; poor fetal development; and 2-3 times higher rate of low-birth and stillbirth babies.

Importance:

Anti-tobacco initiatives often focus on smoking over SLT, which is commonly consumed by women. Drivers of SLT use among women include: cultural appropriateness, medicinal benefits, and poor social determinants of health. These factors must be taken into account while formulating effective anti-tobacco interventions for pregnant women, ensuring safe motherhood and neonatal health.

Solution:

We propose integrating oral health interventions in mitigating tobacco use within the existing antenatal care (ANC) model. Women enrolled in public health facilities in an urban poor neighborhood in South India receive oral health education (OHE) integrated into ANC. The intervention promotes oral hygiene habits, dietary advices, improving dental healthcare utilization, and sensitization on the ill-effects of tobacco-use. Training for ANC providers focuses on delivering antenatal tobacco screening, cessation, and referral services. This includes expanding the medical history to record tobacco use, conduct oral examination and referrals to dentists and/or tobacco cessation centres. Final outcomes of OHE will be measured using pre and post KAP surveys informed by WHO Oral Health Surveys; and training programme using in-depth interviews among providers. Desired policy change is the inclusion of tobacco prevention and cessation programme in the Indian ANC guidelines.

Abstract citation ID: ckac129.259
Oral Health Literacy In Young Migrant/Refugee Mothers From Developing Countries

Jane-Frances Esimekara

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Background and problems:
In the last decade, migration has increased due to climatic, economic, and social factors. Oral health is an integral part of overall health, but primary health packets for migrants/refugees often neglect oral health education and care in the care delivery system. The present article aims to present a realistic approach to integrating oral health into existing structures for young migrant/refugee mothers on a community level in Switzerland.

Importance:
As a young child's oral health is closely related to mother's oral health status and oral health knowledge level, it would be critical that migrant/refugee mothers have access to timely oral health education and care through the primary health care system.

Solution:
We propose an integrated oral health care model for migrant/refugee mothers that maximizes the existing primary health care system. Using existing maternal oral health resources, a training module is developed for the primary care care workforce that serve migrant/refugee mothers. This training module includes oral health needs and status assessment and delivering preventive oral health services in primary care settings. The module includes drawings and images to describe the dangers of poor oral hygiene during pregnancy related to the health of mothers and babies and how to keep the mouth healthy with low-cariogenic diet practice and home oral hygiene care. Primary health care workforce in selected migrant health centers, like nurses, medical aides, and community health care workers, is trained by this module and evaluated by a set of self-assessed questionnaires before and after the training for knowledge improvement, attainment, and clinical practice changes. Migrant mothers participate in questionnaires on oral health hygiene practice and access to dental care during pregnancy and for their young children. The questionnaires are validated by the affiliated university-hospital clinical research center.

Abstract citation ID: ckac129.260
Innovative Ante-Natal Care: Healthy Teeth Healthy Baby, An Interprofessional Collaboration Initiative In Indonesia

Hyewon Lee

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Background and problem:
SDG 3.1 sets out that by 2030, the global maternal mortality ratio (MMR) should be reduced to 70 per 100,000 lives and no country should have MMR above 140 per 100,000 lives. Indonesia still has an MMR of 177 by 2017 data by the World bank. Urgent action is needed to improve the health and survival of women and babies. The main causes of MMR in Indonesia are Hemorrhage, followed by pre-eclampsia, and others, related with diabetes, stroke, etc.

Importance:
Previous studies have shown the association between oral dysbiosis and pre-eclampsia, preterm birth and low birth weight. Oral microbiome of the mother being a key player in pregnancy outcomes. Periodontal disease is considered a possible risk factor for the health of the mother and the newborn.

Solution:
Program goal of this program, "Innovative AnteNatal Care, Healthy Teeth, Healthy Baby", is to create the ecology right from the start, by incorporating oral health diagnosis and prevention into routine antenatal care. This approach achieves a healthy oral condition that can improve systemic health during pregnancy. The program also achieves a healthy and resilient family through oral health empowerment and delivering healthy babies (superior generation 2045-President Joko Widodo). Processes included avocation to provincial health districts, initial survey of the perception and oral health status of pregnant mothers, module preparation, and socialization to health districts and related officers. The program has trained midwives and dental providers and secured governmental budgets for sustainable activities, including socialization and assistance to pregnant mothers and their husbands, field penetration by health professionals, and evaluation of the programs.

Abstract citation ID: ckac129.261
Maternal Oral Health and Global Oral Health: Policy Perspective

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Background and problems:
The findings of the last South African National Children Oral Health Survey conducted between 1999 and 2002 indicated a national prevalence of dental caries at 60% among 6-year-olds, with over 80% of untreated caries. Various studies have shown that one of the successful strategies in preventing dental caries is intervention during pregnancy by providing prenatal oral health education.

Importance and opportunities:
To successfully mitigate the challenge of ECC, South Africa needs a holistic approach strategy that will integrate oral health services into existing general health programmes, especially into antenatal care (ANC). South Africa National Oral Health Policy and Strategy states that "Integrate oral health strategy elements and strategies into programmes and policies of all sectors that impact community health like maternal and women's health." All government health care facilities offer free essential ANC services, identifying risk factors relating to poor maternal and birth outcomes. This existing infrastructure can be utilized to deliver oral health education and care for expecting mothers as essential ANC services.

Solution:
The Public Oral Health Forum, a non-profit organization in South Africa, seeks to develop maternal and oral health policies that can be aligned with its research and policy development strategy. It proposes maternal oral health policy and strategies, which could be applicable in the South African context: Education of pregnant women, prenatal providers, and dental and medical students about perinatal and infant oral health, integration of oral health in primary health care services, interprofessional workforce development and research to improve oral health and access to dental care among pregnant women and new mothers. This presentation will demonstrate how such maternal oral health policy and strategy are developed, aligning with existing policy and infrastructure in South Africa.

4.O. Oral presentations: Mental health disorders

Abstract citation ID: ckac129.262
Re-admission after early discharge from involuntary hospitalization of psychiatric patients

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Background:

State psychiatrics in Public Health Departments in Israel can involuntary hospitalize patients (IHP) in psychotic status. IHP who are unsatisfied with the involuntary hospitalization can appeal to a Psychiatric Committee (PC) in the institution to ask to shorten their hospitalization. The PC can decide to discharge the patient to ambulatory treatment. This cohort study aimed to assess re-admission of IHP among patients who shortened their involuntary hospitalization in Tel-Aviv.

Methods:

IHP whose involuntary hospitalization was shortened by PC (research arm) were compared to IHP patients who completed the entire hospitalization length, as was initially recommended by the psychiatrist (control arm). Re-admission was defined as hospitalization within one year after release by the PC/end of hospitalization.

Results:

From 3,160 IHR between 2010 and 2015, 1,338 were re-hospitalized during a year after release, 317 (41.7%) from the research arm and 1,012 (42.6%) from the control arm, $p < 0.7$. Discharge of IHP by PC during first month of the involuntary hospitalization resulted in a higher re-admission rates than IHR from the control group (58.4% vs. 46.4%, respectively, $p < 0.001$). Yet, discharge of IHR by the PC after one month of hospitalization (or end of the hospitalization) resulted in lower re-admission rates (14.8% vs. 53.6%, respectively, $p < 0.001$). Risks factors for re-admission included male gender, Israeli born, single and diagnosis of schizophrenia.

Conclusions:

Re-admission rates were higher in IHR who were released by the PC during the first month of hospitalization. The first month is important for mental and therapeutic stabilization of IHP. After 30 days, release of IHP can be re-assessed according to the patients' situation. Early discharge of males who were diagnosed with schizophrenia should be carefully assessed.

Key messages:

- Early discharge of psychiatric patients from involuntary hospitalization should be assesses only after the first 30 days of hospital admission, especially among young males with schizophrenia.
- Early discharge of psychiatric patients from involuntary hospitalization should be assesses only after the first 30 days of hospital admission, especially among young males with schizophrenia.

Abstract citation ID: ckac129.263
The 2009-2014 economic crisis and deaths by suicide in Portugal: time series analysis

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Introduction:

Population health, including mental health, is influenced by its socioeconomic context. After the 2008 global economic crisis, studies found contradicting results: some showed an increased risk for self-harm and suicidal behavior, while others found the opposite association. To the best of our knowledge, there is no research in Portugal on the subject. Thus, our aim was to estimate the impact of the Portuguese economic crisis of 2009-2014 on the death rate by suicide and self-inflicted injury in Portugal.

Methods:

A retrospective ecological study with an interrupted time series analysis of deaths by suicide and self-inflicted injury (data from the National Statistics Institute) in mainland Portugal, in 2003-2014, was performed. Resident population data was also retrieved from the National Statistics Institute. Binomial negative generalized linear models were used to compare rates and trends before (2003-2008) and during (2009-2014) the economic crisis. All rates were stratified and adjusted for seasonality.

Results:

The economic crisis was associated with 13% a step increase in the death rate due to suicide and self-inflicted injury, with unemployment playing a significant mediating role, being negatively associated to the outcome. Differences between groups exist, with males, working-age groups and the North and Centre regions being the most impacted, globally.

Conclusions:

Economic downturns pose risks for suicidal behavior. Unemployment may play a role in this association. Employment protection schemes can prevent this impact, so urgent action is needed to prevent economic crisis leading to additional suicides, especially in the context of the COVID-19 pandemic and the economic crisis it caused.

Key messages:

- The Portuguese economic crisis of 2009-2014 was associated with an increased death rate due to suicide, especially in males, working-age groups and the North and Centre regions.
- Unemployment may play a role in this association, and active labour market programmes can prevent the negative impacts of economic crisis leading to additional suicides.

Abstract citation ID: ckac129.264
Educational inequalities in major depressive disorder over the adult life course: a microsimulation

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Background:

Educational inequalities in major depressive disorder (MDD) pose a major challenge. Tackling this issue requires evidence on the long-term impact of intervening on modifiable factors, e.g. behavioural and psychosocial factors. Therefore, we aim to simulate the development of educational inequalities in MDD across the life course, and to assess the impact of intervening on the modifiable factors that contribute to these inequalities.

Methods:

We used data from the prospective Dutch Lifelines Cohort Study to estimate the required input for a continuous-time microsimulation. The microsimulation allowed us to estimate the development of educational inequalities in MDD with a synthetic cohort of 500,000 individuals followed from ages 18 to 65, and to assess the potential benefit of intervening on quality of social contacts, health literacy, and smoking.

Results:

On average, an additional 19.1% of individuals with low education will ever experience MDD between ages 18 and 65 compared to those with high education (32.0% vs 12.9%, respectively). Additionally, individuals with low education generally will develop MDD 0.9 years earlier (35.6 years vs 36.5 years, respectively) and spend 1.2 years more with MDD (6.2 years vs 5 years, respectively), than individuals with high education. Improving the quality of social contacts in individuals with low education would have the largest impact; it would reduce the inequalities in the prevalence, onset, and duration of MDD by an average of 18.4%, 18.3%, and 28.6%, respectively.

Conclusions:

Intervening on modifiable factors, especially quality of social contacts, in individuals with low education could help reduce the large estimated educational inequalities in MDD over the life course.

Key messages:

- There are large educational inequalities in major depressive disorder (MDD) over the life course, especially with regard to the life course prevalence of MDD.
- Improving quality of social contacts, and to a lesser extent health literacy and smoking behaviours, amongst individuals with low education may help reduce the inequalities in MDD.

Abstract citation ID: ckac129.265
Risk factors for mental health disorders during the COVID-19 pandemic in Spain: A cohort study

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Background:

Data comparing the populations' mental health from before, during and after the pandemic is needed. We aim to assess the risk factors for the first-onset and persistence of major depressive disorder (MDD) and suicidal thoughts and behaviours (STB) during the first year of the pandemic among the Spanish general population.

Methods:

Cohort study through two online surveys from before the pandemic (N = 2,005, October/November 2019) and 12-months later (N = 1,357) on an adult Spanish, nationally representative, population-based sample. Multiple logistic regression models were used to assess the association between socio-demographic, COVID-19 related variables and health-care received during the pandemic with the onset and persistence of MDD and STB.

Results:

Women have more than 3-fold risk for the onset (OR 3.18; CI95% 1.40 -7.22) and persistence (OR 8.62; CI95% 1.74-42.48) of MDD. Studying and working at the same time (OR 10.13; CI95% 2.17-47.35) and having close relatives/friends with COVID-19 infection (OR 14.84; CI95% 1.91-115.18) or death (OR 5.26; CI95% 1.56-17.73) due to COVID-19 are risk factors for MDD onset. Sick-leave (OR 17.19; CI95% 2.65-112.56) and unemployment (OR 7.01; CI95% 1.85-26.43) increased the risk for MDD persistence. Death of friends/colleagues due to COVID-19 (OR 8.40; CI95% 1.47-48.07) increased the risk for STB onset, and being on sick-leave (OR 7.91; CI95% 1.80-34.66) for STB persistence.

Conclusions:

During the COVID-19 pandemic, women were consistently more at risk of having worse mental health than men. Direct and indirect consequences caused or aggravated by the pandemic are common risk factors for the increased risk for the onset and persistence of both MDD and STB. Identification of high-risk subgroups and risk factors for MDD and STB among the Spanish general population will allow the developing and implementing of evidence-driven strategies for reducing the long-term impact of the pandemic in populations' mental health.

Key messages:

- The pandemic consequences, whether due to having had COVID-19, having close people affected or who have died from the infection and the social consequences increase the risk for worse mental health.
- Evidence-driven strategies for reducing the long-term impact of the pandemic in populations' mental health should be a public health priority.

Abstract citation ID: ckac129.266
Are loneliness interventions effective in reducing loneliness? A meta-analytic review of 128 studies

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Loneliness is widely acknowledged as a growing public health concern, accelerated by the onset of the COVID-19 pandemic. However, our knowledge about the effectiveness of interventions to reduce loneliness across the lifespan, including knowledge of different intervention strategies, is limited. This preregistered systematic review and meta-analysis aimed to evaluate the effect of interventions to reduce loneliness. The systematic review identified 136 studies. The meta-analysis included 128 studies comprising 54 randomised controlled trials (RCTs) (n = 6,379), 23 multi-cohort studies (n = 2,882) and 48 single-cohort studies (n = 3,009). A small to moderate statistically significant effect was detected (RCTs; SMD = -0.47, multi-cohort studies; SMD = -0.24, single cohort-studies; SMD = -0.42). Using the GRADE system, confidence in the estimates was assessed as low or very low, implying that the estimates may potentially be higher or lower. No statistically significant differences were found between age groups. Psychological treatment, social support interventions, and social and emotional skills training appeared to be the most effective intervention strategies in reducing loneliness but there is currently no strong reason to prefer one intervention strategy over another. Further analyses demonstrated that the long-term effects (i.e., one to six months after the intervention) were comparable to the short-term effects (i.e., up to four weeks after the intervention). Findings from the current meta-analyses provide overall evidence of the effectiveness of loneliness interventions. Given methodological limitations, including the heterogeneity of the reviewed studies, it remains unclear who the interventions would help the most. Overall, there is a need for rigorous and high-quality development and evaluations of interventions for loneliness.

Key messages:

- The findings of this meta-analytic review suggest that interventions designed to reduce loneliness are effective.
- Psychological treatment, social support interventions, and social and emotional skills training are the most promising interventions, albeit the magnitude of the effects is moderate.

4.P. Workshop: Health promotion policy implementation evaluation: tools, challenges and futures directions

Abstract citation ID: ckac129.267

Organised by: University of Limerick (Ireland)
Chair persons: Aurélie Van Hoye (Ireland), Catherine Woods (Ireland)
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Background:

Public policies can enhance opportunities for the whole populations to be more health promoting. They are important tools as they tackle the upstream component of health promotion behaviours to influence the environment and opportunities for the general population. Research has focused on policy development and content, but less on its implementation process and s evaluation. These latter steps are necessary for policy accountability, would serve policy-making process and strengthen policy impact for real change.

Objectives:

The objectives of the workshop are to present different methods and toolkits allowing the evaluation of policy implementation at national level.

Workshop format:

The workshop will include 4 presentations, with two systematic reviews and two tool presentation, to offer opportunities to the audience to understand both theoretical and methodological perspective and applied process in regard to health promotion policy evaluation and implementation evaluation. First, a systematic literature review considering the fitting framework for implementation of policies promoting health nutrition and physically active lifestyle will describe the components and scope of 18 policy implementation frameworks. Second, a systematic literature review on methods of physical activity policy monitoring will help us to learn from the analysis of 112 studies on research-driven, government-driven or co-production approaches, their strengths and weaknesses. The third presentation will introduce the Physical Activity Environment Policy Index, a tool to monitor and benchmark policies to improve the healthiness of physical activity policy environment, as well as provide guidance on how to use it. The fourth presentation will present the health promoting sports clubs national audit tool, aimed at reviewing policy supporting sports clubs to promote health, and present preliminary results from its use in Ireland. During the presentation we will pose questions to the audience, encouraging them to apply the theory/tools to their own context, and to spark conversation and interaction as part of the workshop. After the presentations, questions from the audience will be discussed with each presenter, and a discussion will be open in terms of future challenges for health promotion policies implementation evaluation.

Key messages:

- Guidance is needed to evaluate health promotion policies implementation to improve practice, as well as development of framework and methods to build toolkits.
- Policy implementation evaluation is key for improving policy making process.

Abstract citation ID: ckac129.268

Finding the fitting framework for the implementation of policies promoting healthy nutrition and physically active lifestyle: Results from a systematic review

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Background:

Policies are an important upstream component of health promotion to influence the general population. Various frameworks exist to help implement policies. However, there is currently no overarching synthesis that describes the differences between policy implementation frameworks. In this study, we examined frameworks for implementing policies to promote healthy eating, physical activity and reduce physical inactivity and aimed to explore the scope of the frameworks, the content of the constructs they contain (e.g. processes, determinants, evaluation), the level at which these constructs operate and the inclusion of equity factors.

Methods:

A systematic review (PROSPERO registration number: CRD42019133251) was conducted using 9 databases and 8 stakeholder websites. The content of 38 policy implementation frameworks was coded and analysed.

Results:

All three constructs were covered by 18 frameworks: description of the process, determinants and evaluation of implementation. The majority of frameworks (25/38) considered constructs from three levels: the individual, organisational/community and system levels, with system level constructs being included less frequently than individual level or organisational/community level constructs. Most frameworks (32/38) contained sections that were exclusively descriptive. In addition, 19 frameworks contained prescriptive and 23 explanatory sections. The complex systems approach was included in 8 of the frameworks. More than half of the frameworks (21/38) did not consider equity constructs.

Conclusions:

Most frameworks have a complex scope, include multi-level constructs, combine sections that are purely descriptive with sections that consider prescriptive and/or explanatory associations, and include few or no equity constructs. The findings of this study can facilitate the process of selecting the framework that best fits the needs and goals of policy makers, researchers and policy implementation actors seeking guidance.

Abstract citation ID: ckac129.269
Methods of policy monitoring in physical activity promotion: a systematic review across different levels of government

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Background:

Even though the importance of policy monitoring in public health has increased in the last decades, there is still a lack of understanding what different approaches of policy monitoring exist and which methodology they employ. In order to address this research gap, this review attempts to provide a comprehensive overview about the methods of policy monitoring in the field of physical activity promotion.

Methods:

A systematic search was conducted in five scientific databases, using the terms ''physical activity'', ''policy'' and ''monitoring'' and their variations. In total, 12.963 studies were identified and, after the elimination of duplicates, screened independently by two reviewers. During full text analysis, information on the methods applied for policy monitoring was extracted and studies were categorized based on their key characteristics (monitoring tool, policy level, and setting).

Results:

The search yielded in a total of 112 studies that were structured into seven categories: Report Cards on Physical Activity for Children and Youth, HEPA Monitoring Framework, HEPA Policy Audit Tool, national policies, subnational policies, school setting, and childcare setting. Across all categories, policy monitoring focused mainly on national level policies in a single country. Differences were identified with regards to the level of government involvement which allowed to differentiate between research-driven approaches (little or no government involvement), government-driven approaches (led by governments), and co-production approaches (strong collaboration between researchers and governments).

Conclusions:

Research-driven, government-driven and co-production approaches have different strengths and weaknesses with regards to the monitoring of policies. Awareness needs to be raised regarding the implications of these approaches, and more research is needed to analyse the impact of policy monitoring on policy-making in public health.

Abstract citation ID: ckac129.270
The development of the Physical Activity Environment Policy Index (PA-EPI): a tool for monitoring and benchmarking government policies and actions to improve physical activity

Catherine Woods

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Background:

Insufficient physical activity (PA) is a global issue for health. A multifaceted response, including government action, is essential to improve population levels of PA. The purpose of this study was to develop the 'Physical Activity Environment Policy Index' (PA-EPI) monitoring framework to assess government policies and actions for creating a healthy PA environment.

Methods:

An iterative process was undertaken. This involved a review of policy documents from authoritative organisations, a policy audit of four European countries, and systematic reviews of scientific literature. This was followed by an online consultation with academic experts (N = 101; 20 countries, 72% response rate), and policymakers (N = 40, 4 EU countries). During this process, consensus workshops where quantitative and qualitative data alongside theoretical and pragmatic considerations were used to inform PA-EPI development.

Results:

The PA-EPI is conceptualised as a two-component 'policy' and 'infrastructure support' framework. The two components comprise eight policy and seven infrastructure support domains. The policy domains are education, transport, urban design, healthcare, public education (including mass media), sport-for-all, workplaces and community. The infrastructure support domains are leadership, governance, monitoring and intelligence, funding and resources, platforms for interaction, workforce development, and health-in-all-policies. Forty-five 'good practice statements' (GPS) or indicators of ideal good practice within each domain concludes the PA-EPI. A potential eight-step process for conducting the PA-EPI is described.

Conclusions:

Once pre-tested and piloted in several countries of various sizes and income levels, the PA-EPI GPS will evolve into benchmarks established by governments at the forefront of creating and implementing policies to address inactivity.

Abstract citation ID: ckac129.271
Development of the Health Promoting Sports Club - National Audit Tool

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Background:

Sports clubs have requested support from national governing authorities to invest in health promotion (HP), by developing policies, guidelines and dedicated funding. This manuscript outlines the development of a national audit tool to review policies development and implementation to support HP in sports clubs.

Methods:

A 5-step process was undertaken by an international project team: (1) a rapid literature review to identify items assessing policies in physical activity, HP and sports, (2) a thematic analysis to categorize items, (3) a Delphi method to analyze item relevance, country specificity, reformulation, validation and organization, (4) face validity through an online survey and in-depth interviews with expert representatives on physical activity and sports and (5) audit tool finalization though project team consensus.

Results:

Eight sources were reviewed with 269 items identified. Items were coded into 25 categories with three broad themes: policies, actors and settings-based approach. The Delphi study extracted and refined 50 items and categorized them into 10 sections. After revisions from 22 surveys and 8 interviews, consensus was reached by the international project team on 41 items categorized into 11 sections: Role of ministry or department; Policies; Communication; Implementation & Dissemination; Evaluation & Measurement methods; Sub-national level policies; Funding & Coordination; Participative approach; Actors & Stakeholders; National sporting events; Case studies and Implicated stakeholders.

Conclusions:

To progress HP in the sports club context it is necessary to understand existing national level policies. This national audit tool will aid in monitoring and assessing national policies for health promoting sports clubs.

4.Q. Workshop: Showcasing PHIRI use case results measuring the impact of COVID-19 on population health

Abstract citation ID: ckac129.272

Organised by: PHIRI, EUPHA-PHMR
Chair persons: Enrique Bernal-Delgado (Spain), Thomas Ziese (Germany)
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The COVID-19 pandemic has clearly demonstrated the urgent need for a cross-border and structured European mechanism to exchange, organise and access reliable health information between countries, especially in the area of population health. Population health information, defined by data on health status, health determinants and healthcare systems performance, allows for oriented research to increase the knowledge base in Europe and underpin political decision-making. Its exchange requires timely and topical provision of high-quality health information. There are many indirect effects of the COVID-19 pandemic that affect health through various pathways including secondary consequences on health and wellbeing due to delayed prevention, diagnosis and medical treatment. Within the Population Health Information Research Infrastructure (PHIRI) we look at four use cases measuring the impact of COVID-19 on population health and demonstrating how a broad variety of routine data can be pooled and/or used for secondary analysis in a distributed way across Europe aiming to facilitate research by making scalable, reproducible methods available. These use cases represent pilot activities for the benefits and added value of an infrastructure supporting federated analysis by bringing together data from different European countries and feeding the results into the federated research infrastructure. In over 20 data hubs, data is mobilised and ready to be analysed in a distributed manner. The use case outputs will be processed in an interoperable way by formalising data models, data management processes and analytical pipelines, all of which are part of the client-server PHIRI federated infrastructure implemented as here 10.5281/zenodo.6483177. The workshop aims to ensure a better understanding of COVID-19 impacts in specific subgroups and risk settings by conducting research through real-life use cases of immediate relevance. The FAIRified use cases analysis results focusing on comparisons between countries are presented and provide actionable outcomes to guide policy makers in preparedness and response scenarios. Knowledge and expertise developed across Europe is shared in this workshop. The four presentations will focus on selected aspects of COVID-19 impacts on population health. The first presentation will be on direct and indirect determinants of COVID-19 infection and outcomes in vulnerable population groups with reference to inequalities. This will be followed by a contribution of COVID-19 related delayed care in breast cancer patients. The third presentation looks at the impacts of COVID-19 on perinatal health inequalities followed by the fourth on insights in COVID-19 related changes in population mental health. Exchange with the audience will facilitate knowledge and opinion exchange through an interactive Mentimeter poll during the session.

Key messages:

- The results will support the exchange of knowledge and expertise by facilitating insights in the impacts of COVID-19 in specific subgroups and risk settings compared across European countries.
- Actionable outcomes to guide political decision-making in preparedness and response scenarios will be provided.

Abstract citation ID: ckac129.273

Impact of COVID-19 on hospitalisation for diverse conditions in European countries

Andrea Schmidt

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Background:

The COVID-19 pandemic has had an unprecedented impact on Europe. Health systems came under strain, with non-urgent treatments postponed and resources reserved for treatment of COVID-19 patients. Delayed care seeking has been reported, for fear of infection with SARS-CoV2. Yet, the scale of this impact remains under researched. This study aims to compare indirect effects of the pandemic in a European cross-country study aiming to highlight the potential of Population Health Information Research Infrastructures (www.phiri.eu).

Methods:

Focusing on (i) major vascular events (MVE) and (ii) elective surgery for joint replacements (ESJR) as well as (iii) serious trauma this study analyses individual level hospital data in a standardised harmonised data model. We compared pre-pandemic incidence rates (2018-2019) with rates for 2020 and 2021. Analyses are systematically contrasted with SARS CoV2 incidence rates, and policy measures taken based on the OxCGRT index.

Results:

A drop in hospital discharge rates was observed during the pandemic in all countries but differing by condition and month. Socio-economic differences also varied by condition. Our evidence suggests that periods of more severe policy measures also correlated with more dramatic drops in regular hospital activities.

Conclusions:

Our findings provide new insights on the dramatic level of deprioritisation of essential services faced by non-COVID-19 patients in Europe. From a public health perspective, hospital escalation plans should be developed early on to avoid negative mid and long-term health and financial consequences of indirect effects. The study demonstrates the tremendous potential in exploiting health information systems in a systematic way across countries and the value of the PHIRI system. Further research should investigate policy trade-offs involved in severe lockdown measures during a pandemic and variations in health service resilience for future pandemic preparedness.

Abstract citation ID: ckac129.274
Was there any delay in the treatment of breast cancer patients because of the COVID-19 stringency measures?

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Background:

Healthcare systems across Europe reorganized services to provide attention to COVID-19 patients. In the event of the surge of cases, countries were forced to cancel or postpone non-urgent care. The objective of this work is to investigate whether there were time-to-treatment delays in breast cancer due to April-May 2020 restrictions, and whether the delays were permanent and different across countries.

Methods:

Design: Quasi-experimental pre-post study with a historical control. Population: Virtually the universe of breast cancer patients receiving elective surgery, radiotherapy, hormonal therapy or chemotherapy since January 2017 (until December 2021) in the participant regions - Belgium, Marché (IT), Riga (LV), Portugal, Wales, and Aragon (ES). The main endpoint is the change in the median time-to-treatment before and after an empirical joint-point. The study variables are detailed here https://doi.org/10.5281/zenodo.5148022. Analysis: Distributed generalized additive models using https://cran.r-project.org/package = mgcv.

Results:

Preliminary results show that the impact in March-April 2020 time-to-treatment evolved differently across countries. For instance, while the median time from diagnosis to surgery, as the first treatment, increased from approximately 39 days (2018-2019) to more than 45 days (2020-2021) in Wales, in the Marche region (IT) the median time decreased from 52 days in 2017-2019 to 47 days in 2020. Complete analyses for the rest of the participant countries are currently undergoing.

Conclusions:

We have observed differences in time to treatment in women with breast cancer across countries; however, the magnitude and direction of the effect has been uneven across countries.

Abstract citation ID: ckac129.275
Impact of the COVID-19 pandemic on perinatal health and perinatal health inequalities in Europe

Jennifer Zeitlin

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Background:

The COVID-19 pandemic and lockdowns may adversely affect pregnancy outcomes due to disrupted healthcare provision and increased stress, anxiety and economic hardship. We assessed changes in perinatal outcomes in 2020 using population birth data in Europe.

Methods:

25 Countries in the Euro-Peristat Network implemented a federated analysis using routine national data. Countries generated anonymised aggregate data files using R scripts from individual-level data formatted to a common data model with 22 variables. We compared preterm birth, stillbirth, neonatal death and caesarean delivery rates in 2020 to 2015-2019 for 2 periods: full-year (FY) and pandemic (March-September [MS]). Data from October onward were not included in the MS period because potentially declining pandemic-related fertility may affect perinatal indicators. Country-specific relative risks (RR) for the periods, adjusted for linear trends, overall and by socio-economic (SES) group, were calculated and pooled using random effects meta-analysis.

Results:

Preterm birth rates decreased slightly (pooled RR: 0.97FY [95% confidence interval (CI) 0.95-0.99]; 0.98MS [0.96-1.00]) in 2020. Heterogeneity was high (I2FY = 85%; I2MS = 70%), with 5 countries experiencing significant declines. Neonatal mortality rates were unchanged (0.97FY [0.92-1.01]) while stillbirth rates were higher (1.05FY [1.01; 1.09]; 1.10MS [1.02; 1.19]). Caesarean rates were slightly raised (1.02FY [1.00-1.03]; 1.02MS [0.99-1.04], 5 countries had significant increases). Increases for stillbirth were more pronounced in the lowest (1.08FY [0.99-1.16]) versus highest SES group (1.05 FY [0.93-1.17]).

Conclusions:

In 2020, there was an unexpected decline in preterm birth in some countries, while increases in stillbirths and caesarean occurred in others. High country-level heterogeneity suggests that some government policies to mitigate the pandemic might have been more protective of pregnant women and newborns than others.

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Monitoring COVID-19 related changes in population mental health

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Background:
The COVID-19 pandemic, and its consequences in terms of control measures and restrictions to normal life, has affected the population mental health. One of the four case studies from the Population Health Information Research Infrastructure (PHIRI) for COVID-19 is focused on mental health with the objective to measure changes in incidence of mental health problems associated with the COVID-19 pandemic in several European countries.
Methods:
Using electronic health records (EHR), data on new episodes of depression or anxiety, prescription of antidepressants and anxiolytics, and visits to primary care, specialized care or emergency units with an episode of depression/anxiety, were collected by participant data hubs at national/regional level for the period 2017-2021. A common data model to collect the data was defined for all participating data hubs and analysis of status prior and during the COVID-19 pandemic was performed using R.
Results:
Data hubs from Austria, Finland, Spain (Aragon), and United Kingdom (Wales) were able to provide aggregated results from raw individual-level data. Preliminary analysis of trends suggests a decrease in new cases of depression and anxiety in the pandemic period (2020-2021) in comparison with previous years. Different trends were observed between data hubs regarding prescription of drugs and the number of primary/specialized care visits due to depression or anxiety. Issues in the access to data in some of the participating data hubs were observed, related to ethical and legal matters, and the lack of centralized registers and of private consultations statistics.
Conclusions:
The results of this use case show that EHR for the secondary use can be retrieved in a common way across Europe to analyse and compare the impact of COVID-19 in population mental health in European countries. However, the process is more complicated and time consuming than expected.

5.A. Oral presentations: Evidence for sustainable health systems

Abstract citation ID: ckac129.277
Policy to cover perinatal care costs: a quasi-experimental study on adverse newborn health outcomes

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Background:
Low birth weight (LBW) and preterm birth are associated with an increased risk of neonatal death and chronic conditions across the life course. Reducing LBW is a global public health priority and requires strategies to improve healthcare during pregnancy. We aimed to assess the effect of a health policy providing full coverage of illness-related costs from 13 weeks of gestation through 8 weeks postpartum on birth outcomes and neonatal mortality in Switzerland.
Methods:
We applied a regression discontinuity design to administrative data gathered as part of a Swiss research program (NCCR on the Move). We included all children (N = 166,709) born between March 1, 2013 and February 28, 2015. The outcomes were birth weight (BW), gestational age (GA), LBW (<2,500 g) and very low birth weight (VLBW; <1,500 g), preterm (<37 weeks of gestation), and extremely preterm (<28 weeks), and neonatal ($\leq$ 28 days) death. Children were exposed to the policy if they were born from March 1, 2014 onwards. We estimated the intention-to-treat effect of the policy using parametric regression models.
Results:
Children had a mean BW of 3,291 g and mean GA of 275 days. The prevalence of LBW was 6.4%, VLBW 1%, preterm 7.2%, and extremely preterm 0.4%, respectively. Some 0.3% newborn died within one month. The policy increased BW (mean difference = 13 g [95% confidence interval (CI): 1, 25]) and decreased the risk of LBW (odds ratio [OR] = 0.89; 95% CI: 0.82, 0.98) and VLBW (OR = 0.81; 95% CI: 0.64, 1.01). Additionally, the policy slightly decreased the risk of preterm birth (OR = 0.94; 95% CI: 0.87, 1.03), while it did not affect GA. Effect estimates for extremely preterm and neonatal mortality were imprecise and inconclusive.
Conclusions:
This quasi-experimental and population based-study of 166,709 live births between 2013 and 2015 in Switzerland provides evidence of a reduction in the risk of LBW, VLBW and preterm birth thanks to a health policy that fully covered healthcare services during maternity.
Key messages:
- Free access to healthcare during pregnancy may mitigate adverse newborn health outcomes.
- A Swiss health policy that fully covered healthcare services during pregnancy reduced the risk of low birth weight and preterm births.

Abstract citation ID: ckac129.278
Determinants of excess mortality during the COVID-19 pandemic in 18 countries of the CMOR consortium

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Many countries suffered excess all-cause mortality during the COVID-19 pandemic. This study aims to identify factors associated with excess mortality rates (EMR) in partaking countries during 2020. Weekly all-cause death counts for 2015-2020 were extracted from national databases for Australia, Austria, Brazil, Cyprus, Denmark, Estonia, France, Georgia, Israel, Italy, Mauritius, Norway, Peru, Slovenia, Sweden, USA, Ukraine and UK. EMR per 100,000 population were gauged using a 5-year mean baseline. Separate OLS multiple linear regressions explored pre-pandemic country profiles including healthcare system, geographic, socio-economic and population factors. Feature selection methods detected the main factors contributing to 2020 EMR. The health system model showed that an extra nurse per 1,000 and a 1% increase in Healthcare Access and Quality Index reduces EMR by 41.7% ($p = 0.019$) and 0.48% ($p = 0.034$). The model was statistically significant ($R^2 = 0.415, p = 0.018$). Although the geographical model suggested that a 1% increase in neighbouring countries increased EMR by 0.42% ($p = 0.078$), population density and the model itself were statistically insignificant ($p > 0.05$). The socio-economic and population model indicated a 1% increase in service employed (% of employed) and investment (% GDP) was linked with a 43.4% ($p = 0.01$) and 43.7% ($p = 0.01$) fall in EMR. The model was significant ($R^2 = 0.488$, $p = 0.007$). Death registration quality and population share over 70 years, improved model performance ($R^2 = 0.632$), but neither approached nominal significance. EMR during the COVID-19 pandemic benefited from higher ratios of nurses to population and able and prompt healthcare. The geographic traits were trivial in explaining EMR variation. Higher ratios of service employed, and investment (% of GDP) were linked to lower EMR. These results help to inform policies now and in future pandemics to strengthen resilience against EMR.

Key messages:

- This study identified which pre-pandemic factors affected EMR in partaking countries, adding to a growing body of work on the COVID-19 pandemic.
- Higher ratios of nurses to population, able and prompt healthcare, higher % employed, and investment (% of GDP) were linked to lower EMR.

Abstract citation ID: ckac129.279
Co-creation of activities to promote health and well-being of older people – a scoping review

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Background:

The global population is ageing and the need to promote health and well-being of this generation is essential. Co-creative practices can be solutions to welfare challenges in the health care sector and local policies. However, literature addressing co-creation of activities to promote health and well-being is sparse. The review aimed to identify health promotive activities co-created between the public and older people, the influence of co-creative activities on health and well-being of older people, and facilitators and barriers for doing co-creation.

Methods:

We searched for peer-reviewed and grey literature in eight scientific and five non-scientific databases. Two reviewers independently screened publications for eligibility according to inclusion and exclusion criteria and extracted data. An inductive thematic content analysis was applied for the analysis.

Results:

We included nineteen publications. Four themes related to co-creative activities emerged: ''Social activities'', ''Activities to create age-friendly environments'', ''Discussions of healthy ageing'', and ''Physical activities''. The co-creative activities influenced the overall well-being, and promoted active and healthy ageing, physical functioning, and quality of life. Identified facilitators for co-creation were the role of the facilitator, a supportive environment, recognition of competencies, while the main barriers were time and resources, and recruitment of participants.

Conclusions:

Few studies have investigated co-creation of activities to promote health and well-being of older people. The included studies dealt with activities in any form and not merely social and physical activities co-created. Future co-creation of activities with older people should consider the role of facilitators, the environment in which the co-creation takes place and value time, resources, and competencies of participants.

Key messages:

- Studies on co-creation of activities to promote health and well-being of older people is sparse and must be explored further.
- Future research may focus on co-creation of social and physical activities to promote health and well-being of older people and consider known facilitators for co-creation.

5.B. Oral presentations: Impact of COVID-19

Abstract citation ID: ckac129.280
Monitoring the reproduction number of COVID-19 in France: estimates compared from 3 datasets

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Background:

The effective reproduction number (Rt) represents the average number of secondary cases generated by an infected person. During an outbreak, near-real-time monitoring of Rt constitutes a key indicator for detecting changes in disease transmission and assessing the effectiveness of interventions. The estimation of Rt usually requires identifying infected cases in the population which is in practice challenging from available data. The purpose of this study was to compare Rt estimates for COVID-19 surveillance in France based on three data sources of different sensitivity and specificity for identifying infected cases.

Methods:

By applying a statistical method developed by Cori et al., we estimated Rt using (1) confirmed cases identified from positive virological tests among the tested population (2) suspected cases recorded by a national network of emergency departments (3) hospital admissions for COVID-19 recorded by a national administrative system to manage hospital's organization.

Results:

From June 2020 to March 2022, the estimates of Rt in France showed similar temporal trends regardless of the dataset. Estimates based on the daily number of confirmed cases provided an earlier signal that the two other sources, with a lag of 3 and 6 days compared to estimates based on emergency department visits and hospital admissions, respectively.

Conclusions:

The COVID-19 experience has proven that monitoring temporal changes in Rt was a key indicator to help public health authorities controlling the outbreak in real time. Having data on infected people in the population to estimate the Rt is not straightforward in practice. As this study has shown, the opportunity of using more readily available data, provided that it is highly correlated with the spread of infection, gives a practical solution for monitoring the COVID-19 epidemic and any epidemic in general.

Key messages:

- The effective reproduction number (Rt) is a key parameter to monitor transmission during epidemics but its estimation from available data is often a critical issue.
- Based on COVID-19 experience, data sufficiently correlated with the spread of infection may be appropriate to estimate Rt and monitor its temporal trend.

Abstract citation ID: ckac129.281
Spread of SARS-CoV-2 at school through the pandemic waves: a population-based cohort study in Italy

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Background:

To limit SARS-CoV-2 transmission, proactive closure of schools is often believed by policy-makers and public an effective strategy. While evidence on the role of students in the spread is ongoing, effects of closure on children's well-being are well known. The number of secondary cases per class has been considered one of main driving criteria to mandate for distance learning. We aimed to calculate the rate of secondary infections per classroom and to identify factors associated with the development of school clusters.

Methods:

We conducted a population-based cohort study between October 2020 and November 2021 in the province of Venice, Italy, a catchment area of 600,000 inhabitants. Primary, middle and high-schools were included.

Results:

We identified 1,623 primary cases of SARS-CoV-2 infection in students. Of these, 72.5% did not lead to any secondary case in the school setting, 15.6% to 1, and 11.9% to 2+ contagions. The so-called second wave (Oct-Dec 2020) was associated with a lower occurrence of 2+ contagions (AOR = 0.37; 95%CI: 0.24-0.56) than the fourth (Sep-Nov 2021). Both primary (AOR = 1.74; 95%CI: 1.16-2.63) and middle schools (AOR = 1.76 95%CI: 1,14-2,72) showed higher odds than high schools for cluster generation of 2+ cases. The involvement of 2+ secondary cases was lesser associated with the index case being a student rather than school staff (AOR = 0.42; 95%CI: 0.29-0.60). The number of 2+ cases clusters per week followed a time trend in line with the general population incidence.

Conclusions:

The school environment does not facilitate viral spread, but rather reflects transmission in the community. Appropriate measures (use of airway protection devices, interpersonal distancing, frequent hand and respiratory hygiene) and timely case tracking make school a safe place. Given the documented negative effects of school closures on children's learning and well-being, maintaining school attendance is as essential as it is desirable.

Key messages:

- A SARS-CoV-2 positive student at school does not generate secondary infections in 3 out of 4 cases. The risk of cluster generation is lower when the index case is a student rather than school staff.
- The school environment does not facilitate viral spread, but rather reflects transmission in the community. School attendance is essential considering the effects on children's learning and wellbeing.

Abstract citation ID: ckac129.282
Long COVID in France: prevalence, management and long-term impact

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Certain percentage of population experiences persistent symptoms months after an acute Covid-19 episode (Long-COVID), with a significant impact on daily-life. Few studies exist on its prevalence and its impact among the general population. The main objective of this survey was to estimate the prevalence of Long COVID among the general adult population in France. Secondary objectives were to evaluate Long COVID management and to assess impact of this clinical condition on quality of life and mental health. Cross-sectional study was performed in March-April 2022 using an online self-administered questionnaire. The sample was selected by the quota method from a panel of volunteers. Its representativeness was ensured by appropriate weighting. Three groups were described: Long-COVID, COVID without persistent symptoms, never COVID. Post COVID-19 condition as defined by the WHO was applied for prevalence estimation. The prevalence was calculated by age and sex. Health care consumption and impact of Long COVID on quality of life and mental health will be studied comparing the three groups, using weighted adjusted polytomic regressions. Here, we present preliminary findings on Long COVID prevalence. There were 27,537 respondents, 52% females, mean age (SD) 49 (±16.5). Confirmed or probable COVID-19 was reported by 33.9% of participants; of whom 85.1% had confirmed laboratory test. Majority (65.1%) had COVID-19 <3 months ago. Long COVID concerned 1,086 (4%) participants. Prevalence was higher for females 4.6% vs. 3.3% for males, and among younger population for both sex groups. Overall, prevalence of Long COVID by age group was: 18-34 (6%), 35-49 (4.7%), 50-64 (3.4%), ≥65 (1.8%). This is a first estimation of Long COVID prevalence among the French population. Representativeness of the sample should be interpreted with caution due to a sample based on volunteers' response. Ongoing analyses will provide clearer understanding of the impact of Long COVID.

Key messages:

- This is a first estimation of Long COVID prevalence among the French population.
- There is a significant portion of the French population impacted by persisting or reoccurring symptoms defined by Long COVID; its impact and care management will be further evaluated.

Abstract citation ID: ckac129.283
Establishing intersectoral 'Schools Teams' to mitigate SARS-CoV-2 school transmission, 2020/2021

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The SARS-CoV-2 pandemic disrupted the lives of up to 100,000 school-going children in Ireland. Consequently, intersectoral 'Schools Teams' were established for the 2020/2021 school year to reduce SARS-CoV-2 transmission in school settings. This novel public health intervention provides learning to inform future cross-sectoral collaborative work in Public Health in responding to infectious disease threats. For the 2020/2021 school year in Ireland, intersectoral Schools Teams were formed within each of eight regional Departments of Public Health to manage mitigation of SARS-CoV-2 transmission in school settings. These teams comprised of staff from Departments of Public Health and redeployed staff from the Department of Education. A nationally agreed schools process was followed by Schools Teams to manage SARS-CoV-2 cases and outbreaks in schools. Relevant cases were referred to the regional Schools Team for a public health risk assessment (PHRA). Close contacts were determined using appropriate definitions of close contact within a school setting through the PHRA. This model with centralised procedures and linked health/education teams was novel and adaptable to additional settings. Results from the East region of Ireland showed testing of close contacts of COVID-19 was conducted in 71.8% (676/942) of schools, with 43881 tests completed. Most Schools Team members reported efficient communication within the team (88.7%), a positive team culture (96.3%) and feeling comfortable in their roles following training (82.7%). The majority of members felt the team was able to effectively support schools to reduce COVID-19 transmission (92.5%). Lessons learnt include the synergistic working of educational and health professionals towards a common goal, maximising the skills of all, ensuring a better outcome for school children. Involving educational teams in active contact tracing of COVID-19 cases in schools maximised engagement of the educational sector in the COVID-19 response.

Key messages:

- Establishing intersectoral 'Schools Teams' pooled skills, resources and expertise, enabling development of synergistic solutions to a complex problem.
- This exemplifies a large national cross-sectoral collaborative working process involving education and public health sectors, providing a model for future responses to infectious disease threats.

Abstract citation ID: ckac129.284
Risk of SARS-CoV-2 reinfection 18 months after first infection: population-level observational study

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Background:

Current data suggest that SARS-CoV-2 reinfections are rare. Uncertainties remain, however, on the duration of the natural immunity, its protection against Omicron variant, and on the impact of vaccination to reduce reinfection rates.

Methods:

In this retrospective cohort analysis of the entire population of an Italian Region, we followed 1,293,941 subjects from the beginning of the pandemic to the current scenario of Omicron predominance (up to mid-February 2022). We assessed the proportion of reinfections overall, and by demographic and clinical characteristics, time after primary infection, and predominant circulating variant. Cox proportional hazard analysis was used to compute the relative hazards of reinfection.

Results:

After an average of 277 days, we recorded 729 reinfections among 119,266 previously infected subjects (overall rate: 6.1‰), eight COVID-19-related hospitalizations (7/100,000), and two deaths. Importantly, the incidence of reinfection did not vary substantially over time: after 18-22 months from the primary infection, the reinfection rate was still 6.7‰, suggesting that protection conferred by natural immunity may last beyond 12 months. The risk of reinfection was significantly higher among females, unvaccinated subjects, and during the Omicron wave.

Conclusions:

This study confirms and expands previous findings reporting a low risk of SARS-CoV-2 reinfection, and a very low risk of severe or lethal COVID-19 for those who recovered from primary infection, suggesting that the protection conferred by the natural immunity lasts beyond 12 months. Although the marked increase of the reinfection rates during the Omicron wave is concerning, the risk of a secondary severe disease or death remained close to zero. Vaccines were able to significantly reduce the likelihood of reinfection in both pre-Omicron and Omicron waves, although the risk-benefit profile of multiple vaccine doses for this population should be carefully evaluated.

Key messages:

- After primary infection, the risk of SARS-CoV-2 reinfection and of severe/lethal COVID-19 was low, suggesting that natural immunity lasts beyond 12 months.
- Despite increasing reinfection rates with Omicron, the risk of a secondary severe/lethal disease was close to zero, and vaccines reduced the likelihood of reinfection before and during Omicron waves.

5.C. Skills building seminar: Learn how to contribute to raising awareness about public health in Europe with the EUPHW

Abstract citation ID: ckac129.285

Organised by: EUPHA
Chair persons: Annemieke Schuffelen (EUPHA), Dineke Zeegers Paget (EUPHA)
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The European Public Health Association (EUPHA) aims to bring together the public health workforce for professional exchange and collaboration through Europe. EUPHA is always looking for new tools and that is how the European Public Health Week (EUPHW) started: it promotes collaboration among the public health community in Europe and raises awareness about public health. The EUPHW has been an annual initiative since 2019, inspired by similar initiatives in Austria and the USA. The EUPW cannot be a success without the public health professionals who organise their own public health event. EUPHA needs those enthusiasts! And therefore, this workshop aims to encourage individuals to organise an event during the next European Public Health Week. For event hosts, the EUPHW is the perfect opportunity to share your expertise and contribute locally, regionally and nationally to topics of great relevance all across Europe. We are very well aware that organising an event may be daunting which is why EUPHA is organising this workshop. Over the years we built a network and created materials for promotion, which will make it easier to organise an event. In this workshop, we would like to give you the tools for organising an event during the EUPHW. The EUPHW has a rich portfolio: the past four editions of the EUPHW recorded approximately 550 online and in-person activities, hosted by more than 40 different countries in multiple languages. In this workshop, we will let members of EUPHW's steering committee share their favourite activities from the past few EUPHW editions. What made those events successful? We will talk about engagement with the future generation of public health professionals (EUPHAnxt) and building continuity and sustainable partnerships. Hosts will share their experiences of the EUPHW. What is their perspective on organising a public health week event at both national and European levels? How does the day-to-day coordination work? This sharing of knowledge will be followed by interaction. Together, we will imagine the European Public Health Week of 2023: what topics are important for public health professionals? On what subject do you want to make the case and amplify existing messages? What collaborations do you see? What kind of event would you like to organise? The topics that will be covered include choice of themes and key messages, logistics, target audiences, governance, communication, partnerships, stakeholder engagement, as well as involvement types and evaluation.
The EUPHW is supported by the WHO Regional Office for Europe.

Key messages:

- The European Public Health Week offers a unique opportunity to showcase public health, raise awareness about important health themes and promote collaboration among the public health community.
- This workshop aims to inspire individuals to get involved in the European Public Health Week, and contribute locally to topics of great relevance across the European Region.

Abstract citation ID: ckac129.286

Why be a part of the European Public Health Week?

Marie Guichardon

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What is the European Public Health Week? What's it's impact and why do you want to be part of it?

Abstract citation ID: ckac129.287

How to involve the younger generation in the European Public Health Week?

Monica Brînzac

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This presentation will tell you about the involvement of the next generation: young public health professionals in the European Public Health Week.

Abstract citation ID: ckac129.288

The Austrian Public Health Week & the European Public Health Week

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How did the Austrian Public Health Week start and what does it have to do with the European Public Health Week?

5.D. Workshop: Challenges and opportunities for health systems in the era of multi-morbidity

Abstract citation ID: ckac129.289

Organised by: Western University (Canada)
Chair persons: Saverio Stranges (EUPHA-CHR), Arnaud Chiolero (Switzerland)
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Multimorbidity, defined as the co-existence of two or more chronic conditions in the same individual, is affecting increasing segments of the population across both high-income and low-resource settings. The workshop will provide a comprehensive and global perspective on the clinical and public health burden of multimorbidity from a health system perspective, including presentations and speakers from Europe, Africa and North America. Current research and policy initiatives are still primarily focused on the clinical management of multimorbidity after it occurs as well as on the prevention of adverse events in those individuals who are already living with multimorbidity. There is still a significant need to develop and establish effective and equitable primary prevention strategies in order to avoid the occurrence of multimorbidity across populations. Also, health systems around the world will need to implement context-specific initiatives and changes to tackle the growing burden of multimorbidity in ageing populations, which will be constrained by available resources, societal and political priorities and values. Any potential health system transformations will need to reconcile the concomitant burden imposed by multimorbidity and other major public health priorities, including the current pandemic, the health impact of climate change and widening health disparities across marginalized populations.

Key messages:

- There is a significant need to develop effective and equitable primary prevention strategies in order to avoid the occurrence of multimorbidity.
- Health systems around the world will need to implement context-specific initiatives and changes, which will be constrained by available resources, societal and political priorities and values.

Abstract citation ID: ckac129.290
Examining existing strategies to prevent multimorbidity – a scoping review

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Multimorbidity has been acknowledged as the "defining challenge" for health systems around the world, but current research and policy are primarily focused on the management of multimorbidity after it occurs or the prevention of adverse events in those individuals who are already living with multimorbidity. There is still a significant need to develop and establish effective and equitable primary prevention strategies in order to avoid the occurrence of multimorbidity across populations. This scoping review aims to identify existing strategies, programs and policies that are focused on the prevention of multimorbidity across various settings and countries around the world. To identify relevant publications, two databases will be searched: PubMed and Embase. The search strategies will be adjusted for each database and will include variations of the keywords multimorbidity, prevention and strategy. This review will specifically include publications that are original research, focused on multimorbidity and published in English. However, there will be no restrictions on the location of the research or the age of the target sample or population. For the full text screening phase, more specific criteria will apply and information will be extracted from the final set of retained studies. This information will be summarized and will include key factors such as study design, study setting, type of prevention programs, scope of programs (e.g. national, regional, local, etc.) and target population (e.g. age groups, socioeconomic groups, etc.). This scoping review will describe existing prevention programs and highlight areas of gaps and opportunities in the prevention of multimorbidity.

Abstract citation ID: ckac129.291
Life expectancy in multimorbid older adults: Why it matters for preventive care

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Multimorbidity is highly prevalent among older adults and associated with a shorter life expectancy. Many guidelines recommend tailoring preventive care of multimorbid people according to life expectancy. Indeed, there is a time lag between a preventive care intervention and the expected potential benefit, and patients with a relatively short life expectancy might not have the time to benefit from the preventive care intervention. Further, both patients and health care providers tend to overestimate benefits and underestimate risks of interventions. It is therefore necessary to have a valid index for mortality prediction in multimorbid patients, but there is no life expectancy estimator designed and recommended for this population. The paper describes the development and internal validation of a new life expectancy estimator. In this presentation, we focus on the importance of life expectancy estimation in multimorbid older adults: Why does it matter in this population? What is the time lag to benefit of a preventive intervention, e.g., cancer screening? What is the state in this field, in research and clinical practice? How could tailoring preventive care to life expectancy improve patient outcomes?

Abstract citation ID: ckac129.292
Association between functional limitation and quality of life among older adults with multimorbidity in Luxembourg

Piotr Wilk

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Introduction:

Multimorbidity, defined as the co-existence of two or more chronic conditions, is affecting an increasing number of Europeans, leading to poorer quality of life (QoL). This study assessed how functional limitation affects the QoL trajectories in a cohort of older individuals having multimorbidity, and whether there are any gender differences in these effects.

Methods:

We used a longitudinal cohort of 906 multimorbid respondents 50 years of age or older from Luxembourg who participated in four waves of the Survey of Health, Ageing, and Retirement in Europe (2013-2020). We used the Control, Autonomy, Self-Realization, and Pleasure scale (CASP-12) to assess QoL and the Global Activity Limitation Indicator (GALI) to measure functional limitation. Multigroup latent growth curve (LGC) modeling techniques were employed to assess how the measures of functional limitation over time are related to QoL trajectories and whether or not these effects are different by sex.

Results:

In 2013, over 60% of older residents of Luxembourg were affected by multimorbidity. The results from the LGC models suggest that both men and women with multimorbidity experienced a statistically significant decline in QoL between 2013 and 2020 at a constant rate; there were no significant differences in the rate of this change between men and women. The level of QoL at baseline and over time was significantly lower for individuals reporting functional limitation. However, functional limitation had no significant impact on the rate of decline in QoL for both men and women.

Discussion and conclusions:

As an increasing number of individuals in Europe are becoming vulnerable to more years lived with multiple chronic conditions, there is a growing need to identify factors that may lead to improvements in QoL among people affected by multimorbidity. Gaining more knowledge on the role of functional limitation may be particularly important for planning comprehensive care for patients with multimorbidity.

Abstract citation ID: ckac129.293
Prevalence of cardio-metabolic multi-morbidity and associated risk factors in a population-based sample of South Africans

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Objectives:

Cardio-metabolic multi-morbidity (CM), the co-existence of two or more cardio-metabolic disorders in the same person, is rapidly increasing. We examined the prevalence and risk factors associated with CM in a population-based sample of South African adults.

Study design:

Data were analyzed on individuals aged $\geq$15 years from the South African National Health and Nutrition Examination Survey (SANHANES), a cross sectional population-based survey conducted in 2011-2012.

Methods:

CM was defined as having $\geq$2 of hypertension, diabetes, stroke and angina. Multivariable logistic regression was used to investigate the sociodemographic and modifiable risk factors associated with CM.

Results:

Of the 3832 individuals analyzed, the mean age was 40.8 years (S.D. 18.3), 64.5% were female and 18% were $\geq$60 years. The prevalence of CM was 10.5%. The most prevalent CM cluster was hypertension and diabetes (7.3%), followed by hypertension and angina (2.6%) and hypertension and stroke (1.9%). Of the individuals with diabetes, nearly three quarters had multi-morbidity from co-occurring hypertension, angina and/or stroke and of those with hypertension, 30% had co-occurring diabetes, angina and/or stroke. Age (30-44 years Adjusted Odds Ratio (AOR) = 2.68, 95% CI: 1.15-6.26), 45-59 years AOR = 16.32 (7.38-36.06), 60-74 years AOR = 40.14 (17.86-90.19), and $\geq$75 years AOR = 49.54 (19.25-127.50) compared with 15-29 years); Indian ethnicity (AOR = 2.58 (1.1-6.04) compared with black African ethnicity), overweight (AOR = 2.73 (1.84-4.07)) and obesity (AOR = 4.20 (2.75-6.40)) compared with normal or underweight) were associated with increased odds of CM.

Conclusions:

A tenth of South Africans have two or more cardio-metabolic conditions. The findings call for immediate prioritization of prevention, screening and management of cardio-metabolic conditions and their risk factors to avert large scale health care costs and adverse health outcomes associated with multimorbidity.

Abstract citation ID: ckac129.294
Multimorbidity in Large Canadian Urban Centres

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Introduction:

Although health outcomes are related to the characteristics of the geographic areas in which people live, there is limited knowledge on how the prevalence of multimorbidity varies within and across major Canadian urban centres. Our goal was to assess the level of between-neighbourhood variation in the prevalence of multimorbidity in Canada's large urban centres, controlling for compositional effects associated with demographic and socioeconomic factors.

Methods:

Cross-sectional data from the 2015-2018 cycles of the Canadian Community Health Survey (CCHS) were used. Respondents (20 years and older) residing in one of the 35 census metropolitan areas (CMAs) were included (N = 100,803). Census tracts (CTs), relatively small and stable geographic areas nested within CMAs, were used as a measure of neighbourhood. To assess the between-neighbourhood differences in multimorbidity prevalence, we fitted sequential random intercept logistic regression models.

Results:

During the 2015-2018 period, 8.1% of residents of large urban centres in Canada had multimorbidity. The results from the unadjusted model indicate that 13.4% of the total variance in multimorbidity could be attributed to the between-neighbourhood differences. After adjustment for overall characteristics of the CMAs in which these neighbourhoods are located, as well as for individual-level demographic and socioeconomic factors related to compositional effects, 11.0% of the individual variance in multimorbidity could still be attributed to the between-neighbourhood differences.

Discussion and Conclusions:

There is significant and substantial geographic variation in multimorbidity prevalence across neighbourhoods in Canada's large urban centres. Residing in some neighbourhoods could be associated with increased odds of having multimorbidity, even after accounting for overall characteristics of the CMAs in which these neighbourhoods are located, as well as individual-level factors.

5.E. Oral presentations: Urban and environmental health

Abstract citation ID: ckac129.295

A Holistic Approach to Urban and Children's Mental Health

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Background:

EU data show that there is a continuous increase in mental health problems in children. The multiple exposures in the physical and social domain influence the internal exposome and the final health outcomes. The Equal-Life project research focuses on the exposome (physical, social and internal) and mental health of children and adolescents.

Methods:

Literature reviews on children's mental health and a total of physical and social exposures from 9 different European cohorts are used to set a framework of data interpretation. In addition, information gathered from 3 surveys/65 interviews with stakeholders from different fields was used to look for a transdisciplinary framework for analysis of the cohort data. The approach develops (in a co-design approach) tools that help stakeholders to collect and organize the information necessary to make decisions. The exposome is as if it were a multilayer system and requires approaches that are able to manage the interconnections between the various variables involved in the field of children's mental health.

Results:

The main points extracted are an early life exposure to urban planning related factors (noise/air pollution, traffic), social factors (family relations, stress), biomarkers related to environmental and social exposures. Concerning the life course approach, vulnerable settings were identified such as schools, neighbourhoods, accessibility to green restorative spaces. These ingredients are the basis of interaction between scientists and community stakeholders and from the policy domains to find and interpret the scientific results for the implementation of protective and promotive policies in cities.

Conclusions:

Transdisciplinary approach is necessary for management and developing strategies for solving mental health problems in urban spaces when considering all kind of exposures. The development of tools through co-design sessions with different stakeholders gives important contributions for this goal.

Key messages:

- Development of interventions and policies for better mental health of children and adolescents should be based on available evidence for meaning of external and social exposome.
- The main outcome of Equal-Life is to develop tools where stakeholders have access and opportunity to use it for solving mental health issues at national or local level.

Abstract citation ID: ckac129.296

Leveraging Citizen Science to Improve Urban Public Health

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Background:

Mobile health approaches in community based participatory projects keep the promise to encourage sustainable behavior in citizens by engaging communities in data collection and connecting their individual level behavior to larger level community health. This review evaluates the effectiveness of the implementation of citizen science for health promotion of non-communicable diseases in urban community-based participatory research projects.

Methods:

A scoping review was conducted using PRISMA-ScR. Pubmed and Web of Science were searched for citizen science studies. We included research 1.) conducted in an urban setting, 2.) related to environmental sustainability, 3.) focused on non-communicable diseases, and 4.) applied citizen science methodology.

Results:

32 community-based participatory research projects were identified using the following data collection technologies: mobile applications (n = 7), photovoice (n = 6), Stanford Healthy Neighborhood Discovery Tool (n = 6), monitoring (n = 6), mixed-methods (n = 4) and sensors (n = 3). The Stanford Healthy Neighborhood Discovery Tool was most effective at delivering real time data collection, exploring new communication and dissemination opportunities for remote and marginalized communities, and at offering a flexible and cost-effective approach to identify health promotion interventions. Studies that implemented photovoice tools and mobile applications had challenges with regard to recruitment and retention of participants as well as privacy concerns.

Conclusions:

Mobile health technologies in community-based participatory research projects may be a promising way to uncover unknown local risk factors, raise awareness and identifying targeted policy solutions to promote healthy and sustainable environments in urban spheres. The effectiveness of mobile health applications for health promotion of non-communicable diseases may vary between community-based participatory studies by data collection method.

Key messages:

- Mobile health technologies in communities may be a promising way to promote healthy and sustainable environments by raising awareness and offering targeted policy solutions in urban spheres.
- The effectiveness of mobile health applications for health promotion of non-communicable diseases may vary between community-based participatory studies by data collection method.

Abstract citation ID: ckac129.297
Association between worries about climate change and mental health in Norwegian adolescents

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Background:

Climate change has a great impact on the future of children and young people. Since the global climate strike movement, many adolescents expressed worries about climate change. But do these worries lead to declined mental health and future optimism? Thus, we aim to explore associations between prevalence of worries about climate change, leisure activities and mental health problems in a representative sample of Norwegian adolescents.

Methods:

In 2021, the youth survey Ungdata collected data from 139,841 Norwegian adolescents, which corresponds to a response rate of 75%. Descriptive analysis was used to calculate the prevalence of worries about climate change cannabis use and bi- and multivariate logistic regression analysis to examine the association between worries about climate change and mental health, leisure activities and alcohol and cannabis use, controlled for sociodemographics.

Results:

Around 37% of Norwegian adolescents are worried about climate change. Worries increased with age and are more prevalent among girls. There is a relationship between mental health problems and worries about climate change (OR = 1.80 (CI:1.75-1.86)) still after adjusting for sociodemographic variables, leisure activities and alcohol and cannabis use (OR = 1.71 (1.10-1.42)).

Conclusions:

The results indicate a real connection between mental health problems and worries about climate change, but the causal relationship needs further study. This knowledge makes it important for all profession, working with adolescents, paying special attention to possible negative effects of worries about climate change on the mental health of young people.

Key messages:

- Worries about climate change has an impact on mental health of young people.
- Adolescent's worries about climate change should be taken seriously.

Abstract citation ID: ckac129.298
Air pollution is associated with the risk of neurodegenerative disorders: a prominent role of PM10

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Background:

Studies revealed an implication of air pollution in neurodegenerative disorders, although this link remains unclear. Here, we investigated this testing multiple pollutants simultaneously.

Methods:

In the Moli-sani cohort (N = 24,325; ≥35 years; 51.9% women, baseline 2005-2010), we estimated yearly levels of exposure to nitrogen oxides (NOX, NO, NO2), ozone (O3), particulate matter (PM10) and BTX hydrocarbons (benzene, toluene and xylene) in 2006-2018, applying residence geo-localization of participants and Kriging interpolation algorithm to land measurements of air pollutants. We performed a principal component analysis and tested association of the resulting principal components (PCs) with the incident risk of Parkinson (PD) and Alzheimer disease (AD), through multivariable Cox PH regressions adjusted for age, sex and education level completed.

Results:

Over 24,308 subjects with pollution data available (51.9% women, 55.8(12.0) years), we extracted three PCs explaining ≥5% of pollution exposure variance: PC1 (38.2%, tagging PM10 exposure), PC2 (19.5%, O3/CO/SO2), PC3 (8.5%, NOx/BTX hydrocarbons). Over a mean follow-up of 10.9(2.1) years, we observed statistically significant associations of PC1 with an increased risk of PD (HR[CI] = 1.04[1.02-1.05]; 405 incident cases) and AD (1.06[1.04-1.08]; 218 cases). These associations were confirmed when we analyzed PM10 levels averaged over follow-up time, in models further adjusted for professional exposures like working class, compartment and toxic compounds and lifestyles like smoking and drinking habits, physical activity and adherence to Mediterranean diet (PD: 1.27 [1.19-1.37]; AD: 1.22[1.16-1.28] per 1 μg/m3 increase of PM10).

Conclusions:

This evidence supports an influence of air pollution - especially PM10 - on increased neurodegenerative risk in the Italian population, independent on concurring risk factors. This suggests reducing PM10 pollution as a potential strategy to reduce neurodegenerative risk.

Key messages:

- PM10 levels are associated with increased Parkinson and Alzheimer disease risk.
- This suggests to act on air pollution to reduce neurodegenerative risk in the general population.

Abstract citation ID: ckac129.299
Health, Architecture and Wellbeing: building bridges between health and the design of living spaces

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Background:

Health is determined by where we live. Nevertheless, medical and architecture students often ignore the relation between health, housing and urban planning. In order to bridge these areas, we designed an interdisciplinary course for students of University of Porto Medical and Architecture schools, winning a 2021 Pedagogic Innovation courses call.

Objectives:

"Health, Architecture and Wellbeing" aimed to explore the effect of living spaces in health, combining the health and architecture perspectives in the analysis of case studies, and discussing strategies to improve health and wellbeing of the population. By exposing students to tools for designing healthy, sustainable, efficient and accessible spaces, and to public participation strategies, we aimed to foster awareness and share knowledge among complementary scientific fields.

Results:

Students were exposed to theoretical and practical sessions with experts from the medical, architecture, landscape architecture, and geography areas, as well as to field visits in social neighbourhoods, collective housing, and green spaces. Besides introducing students to concepts, as health needs and determinants, and to healthy and accessible design methods, students interacted with inhabitants, gathering experiences on how they lived in those spaces, understanding its impact on their wellbeing, while exploring the enablers and barriers of participation strategies. Students were encouraged to complement technical architecture competences with public health evidence, and social participation leading to the development of design proposals improving the existing living environments.

Conclusions:

''Health, Architecture and Wellbeing'' interdisciplinary course connected public health expertise with architecture, promoting knowledge dissemination and awareness among health and architecture students. This experience may be reproduced in other countries, as health continues to be determined by living and public spaces.

Key messages:

- Bridging public health with other disciplines is fundamental to understand the origin of health issues, namely living conditions, and maximise the opportunities of acting near their root causes.
- This course allowed architecture and medical students to gain awareness about the impact of housing and urban design on people's health, and to learn how to propose and design healthier environments.

5.F. Oral presentations: Digital interventions

Abstract citation ID: ckac129.300
Factors associated with the perception that eHealth facilitates access to healthcare

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Background:

The provision of eHealth has increased in the COVID-19 era with the aim of improving access to care without the risk of infection. Perceiving eHealth beneficial may affect the use. This study examined which patient-related factors are associated with the perception that eHealth facilitates access to care.

Methods:

A nationwide survey was sent to 61,600 Finnish residents during the COVID-19 pandemic (September 2020-February 2021). Binary logistic regression analysis was used to examine whether the service needs (self-rated health, met service needs, challenges accessing traditional care) and eHealth experience (e-visits, need for guidance, data security concerns) were associated with perceiving that eHealth facilitates access to care. The model was adjusted for age, gender and education.

Results:

The study included 21,409 respondents who had used healthcare services in the past 12 months (55.0% female, mean age 52.88, SE .18). The majority (63.8%) agreed with the benefit that eHealth facilitates access to care. Patients in good health (OR 1.24, 95% CI 1.13-1.37), whose service needs were met (OR 1.34, 95% CI 1.19-1.52) and who had no challenges in accessing traditional care (OR 1.18, 95% CI 1.02-1.36) had greater odds of perceiving the benefit compared to their counterparts. Patients with experience of e-visits (OR 2.60, 95% CI 2.28-2.96) and without need for guidance (OR 1.71, 95% CI 1.52-1.91) had greater odds of perceiving the benefit compared to their counterparts.

Conclusions:

Patients in good health, with met service needs and with easy access to traditional care appear to perceive eHealth more beneficial than their counterparts, which might exacerbate the already existing inequalities in healthcare access and health outcomes. Promotion of eHealth skills might increase equitable opportunities to benefit from eHealth for those patients whose service needs could be met without traditional face-to-face encounter.

Key messages:

- Patients in good health, with met service needs and without difficulties accessing traditional healthcare appear to find eHealth more beneficial than their underprivileged counterparts.
- Promotion of eHealth skills might increase equitable opportunities to benefit from eHealth for those patients whose service needs could be met without traditional face-to-face encounter.

Abstract citation ID: ckac129.301
Low confidence in systematic reviews of digital interventions for physical activity promotion

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Background:

The field of digital public health aims to promote and improve the health of people and communities through the application of digital interventions (DIs). Systematic reviews (SRs) show that many DIs target physical activity (PA) promotion. 'A Measurement Tool to Assess Systematic Reviews' (AMSTAR2) is a valid and moderately reliable appraisal tool with 16 items that can be used to derive an overall confidence rating (OCR: high, moderate, low or critically low) in the results of a SR. This cross-sectional study aimed to appraise SRs of DIs for PA promotion.

Methods:

This study using 30 SRs was embedded within a scoping review with a published protocol (doi:10.2196/35332). Following electronic searches in 03/2021 in MEDLINE, PsycINFO, and CINAHL two authors independently selected and appraised the SRs. AMSTAR2 appraisal outcomes were expressed as (1) OCRs according to the AMSTAR2 scoring guidelines and (2) as percentage scores (fulfilled items/16 items). Appraisal outcomes were assessed using descriptive statistics.

Results:

The 30 SRs were published in 2007-2021 and included 5-60 primary studies. Most SRs (27/30) received 'critically low' OCR, while 'low' (2/30), 'moderate' (1/30) or 'high' (0/30) OCRs were seldom. The 21 SRs published after AMSTAR2 implementation in 2018 onwards received higher percentage scores (mean±SD of 53±15%) compared to 9 SRs published before 2018 (44±13%). In addition, the 11 SR with a protocol received higher percentage scores (59±13%) compared to 19 SRs without a protocol (45±15%) and had fewer critical weaknesses (median: 2 vs. 4).

Conclusions:

High quality SRs are needed for making public health decisions. AMSTAR2 assigns mostly low and critically low OCR to SRs of DIs for PA promotion. These SRs should not be relied on as a source of accurate evidence. Our results show that SR reporting guidelines need to be better followed.

Key messages:

- According to AMSTAR2 the overall methodological quality of systematic reviews of digital interventions for physical activity promotion needs improvement.
- Better adherence to established reporting guidelines for systematic reviews in public health context is needed.

Abstract citation ID: ckac129.302
Ethnicity, deprivation, and the use of patient portals in England's general practices 2018-2020

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Background:

Patient portals are made available and widely promoted in healthcare systems in the USA and Europe. These technologies can help patients access healthcare, receive timely treatment, and manage their health through services such as appointment booking and repeat prescription ordering. However, it is not clear if all patients who need the services are using them. This study explored patient portal use (online appointment booking and repeat prescription ordering features) and patient characteristics among NHS England GP practice patients.

Methods:

The study used cross-sectional participant-level data from the GP Patient Survey (GPPS) of 2018, 2019, and 2020. Performing multilevel regression analysis, we explored the association between patient portal feature use and ethnicity and deprivation and controlled for eight other patient characteristics and one GP practice level characteristic, and modelled GP practice as a random effect in the model.

Results:

In the fully adjusted model controlled for all patient characteristics and GP characteristics, participants of the Black and Other ethnic groups were less likely to have used online appointment booking (OR: 0.84, 95% CI:0.81, 0.86, and OR: 0.96, 95% CI: 0.92, 0.99, respectively) and online repeat prescription ordering (OR: 0.76, 95% CI: 0.74-0.78 and OR: 0.78, 95% CI: 0.75-0.81, respectively) compared to the White ethnic group. Association with patient portal use increased proportionally with reduced deprivation ranking.

Conclusions:

In NHS England GP practices, certain ethnic minority groups and high deprivation ranking is associated with a reduced likelihood of using patient portals. If patient portals are the only route to access services, it is likely to lead to inequalities in use by some patient groups introducing unfair access to the services. Patients could continue to be provided with alternatives to patient portals to prevent potential inequities in access to services.

Key messages:

- Patient portals are widely used in the healthcare system and can benefit all patients given that disparities are prevented by understanding patient groups who cannot access portals.
- Understanding patient groups less likely to use patient portals could help adapt healthcare system services and meet the needs of all patient groups.

Abstract citation ID: ckac129.303
Effectiveness and safety of pulse oximetry in remote patient monitoring of patients with COVID-19

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Context:

A surge of COVID cases globally is often portrayed as ''very likely'', which overwhelms health systems and challenges their capacities. A mitigation strategy is seen by remotely monitoring COVID patients in out-of-hospital settings to determine the risk of deterioration.

Description of the problem:

We need an indicator to enable remote monitoring of COVID patients at home that can be measured by a handy tool; pulse oximetry which measures peripheral blood oxygen saturation (SpO2). Evidence shows that SpO2 is a reliable indicator of deterioration among COVID patients. The UK initiated a national programme (COVID Oximetry @ Home (CO@H)) to assess the theory. The concept can be potentially applied in other countries in various settings. As part of CO@H, we conducted a systematic review of the evidence on the safety and effectiveness of pulse oximetry in remote monitoring of COVID patients.

Results:

Our review confirms the safety and potential effectiveness of pulse oximetry in remote home monitoring among COVID patients. We identified 13 research projects involving 2,908 participants that assessed the proposed strategy. Evidence shows the need to monitor at-rest and post-exertional SpO2. At-rest SpO2 of $\leq$ 92% or a decrease of 5% or more in post-exertional SpO2 should indicate care escalation. The recommended method for measuring at-rest SpO2 is after 5-10 min of rest, and assessing post-exertional SpO2 is after conducting a 1-min sit-to-stand test. We could not find explicit evidence on the impact on health service use compared with other models of care.

Lessons:

Remote monitoring of COVID patients could alleviate the pressure on health systems and save hospital resources. Monitoring SpO2 by pulse oximetry can be widely applied, including in resource-limited settings, as the tool is affordable, reliable, and easy to use.

Key messages:

- Adopting relevant health technologies in remote patient monitoring is critical to combat the pandemic.
- Pulse oximetry is an affordable, easy to use and widely available tool to monitor patients with COVID-19 at home.

5.G. Oral presentations: Ferenc Bojan: young investigator award session

Abstract citation ID: ckac129.304
Metabolic syndrome as predictor of work exit type: A longitudinal study among 55,817 Dutch workers

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Background:

Chronic diseases like cardiovascular disease or type two diabetes mellitus are related to work exit types such as unemployment and work disability. It is unknown whether metabolic syndrome as a risk factor preceding these chronic diseases is related to work exit type. Metabolic syndrome is present when people have at least three out of the following five risk factors: hypertension, abdominal obesity, raised triglycerides, raised blood glucose, and reduced HDL-cholesterol. We examined the association of metabolic syndrome with work exit type while controlling for socio-demographic and occupational factors.

Methods:

The sample included 55,817 Dutch workers aged 40-65 years from the Lifelines Cohort Study and Biobank. We used data from five measurement waves with a mean follow-up time of 4.1 years. Metabolic syndrome was measured at baseline and based on physical examinations, blood markers, and medication use. Follow-up work exit types were self-reported and included unemployment, work disability, early and regular retirement. Competing risk regression analysis was used.

Preliminary

Results:

Metabolic syndrome increased the risk of work disability (adjusted SHR: 1.69, 95% CI: 1.42, 2.02) and unemployment (adjusted SHR: 1.11, 95% CI: 1.01, 1.22), and was not associated with early and regular retirement.

Conclusions:

Metabolic syndrome increases the risk of work disability and unemployment. More awareness about and prevention of metabolic syndrome is needed among general practitioners and occupational physicians. Early detection of metabolic syndrome as a risk factor preceding chronic diseases might prevent premature work exit in middle- and late-career.

Key messages:

- Metabolic syndrome increases the risk of work disability and unemployment among middle-aged and older workers.
- More metabolic syndrome awareness and prevention might help to extend healthy working years.

Abstract citation ID: ckac129.305
The characteristics of women not-attending screening and their barriers to attendance in Czechia

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Background:

Cervical screening is one of the most important tools to reduce the incidence and mortality of cervical cancer, but uptake is still insufficient in many European countries with implemented population screening programs. In this study, we analyze the sociodemographic characteristics of women who do not attend cervical screening and describe the barriers that these women may have to attend cervical screening using Czechia as an example.

Methods:

In the representative sample of 902 Czech women, we first employed binary logistic regression to identify groups of women that have higher chances of being non-attendees. Second, we described the reasons non-attendees declared as barriers to attendance. Third, we analyzed whether there were differences in women's characteristics according to the declared barriers.

Results:

In the study sample, 36.7% of the women were considered non-attendees. Women with lower education (primary compared to university education, OR = 2.2, 95%CI 1.2-3.9) single women (compared to married/partnered, OR = 3.6, 95%CI 2.0-5.1), or older women, had a higher chance of not attending the screening. The most frequently declared reasons for not attending were 'not experiencing any symptoms' (36.3%), 'fear of cancer diagnosis' (23.0%), and 'fear of the examination procedure' (20.2%). In most of these barriers, women declaring these reasons did not differ from the other non-attendees.

Conclusions:

Identifying sociodemographic determinants of cervical screening non-attendance and the barriers women have to attend are crucial for improving cervical cancer prevention. Based on this knowledge, public health policies should minimize screening hesitancy by targeting psychological factors and improving screening literacy among women. Although this research is a case study for Czechia, we believe that the results may be applicable in other countries.

Key messages:

- Cervical screening promotion should be targeted on women at higher risk of non-attendance.Those are women with lover education, single women or older women.
- Understanding the specific barriers to cervical screenin attendance could help develop strategies to improve the communication of prevention.

Abstract citation ID: ckac129.306
Vaccination coverage trends in European Union from 1980 to 2020: A joinpoint Regression Analysis

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Vaccinations are successful, cost-effective public health interventions; nevertheless, vaccine hesitancy represents a concern and several EU countries have implemented mandatory vaccinations to counteract it. The assessment of vaccination coverage data is helpful to clarify the reason behind this choice better and assess its impact. Data were extracted from the WUENIC database as of July 2021. All the 27 EU countries were included, considering the period from 1980 to 2020 (depending on data availability). Coverage indicators on seven vaccinations scheduled during the first year of life to prevent nine vaccine-preventable diseases were considered. Joinpoint regression was run using Joinpoint Trend Analysis Software

4.9.0.0. For each coverage indicator, the last two trends in time identified by the joinpoint regression were considered to identify countries with a positive vaccination coverage trend (having either the last trend significantly positive or the second last significantly negative but followed by a trend reversal) or a negative coverage trend (having either the last trend significantly negative or the second last significantly positive but followed by a trend reversal). To assess each country, we collated together information on each coverage indicator. A total of 180 jointpoint regressions were run. At least one joinpoint was observed in 144 cases: 39 (27.1%) showed a significant positive trend, and 49 (34%) had a significantly negative one. In 36 cases, there was a single trend lacking a joinpoint, either positive (21, 58.3%), negative (8, 22.2%), or not showing a change (7, 19.4%). Overall, 14 countries had mostly negative vaccination coverage trends, whereas 13 had mostly positive vaccination coverage trends. Systematised data collection and analysis of vaccination coverage trends are needed to support public health systems. EU countries differ broadly, but the overall situation shows that coverage trends are a key issue to be addressed.

Key messages:

- Vaccination coverage in the EU shows a general negative trend. The assessment and comparison of coverage trends across EU countries could make policymakers able to respond to critical issues timely.
- Mandatory vaccinations have been issued in different countries to prevent vaccination coverages from decreasing. Some countries have not issued any mandate but show high vaccination coverages.

Abstract citation ID: ckac129.307
Menstrual inequity in Spain: a cross-sectional study

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Background:

Menstrual inequity has an impact on (menstrual) health outcomes and emotional wellbeing. It is also a significant barrier to achieve social and gender equity. The aim of this study was to assess menstrual inequity and its associations with sociodemographic factors, among women and people who menstruate (PWM) aged 18-55 in Spain.

Methods:

A cross-sectional online survey-based study was conducted in Spain in March-July 2021. Data were analysed through descriptive statistical analyses and multivariate logistic regression models.

Results:

22,823 women and PWM participated (Mean age = 33.2, SD = 8.7). Over half had accessed healthcare services for menstruation (61.9%) and had partial/no menstrual education pre-menarche (58.4%). Lifetime menstrual poverty was 22.2-39.9%. Main risk factors for menstrual poverty were identifying as non-binary (aOR: 1.67, 95% CI, 1.32-2.11), being born in non-European or Latin American countries (aOR: 2.74, 95% CI, 1.77-4.24), and not having a permit to reside in Spain (aOR: 4.27, 95% CI, 1.94-9.38). In turn, menstrual poverty protective factors were having completed university education (aOR: 0.61, 95% CI, 0.44-0.84) and not experiencing financial hardship in the last 12 months (aOR: 0.06, 95% CI, 0.06-0.07). Besides, 75.2% of participants indicated having overused menstrual products because of not having access to adequate menstrual management facilities. Menstrual-related discrimination was reported by 44.0% of women and PWM. Menstrual discrimination risk was higher among non-binary menstruators (aOR: 1.88, 95% CI, 1.52-2.33). Menstrual-related work (20.3%) and educational (62.7%) absenteeism was reported.

Conclusions:

Our study suggests that menstrual inequity in Spain is widespread, especially among those more socioeconomically deprived, vulnerable migrant populations and non-binary and trans menstruators. Findings from this study are being useful to inform future research and menstrual (health) policies.

Key messages:

- Menstrual inequity especially impacts socioeconomically deprived, gender nonconforming menstruators and vulnerable migrant populations in Spain.
- Menstrual inequity research is crucial to address social inequities of health and develop menstrual policies.

Abstract citation ID: ckac129.308
Associations between area- and individual-level community belonging and self-rated health

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Background:

Previous studies point to the importance of individuals' sense of community belonging to multiple measures of health and well-being. However, the extent to which collective sense of belonging within neighbourhoods might influence individual health has not been characterized. The objectives of this study are to describe variations in self-rated health by a novel area-level measure of community belonging and determine the impact of including these measures in models of individual-level community belonging and self-rated health.

Methods:

We conducted a cross-sectional study of respondents of the 2020 Canadian Community Health Survey (CCHS) living in census tracts. These data were merged with novel small area estimates of community belonging derived by Statistics Canada from the CCHS 2016-2019. Multinomial logistic regression models were used to analyse associations of individual- and area-level community belonging, and self-rated health. We adjusted for sex, age, recent immigrant status, visible minority status, province, marital status, presence of children in the household, smoking status, presence of chronic conditions, income, and employment status. All results were generated using survey weights and bootstraps representing a subpopulation of 21 million people.

Results:

A greater proportion of CCHS respondents living in neighbourhoods with the strongest collective sense of community belonging reported being in good, very good, or excellent health. Models indicate that living in a neighbourhood with low collective sense of community belonging is associated with higher odds of reporting being in poor or fair health (OR = 1.44, 95% CI 1.15-1.81) even after adjusting for other factors, including individual-level sense of community belonging, which also remained independently associated with self-rated health.

Conclusions:

Both area- and individual-level sense of community belonging are independently associated with self-rated health.

Key messages:

- The collective sense of belonging within neighbourhoods may influence health outcomes.
- Measures of area-level and individual-level community belonging may capture different aspects of social connections with respect to health.

5.H. Round table: Health care systems, health service provision, and equity in health

Abstract citation ID: ckac129.309

Organised by: EUPHA-HSR, EUPHA-EPI
Chair persons: Johan Hansen (EUPHA-HSR), Stefania Boccia (EUPHA-EPI)
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The starting point for this round table is the observation that the research areas of health systems, health services and population health are usually seen as separate academic specialisations. This hampers the potential for getting insights into the role of health care systems and service provision in the development of population health and health inequalities, and of policies to reduce inequalities. As a result of the different mix of disciplines, with different approaches, different research and publication cultures, and different funding sources health systems research, health services research and population health research have tended to grow apart and to ignore the results from the other areas. In this round table session we will discuss the ways health care systems and health service provision influence inequalities in health. This implies looking at different levels of analysis. Health care systems and inequalities in population health refer to the macro level, and both are influenced by the same political and societal context. Health inequalities are also (and more strongly) influenced by structures and processes at macro level outside the health care system and service provision. Health service professionals form the intermediate level; their actual service delivery takes place at the micro level where health care professionals and users meet. Health care professionals and users of services bring their own attitudes, beliefs and resources that influence their interaction and consequent outcomes. Both meso and micro level are influenced by structures and institutions, in society in general as well as in the design of the health care system. The results of the interactions between health care professionals and users are (e.g.) decisions whether or not to use certain types of care, with consequences for the health and functional abilities of users. These decisions and their consequences are patterned by socio-economic characteristics of care users. These aggregate into patterns of inequality at the macro level. Over time, the influence of health care on population health has increased. The responsibility of health care for upstream causes of health inequalities can be strengthened through deliberate policies. With the (long-term) change of morbidity from infectious disease to chronic disease, prevention is often moving to programmes to support people in changing their lifestyle. This in itself exposes the relationships between health care and health inequalities, as those interventions that require a contribution from individuals tend to increase inequalities since those lacking resources will find it harder to participate. In this round table we present a proposal to integrate the three fields of research. We invite specialists from each of these fields and the audience of the round table to react to our proposal. The aim of this round table is to promote cross-disciplinary collaboration. The two organizing EUPHA sections cover the three areas of research in focus.

Key messages:

- The same political and societal context influences the health system, service provision and many of the social determinants of population health.
- The potential to address health inequalities through health care may have increased, and requires specific attention to integration of social care and different parts of health care.

Speakers/Panellists:

Peter Groenewegen
NIVEL, Utrecht, Netherlands

Ilmo Keskimäki
Finnish Institute for Health and Welfare, Helsinki, Finland

Alastair Leyland
University of Glasgow, Glasgow, UK

Ellen Nolte
LSHTM, London, UK

5.J. Pitch presentations: Occupational health and sickness absence

Abstract citation ID: ckac129.310

Pain and mental health - separate and joint associations with sickness absence among young employees

Pi Fagerlund

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Background:

Both pain and mental illness associate with work disability. However, few studies have examined the association of concurrent pain and mental distress with sickness absence (SA). We examined separate and joint associations of chronic pain, multisite pain, and mental distress with total and long-term all-cause SA among young and midlife municipal employees.

Methods:

As part of the Young Helsinki Health study, baseline data were collected in 2017 from 19-39-year-old employees of the City of Helsinki, Finland. Chronic ($\geq$3 months) pain, multisite ($\geq$2 body sites) pain and mental distress (RAND-36 emotional wellbeing subscale below median) were reported by 3911 respondents. Register data on total (>1 day) and long-term ((>11 workdays) SA for the following year were obtained from the employer and the Social Insurance Institute of Finland with respondents' informed consent. Negative binomial regression analyses were performed with sociodemographic, socioeconomic, and health-related factors as confounders. The interaction of gender was examined.

Results:

Chronic pain, multisite pain, and mental distress were associated with total SA. Chronic multisite pain was associated with long-term SA (rate ratio [RR] 2.51, 95% CI 1.17-5.42), and chronic pain (RR 5.04, 95% CI 2.14-11.87) and multisite pain (RR 4.88, 95% CI 2.30-10.33) with long-term SA among those with mental distress. For women, there was a synergistic interaction of multisite pain to the association with total SA (synergy index 1.80, 95% CI 1.27-2.54).

Conclusions:

Chronic and multisite pain associate with SA among young and midlife employees. The associations are generally stronger among women and particularly among those with concurrent mental distress. Interventional studies are needed to confirm if early symptom recognition and support could reduce sickness absence.

Key messages:

- Chronic pain and pain at multiple body sites associate with sickness absence among young and midlife employees, particularly among women and those with concurrent mental distress.
- Interventional studies are needed to confirm if sickness absence could be reduced by early recognizing pain and mental distress among employees and providing preventive and therapeutic services.

Abstract citation ID: ckac129.311
Clustering of unhealthy behaviours and subsequent sickness absence among Finnish municipal employees

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Background:

Unhealthy behaviours are associated with increased sickness absence (SA), but few studies have explored these associations using person-oriented approach. We aimed to identify latent classes of unhealthy behaviours among female and male employees and examined their associations with subsequent SA.

Methods:

Health behaviours (leisure-time physical activity, sedentary behaviour, fruit and vegetable [F&V] consumption, sleep, binge drinking, and use of tobacco products) were derived from the Helsinki Health Study questionnaire survey, collected in 2017 among 19-39-year-old employees of the City of Helsinki, Finland. The questionnaire data were linked to employer's SA register. Latent class analysis was used to identify underlying profiles of unhealthy behaviours and negative binomial regression was used to examine their associations with subsequent SA ($\leq$7 days, >7 days, and all lengths) among 3228 women and 771 men. The mean follow-up time was 2.1 years.

Results:

Among women, we identified 3 latent classes: 1) healthy behaviours (81% of women), 2) binge drinking and tobacco use (12%), and 3) inadequate F&V consumption and insufficient sleep (7%). Classes 2 and 3 showed increased rates for subsequent SA compared to class 1, regardless of the length of SA spells (age-adjusted rate ratios [RR] 1.37-1.42 and 1.35-1.64, respectively). Among men, we identified 3 latent classes: 1) healthy behaviours (51% of men), 2) binge drinking and tobacco use (19%), and 3) inadequate F&V consumption, binge drinking and tobacco use (30%). While classes 1 and 2 were not different in terms of subsequent SA, class 3 had increased rates of subsequent, particularly short-term SA (RR 1.24, 95% CI 1.03-1.48).

Conclusions:

Preventive actions should consider simultaneously several unhealthy behaviours while aiming to reduce employees' SA. These actions might benefit from regarding potential gender differences in the clustering of unhealthy behaviours and their associations with SA.

Key messages:

- Preventive actions to reduce sickness absence should consider clustering of unhealthy behaviours among employees.
- Potential gender differences need to be regarded in these actions.

Abstract citation ID: ckac129.312
Work after cancer-sickness absence. Barriers and facilitators from survivors' perspective

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People who have suffered from cancer find it difficult to return to work after a sickness absence (SA). Previous evidence indicates that people who survive a cancer have a higher risk than general population of leaving the labor market prematurely or being unemployed due to sequelae of both treatment and disease. Our objective is to identify barriers and facilitators associated with the return and permanence in the workplace of salaried workers after a SA due to cancer in Catalonia. The research used a descriptive qualitative approach with socio-constructivist perspective. A theoretical sampling was carried out until saturation. Three discussion groups (7 people/group) were conducted with people who had suffered a SA due to cancer in Catalonia. The sessions were held virtually and were recorded, transcribed verbatim, and analyzed using thematic analysis and mixed coding with Atlas.ti. Most of the people had returned to work after SA or were looking for a job that was suitable for their health status. Among the barriers to reincorporation to their job detected: (1) coping with the same workload they had before the SA, (2) sequelae associated with cancer treatment that affected their ability to work (stress, low ability to concentrate, chronic fatigue, mobility limitations), (3) having jobs with a high physical load, (4) expectations of colleagues and bosses. Among the facilitating factors: (1) sessions with psycho-oncologists, (2) availability of holidays to adapt their return after SA, (3) teleworking, and (4) job adaptation. Regarding proposals to improve this process, the most outstanding were the implementation of policies that allow a gradual return to work adjusted to the people who want to adhere to it and generalize the possibility of doing psycho-oncological therapy. End of SA after cancer is a key moment for people who go through it, they suffer many difficulties during the process that could be prevented with measures such as a gradual return to work.

Key messages:

- Workers who suffer a SA due to cancer face difficulties on their return to work.
- Initiatives of adaptation and gradual reincorporation to the workplace could improve return to work process after a SA due to cancer.

Abstract citation ID: ckac129.313
Evaluation of an e-learning on involving significant others in occupational health care

Nicole Snippen

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Background:

Significant others (SOs) like partners, family members or friends can play an important role in how workers cope with chronic disease, thereby influencing work and health outcomes. Despite the potential benefits of involving SOs in the return-to-work (RTW) process of workers with chronic diseases, guidance and training on how to manage this is scarce. Educating work and health professionals on this topic could lead to better RTW support for workers and prevention of long-term sickness absence.

Objectives:

This study aimed to determine the effectiveness of an e-learning for improving occupational health physicians' (OHPs) knowledge, attitudes, and self-efficacy regarding involving SOs in the RTW process. In addition, we explored OHPs' responses to and satisfaction with the e-learning. We conducted a randomized controlled trial with 87 OHPs, involving an intervention group and a waitlisted control group. Between-group differences in knowledge, attitude, self-efficacy outcomes, and retention of effects were assessed using ANOVA and paired t-tests. Reactions to the e-learning were analyzed with descriptive statistics and thematic analysis.

Results:

We found moderate to large effects on OHPs' knowledge ($p < .001$, $\eta p2 = .202$), attitudes ($\eta p2 = .098$), and self-efficacy ($p < .001$, $\eta p2 = .237$), with retention of all changes at 10-week follow-up. OHPs graded the e-learning with a mean score of 7.9 out of 10 (SD = 1.11) and indicated that the e-learning increased their awareness of the role of SOs in RTW and encouraged them to address this more often.

Conclusions:

The developed e-learning is the first evidence-based training to improve the knowledge, attitudes, and self-efficacy of OHPs with regard to involving SOs in the RTW process of workers with chronic diseases. The e-learning and accompanying materials can encourage work and health professionals to more often address the role of significant others in the work re-integration process.

Key messages:

- The developed e-learning is effective in increasing occupational health physicians' knowledge, attitudes and self-efficacy with regard to involving significant others in the return-to-work process.
- The e-learning and accompanying materials can encourage professionals to more often address the role of significant others in the work re-integration process to prevent long-term sickness absence.

Abstract citation ID: ckac129.314
Associations between perceptions and sick leave duration in dyads of workers and significant others

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Background:

Dyadic processes of workers and significant others like partners, family members and friends can play an important role in adaptation to chronic disease, thereby influencing health and work outcomes. This study aimed to increase our understanding of dyadic processes in sick leave duration of workers with chronic diseases. We examined illness perceptions, return to work expectations (RTWE) and perceptions about significant other responses (i.e., engagement, buffering and overprotection) of workers and their significant others in relation to sick leave duration.

Methods:

This study used survey and registry data of 90 dyads of sick-listed workers with a chronic disease and their significant others. Simple and multiple regressions in which perceptions of workers and significant others were included simultaneously were used to examine associations with sick leave duration.

Results:

Workers' and significant others' perceptions were moderately to strongly correlated (r ranged from .46 to .80). Sick leave duration was associated with illness perceptions of both workers ($b = 8.58$, $p = .001$) and significant others ($b = 6.46$, $p = .008$), with more negative illness perceptions associated with a longer sickness absence. In the multiple regression, illness perceptions explained 12.3% of the variation in sick leave duration. Sick leave duration was also associated with RTWE of workers ($b = -76.87$, $p < .001$) and their significant others ($b = -92.47$, $p < .001$), with more positive RTWE associated with a shorter sickness absence. The RTWE of dyad members accounted for 24.5% of the variance of sick leave duration.

Conclusions:

Illness perceptions and RTWE of workers and their significant others are strongly interdependent and associated with sick leave duration of workers with chronic diseases. A dyadic approach targeted at improving illness perceptions and RTWE of both workers and significant others might be more effective than an individualistic approach in preventing long-term sickness absence.

Key messages:

- Return to work expectations and illness perceptions of workers and their significant others are associated with the duration of sickness absence of workers with chronic diseases.
- A dyadic approach targeted at both workers and their significant others might be more effective than an individualistic approach in the prevention of long-term sickness absence.

Abstract citation ID: ckac129.315
Covid-19 impacts on unemployment on the migration-gender intersections in Spain, a multilevel study

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Background:

The covid-19 pandemic has led to several socioeconomic consequences, which ultimately affect individuals' health status. This study aims to assess and explore the short-term impacts of the pandemic on the labour market in Spain, through the intersectional and multilevel analysis of unemployment rates.

Methods:

Cross-sectional study using data from the Spanish Labour Force Survey from the three quarters before and after the outbreak of covid-19 (N = 922,074). Multilevel logistic regressions were used to calculate the odds of being unemployed for the intersectional positions on gender and migration background, nested within 7 educational levels.

Results:

Before (pre) and after (post) the covid-19 outbreak, women had higher odds ($OR_{nw\text{-}pre} = 1.974$; p-value<0.001; $OR_{mw\text{-}pre} = 2.202$; p-value<0.001) of being unemployed than men

(ORmm-pre = 0.887; p-value<0.001). However, the pandemic affected women's employment unequally. Migrant women experienced an increase in the risk of being unemployed 6 times larger than native women (48.67% (ORmw-post = 2.688; p-value<0.001) v 8.78% (ORnw-post = 2.062; p-value<0.001)). Moreover, in the post-covid 19 scenario, individual characteristics of migrant women (ORmw-post = 2.688; p-value<0.001) played a larger role in the risk of being unemployed than their educational level (MOR = 2.537).

Conclusions:

Migrant women are disproportionately bearing the short-term economic consequences of the pandemic by means of higher unemployment rates, underpinning experiences of racism and gender discrimination. Increasingly attention needs to be placed on discriminated groups in society. Targeted protective policies that foster labour market integration and increase social protection are needed to mitigate and decrease existing economic, social, and health inequalities.

Key messages:

- Migrant women have disproportionately carried the economic impact of the covid-19 pandemic in Spain. Targeted protective policies are needed to mitigate existing socioeconomic and health inequalities.
- Migrant women's gender and migration background play a greater role than their education in the risk of being unemployed, underpinning experiences of racism and gender discrimination.

Abstract citation ID: ckac129.316

What do employees on long-term sick leave experience, as barriers for returning to work?

Kine Strømstad

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Background:

The financial burden long-term sick leave places on society are immense and amounted to an annual cost of 180 billion NOK in Norway. Epidemiological and sociodemographic risk factors related to sickness absence and return to work (RTW) are well studied, less is known regarding self-perceived biopsychosocial barriers for RTW. The aim of this study was to investigate the diversity of barriers for RTW as experienced by long term sick listed employees.

Methods:

The study is a large-scale qualitative interview study (n = 85), using semi-structured telephone interviews. Participants were eligible to participate if they had received sick leave benefits >6 months and <1,5 years at the time of recruitment, for at least 50% of their employed work hours. The data was analysed with a directed qualitative content analysis combined with a summative approach. A deductive approach, guided by the theoretical framework provided in Model of Human Occupation (MoHO) were used in the analysis process. In MoHO, the main categories are person specific components and environmental components.

Results:

The study generated 952 coded meaning units describing barriers for RTW. Of these, we were able to deductively code 917 within the framework of MoHO. In the person specific concept, performance capacity barriers were dominant (n = 530). Volitional barriers (n = 164) were related to personal causation, hereunder self-efficacy (n = 24), and one's sense of capacity (n = 91). Barriers related to habituation (n = 64) was expressed as habits, both necessary habits and undesirable habits. Barriers related to the environmental component amounted to 388. The majority was linked to occupational environment (n = 217), including availability of adequate work tasks and barriers related to the healthcare system.

Conclusions:

The experienced RTW-barriers extended beyond health-related barriers, for most of the participants the barriers were related to both person specific components and environmental components.

Key messages:

- By gaining a greater understanding of the experienced RTW-barriers we could possibly provide more tailored RTW-services and help sick listed to a safe and sustainable return to work.
- The experienced RTW barriers for long term sick listed were primarily related to person specific and environmental components, and thus extended beyond health-related barriers.

5.K. Workshop: National and European studies on health literacy in children and adolescents

Abstract citation ID: ckac129.317

Organised by: EUPHA Working Group on Health Literacy, EUPHA-HP, EUPHA-CAPH, Technical University Munich, Robert Koch Institute
Chair persons: Orkan Okan (EUPHA-HP), Kimberley Foley (UK)
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Health literacy describes how people use health information to make informed decisions in context of healthcare, disease prevention and health promotion. Enhancing health literacy of populations is critical and in particular important at an early age, which is understood to be more sustainable because health literacy contributes to improved personal health and development. Low health literacy in child and adolescent populations has been linked to worse health outcomes and health disparities in Europe, making health literacy of children and adolescents an important public health topic. Developing and delivering target group specific interventions and services requires precise data generation on the state of health literacy in early age. In the past decade, several conceptual approaches have been undertaken but methodological sound, validated and reliable measurement tools are still scarce. Available systematic reviews show that most tools originated from North America and/or English speaking countries. However, in the past years European researchers have been involved with research on health literacy in childhood and adolescence, the result of which culminated into heavy progress regarding the development of health literacy measurement instruments, including generic health literacy, digital health and mental health literacy. These new developments lead to the availability of validated tools for school-aged children, including primary and secondary school children. The purpose of this workshop is to bring together five contemporary health literacy studies conducted in child and adolescent populations across Europe, including national and European-wide studies. Both methodological findings regarding the measurement tool and empirical data will be introduced. The first presentation emerges from the HLCA HL-Kids project, which has been conducted in Germany and focusses on primary schoolchildren, using the HLS-Child-Q15 tool. The second presentation originates from the Netherlands where the HLS-Child-Q15 tool was adapted to Dutch children. The third presentation aims at health literacy of adolescents in secondary school-age in Germany, by using the MOHLAA-Q tool. The fourth presentation originates from the WHO-led HBSC study, which has been conducted by using the HLSAC questionnaire. The final presentation will focus on the first digital health literacy measurement tool for secondary schoolchildren, which has been developed within a German study in schools. Each project will be given ten minutes to present their findings, including questions, which will be followed by Q&A and an open discussion with the audiences. This workshop offers a forum for researchers, practitioners and policy-makers interested in health literacy measurement in children and adolescents. By dialogue and two-way communication, vivid interaction will be ensured, allow building synergies, and facilitate networking and capacity building.

Key messages:

- Health literacy contributes to improved personal health and development of children and adolescents.
- The measurement of health literacy is key to public health intervention success and needs theory driven, validated and reliable instruments.

Abstract citation ID: ckac129.318
HL-Kids-NRW – Study of fourth-graders' health literacy

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Background:

Although children are identified as a key target group for interventions targeting the development of health literacy, little data is available on children's health literacy and how it is related to health outcomes at a young age. This study addresses this research gap by providing data on fourth-graders' health literacy and associated health outcomes.

Methods:

A cross-sectional study was conducted among fourth-grade students in the state of North-Rhine Westphalia, Germany. The study was designed as a representative survey starting in 12/2020, which could, however, not be realized due to pandemic-related constraints. Data collected between 07/20 and 11/20 is included in the analyses presented here. Among others, we assessed self-reported health literacy with the HLS-Child-Q15 questionnaire, while also assessing various self-reported health outcomes.

Results:

n = 364 students are included in the analysis, 49,5% of which are female. The mean age is 9.5 years (SD = .7). The HLS-Child-Q15 demonstrated high internal consistency (Cronbach's $\alpha = .812$). Self-reported health literacy is high, with a HLS-Child-Q15 mean score of 3.13, indicating that it is rather easy for participants to deal with health-related information. Health literacy is significantly associated with a number of outcomes related to health status (KINDL-R subscales physical wellbeing and mental wellbeing, Spearman's $\rho = .280$ and $\rho = .271$, respectively; $p < .001$) and health behaviour (freq. of brushing teeth: $\rho = .173$; $p < .01$; freq. of eating fruit and vegetable: $\rho = .217$ and $\rho = .299$; $p < .001$; freq. of physical activity: $\rho = .279$; $p < .001$).

Conclusions:

While the overall level of health literacy in our sample is high, higher health literacy is associated with better health behaviours, as well as improved mental and physical wellbeing. Further analyses are necessary to explore the causal pathways between the investigated variables, and representative survey are needed to verify these findings.

Abstract citation ID: ckac129.319
Measuring health literacy and its associations with health behaviors of adolescents in Germany

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Background:

The questionnaire ''Measurement of Health Literacy Among Adolescents Questionnaire'' (MOHLAA-Q) was developed and validated in a multi-stage process to measure generic health literacy among 14- to 17-year-olds. The MOHLAA-Q combines subjective and objective measurements, consisting of four scales. The instrument was applied to explore associations between generic health literacy and different health behaviors among adolescents in Germany. The data should contribute to the age-appropriate development of health promotion interventions.

Methods:

We carried out a nationwide cross-sectional online survey with 1,235 adolescents aged 14-17 years in Germany in 2019. Data on generic health literacy were collected using the four scales of the MOHLAA-Q and data on health behaviors were collected using single established single-item questions on sports, diet, alcohol consumption, and smoking. Bivariate and multiple analyses were performed for investigating associations between generic health literacy and health behaviors, adjusted for age, gender, education and self-efficacy.

Results:

Not consuming fruit and vegetables daily was associated with lower health literacy levels in all examined scales. Doing no sports as well as smoking showed positive associations with low levels in ''health-related communication and interaction skills'' and ''attitudes toward one's own health and health information''. No associations were found between risky alcohol consumption and health literacy.

Conclusions:

The results indicate that strengthening health literacy should be part of health promotion activities for increasing physical activity and healthy diet among adolescents. The MOHLAA-Q allows us to identify which specific dimensions of health literacy might be addressed in order to promote different health behaviors.

Abstract citation ID: ckac129.320
Exploring children's health literacy in the Netherlands – results in a sample of 8-11 year olds

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Background:

There are few valid, age-appropriate tools to assess children's HL. The German-language European Health Literacy Survey Questionnaire Adapted for Children (HLS-Child-Q15-DE) is a self-report questionnaire adapted from the adult European Health Literacy Survey Questionnaire. In 2021, this instrument was translated and validated in the Netherlands. In this presentation, we will describe the distribution of Health literacy in a sample of Dutch children, and relate their Health literacy level to certain aspects of their health behaviour such as food intake and physical activity.

Methods:

The HLS-Child-Q15-DE was translated following WHO guidelines and administered digitally to 209 Dutch schoolchildren (eight-to-eleven-year-olds). Its psychometric properties were assessed and the sample's HL distribution was explored by demographic characteristics. Associations with food intake and physical activity were computed.

Results:

Of the sample, 17.2% had a low health literacy score (first quintile), 61.1% medium (second to fourth quintile) and 21.7% high (fifth quintile). Higher HL scores were observed for ten-to-eleven-year-olds (compared with eight-to-nine-year-olds; p = 0.021) and fourth-grade students (compared with third-grade; p = 0.019). A positive association between children's HL and their vegetable consumption and PA behaviour was observed.

Conclusions:

Children's health literacy can have an impact on some aspects of their lifestyle. This supports the idea that health literacy evolves throughout life and stresses the importance of both parents and schools in this process.

Abstract citation ID: ckac129.321
Health literacy among adolescents: summary of some key findings from ten European countries

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Introduction:

In research on disparities, the concept of health literacy (HL) as a set of competencies to promote and sustain health may help in understanding the disparities better and in addressing avoidable and unfair health disparities. The presentation will present some key findings on adolescents' HL levels in ten European countries, and how HL mediates and moderates between various background factors and health outcomes.

Methods:

Data consisted of cross-sectional data from Health Behaviour in School-aged Children (HBSC) study from year 2017/18 of ten European countries (Austria, Belgium (Fl), Czechia, England, Estonia, Finland, Germany, Macedonia, Poland, and Slovakia). Data (n = 14,590 - 22,291) of 13- and 15-year-old pupils were used. Indicators include background variables (e.g. age, gender), Health literacy, Health indicators (e.g. self-rated health (SRH) and problematic social media use (PSMU)). Analysis include (1) Mediator analysis (with Mplus): pearson correlation coefficients, path models (Mplus 7.3 and Maximum Likelihood estimator) and (2) random effects models and moderator analyses (with R-sofware).

Findings:

HL is an independent factor explaining disparities in health (e.g. SRH), and a mediator as well as a moderator between health outcomes and background factors. Based on the national analyses HL had significant main effects in every country, but group level differences emerged only in some countries. For instance, in Finland and Belgium, among girls HL lowered the likelihood to problematic social media use, but not among boys.

Discussion:

HL is of use in understanding and tackling health disparities among adolescents. Results confirm the need to adopt the principles of proportionate universalism when promoting HL among adolescents to avoid widening the disparities within population groups. Also, country-specific health literacy interventions are needed to secure equity in opportunities of different population groups to benefit from the HL interventions.

Abstract citation ID: ckac129.322
Digital health literacy and health behaviors of eighth and ninth graders from Germany

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Background:

Due to the high availability and use of digital media, health-related information is increasingly shifting into the digital space. While there are increasing empirical findings on general health literacy (HL), there is a lack of evidence on digital HL in adolescence and its association with health behavior.

Methods:

A cross-sectional study of 490 secondary school students (grades eight and nine) from the federal state of Hesse was conducted from October 2019 to February 2020. Digital HL was assessed using five subscales of the Digital Health Literacy Instrument (DHLI), while consumption of fruits, vegetables, soft drinks, and weekly physical activity were used as indicators of health behavior. In addition to gender and grade level, subjective social status (SSS) was used as a social characteristic. Univariate, bivariate, and multivariate analyses were performed, with binary-logistic regression adjusted for gender and SSS.

Results:

Across all items, the percentage of adolescents reporting difficulties in acquiring and dealing with digital health information ranges from 15.3 % to 37.5 %. Stratified by social characteristics, gender and socioeconomic differences were found with girls and respondents reporting a lower SSS more often showing a limited digital HL. Adolescents with moderate and low digital HL report higher levels of low physical activity, non-daily fruit and daily soft drink consumption. Depending on the health behavior, different relationship patterns can be observed for the dimensions of digital HL.

Conclusions:

The findings suggest a need for interventions to promote digital HL among adolescents, particularly for those of low SSS. In this context, the differential relationship patterns with health behaviors provide an avenue for the development of specific interventions.

5.L. Oral presentations: Health professionals training and practice

Abstract citation ID: ckac129.323
Health workforce needs of small medical specialties: findings from rheumatology in Germany

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Background:
Small medical specialties may be more vulnerable to workforce shortage and the COVID-19 pandemic and this may directly impact in the provision of care for chronically-ill patients. This study aims to explore health workforce development and new needs, using rheumatology in Germany as a case study.

Methods:
An explorative multi-methods approach was applied, combining health labour market assessment of rheumatology physicians (public statistics 2000-2019) and a questionnaire-based online survey conducted in early 2021 (n = 101 respondents; rheumatology physicians and residents). Main selected topics: work hours, workload, mental health issues, discrimination and sexual harassment experiences, impact of COVID-19. Descriptive statistical analysis was performed and qualitative content analysis for free-text information.

Results:
Health labour market analysis showed that the numbers of rheumatologists increased markedly between 2000 and 2019 in the groups aged +50 years, but only 9% in younger groups under 50 years; since 2010 the group 40-50 years showed decreases. In 2019, the absolute number of rheumatologists working in healthcare after retirement-age exceeded those aged 40 and under. Survey data revealed a strong mismatch between actual and desired work hours for women and men. 81% rated their workload as high or very high; every sixth rheumatologist has suffered from stress or burnout syndromes at least once in the past. Experiences of gender discrimination and sexual harassment/violence were frequently reported, mostly by women. COVID-19 was an amplifier of stress with major stressors being digitalisation and increased demand for communication and patient education.

Conclusions:
Decreasing health workforce capacities in German rheumatology combine with negative perceptions of work and workplace conditions, threatening both retention and service delivery.

Key messages:
- Small medical specialties, like rheumatology, face severe shortage that threaten healthcare for chronically-ill patients and need greater attention.
- COVID-19 has reinforced rheumatologists' workload and stressors, thus worsing mental health and retention.

Abstract citation ID: ckac129.324
Training health professionals in infodemic management to mitigate the harm caused by infodemics

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Background:
Due to their multifaceted impacts on health and society, understanding and controlling infodemics to support uptake of vaccines, public health and social measures, treatments, and health behaviours is rapidly becoming a priority for many health authorities. WHO has developed a comprehensive training programme to support health professionals in the new field of expertise of managing infodemics.

Objectives:
The WHO infodemic management multiformat and transdisciplinary training program builds the skills and knowledge needed to prepare for and respond to infodemics. The trainings are built on WHO competency framework for building an infodemic response workforce. The methodology used relies on human-centred and emotional design evidence and practice and uses evaluation for continuous learning design improvement.

Results:
Since November 2020, three WHO global trainings organized online with US Centers for Disease Control and Prevention, UNICEF and other partners, including four-week-long simulation exercises, creating a network of 772 infodemic managers in 133 countries. A ''train-the-trainers'' companion package was prepared and by April 2022 delivered in Iran and Malaysia. Deep dive training modules on specialist infodemic management practice topics have been prepared for use at country level. In addition, a comprehensive set of self-paced free online courses enhances infodemic literacy and resilience to misinformation. Between December 2021 and April 2022, the OpenWHO Infodemic Management 101 course reached over 17 000 enrolments. The training programme will be updated based on evaluations, the feedback from field responders and the updated to the WHO competency framework for infodemic management workforce.

Conclusions:
The WHO multiformat blended training program allows an efficient and rapid dissemination of infodemic management skills and knowledge.

Key messages:
- A global network of trained infodemic managers is ready to support national preparedness and response planning.
- Skills and knowledge in infodemic management are accessible to all thanks to free online courses.

Abstract citation ID: ckac129.325
Mixed-methods study to assess an intervention for healthier lifestyles in primary healthcare

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Background:
Smoking, physical inactivity, low fruit and vegetable consumption, and obesity are common in Kosovo. The Accessible Quality Healthcare project is implementing a primary healthcare intervention that entails nurse-guided motivational counselling to facilitate lifestyle behaviour change. This study assesses the uptake of counselling and the impact on health behaviours and participants' stages of health behaviour change as well as describes experiences and perceived benefits of motivational counselling.

Methods:
Study participants (n = 907) were recruited from 12 municipalities participating in the Kosovo Non-Communicable Disease Cohort study. For the quantitative study, data on lifestyle behaviours, use of counselling, and stages for behavioural change were used. For the qualitative study, in-depth interviews were conducted with 26 cohort participants who had undergone motivational counselling.
Results:
Motivational counselling was received by only 22% of the eligible participants in the intervention municipalities. Unhealthy behaviours remain high even in persons who underwent counselling (of whom 13% are smokers; 86% are physically inactive; 93% with inadequate fruit and vegetable consumption; 61% are obese). According to the qualitative study results, the participants that received counselling were very satisfied with the services but requested additional services such as group physical activity sessions and specialized services for smoking cessation.
Conclusions:
More tailored and additional primary healthcare approaches in accordance with patients' views need to be considered for the motivational counselling intervention to reach patients and efficiently facilitate lifestyle behaviour change.
Key messages:
- The following tailored approaches are suggested: a) strengthened referral mechanism b) specialized services for smoking cessation; c) delivery of group physical activity sessions.
- More tailored and additional primary health care approaches in accordance with patients' views need to be considered for the motivational counselling intervention.

5.M. Workshop: The need to account for vaccine-specificities in the implementation of the EU Regulation on HTA

Abstract citation ID: ckac129.326

Organised by: EUPHA-HTA, Vaccines Europe, HTAi
Chair persons: Chiara de Waure (EUPHA-HTA), Elena Petelos (EUPHA-HTA)
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In January 2022, the EU Regulation on Health Technology Assessment (HTAR) entered into force. The HTAR provides for the centralized conduct of EU-wide joint clinical assessment (JCA) for oncology treatments (2025 onwards), and for other medicinal products incl. vaccines (2030 onwards). HTA is a multidisciplinary process aiming to disentangle the value of a health technology in comparison to other. It has been used, to different extent across EU countries, to inform vaccine price and reimbursement decisions. Nevertheless, existing assessment frameworks utilized by HTA bodies, incl. National Immunization Technical Advisory Groups (NITAGs), as well as the relative effectiveness assessment (REA) framework developed by the European Network for Health Technology Assessment (EUnetHTA), do not fully account for the specificities of vaccines. In fact, to account for the broad value of vaccines several aspects ought to be considered, including societal benefits. Attention has been paid to these topics for years by the public health community, and in particular EUPHA-HTA, and also Vaccines Europe, a specialized vaccines group within the European Federation of Pharmaceutical Industries and Associations (EFPIA), has recently released a position statement on the need to tackle vaccine specificities in future JCA. Furthermore, as the COVID-19 pandemic has highlighted, such aspects are critical for joint procurement efforts to combat the current and future pandemics. The objective of this workshop is to address the current and future role of HTA in vaccine regulation across EU countries, inform on key specificities of vaccines in respect to JCA and HTA as a whole and discuss opportunities to develop vaccine-specific methodological guidelines within the HTAR. Following an introduction, the following topics will be addressed:
- Competent bodies and HTA impact on vaccine decision-making process, incl. a discussion of implementation challenges and potential impacts of the HTAR.
- JCA specificities in respect to vaccines and the importance of addressing the whole value of vaccines and vaccinations.
- The proposal of Vaccines Europe for guiding principles to account for vaccines specificities in JCA built on the outcomes of an 'across-the-industry' project incl. also non-industry experts.

The presentations will be followed by a panel discussion to further explore the themes, consider next steps and address questions from the audience.
Key messages:
- The new EU HTAR is paving the way for JCAs of several medicinal products, incl. vaccines necessitating expert guidance in terms of determining their whole value.
- Vaccines specificities should be duly considered in JCAs to inform national and EU-wide decision-making for vaccination programmes, reimbursement, and pricing.

Abstract citation ID: ckac129.327
HTA and National Immunisation Program: an overview of competent bodies and of the impact of HTA on the decision-making process

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Issue/problem:
The WHO has recommended for many years to adopt transparent and standardized methods to decide upon the introduction of vaccines at national level. For this purpose, the Global Vaccine Action Plan has envisaged the establishment of National Immunization Technical Advisory Groups (NITAGs) to issue independent advice relied on the assessment of vaccines efficacy and safety and health technology assessment (HTA).
Description of the problem:
So far, 172 countries worldwide have a NITAG. Despite the growth in the number of NITAGs worldwide and their strengthening following process indicators identified by the WHO, the way how NITAGs issue recommendations and how they are considered in the development of vaccine policy still represent a matter to the attention of the scientific and policy community.

Results:

The evidence shows that assessment frameworks vary across countries. Furthermore, the legal basis and the authority, namely binding or advisory, recognised to them could influence the way how NITAGs work and impact on vaccine policy. Eventually, the final decision is also led by other aspects, including financial and contextual factors that are less standardizable but should be always taken into consideration in health policy. In fact, the final decision on the inclusion of a vaccination into the national immunization program is made by the Ministry of Health also based on the evaluation of HTA bodies working in the country.

Lessons:

Considering the central role of NITAGs in vaccine policy, some efforts should be done in order to make NITAGs more authoritative and collaborative. This could help, from one side, to make the relationship between final decision and NITAGs recommendations clearer and, on other one, to make it possible to have shared and timely evaluations. In this respect, Joint Clinical Assessment envisaged by the new EU regulation on HTA could prepare the way for a more transparent and timely vaccine policy at European level.

Abstract citation ID: ckac129.328
Accounting for vaccines specificities in the Joint Clinical Assessment (JCA): a proposal for guiding principles

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Issue/problem:

Vaccines are an important public health intervention protecting the population against infectious diseases. The value of vaccines is broad ranging from individual to societal as achieving community immunity protects the unvaccinated, minimizes the risk of outbreaks, reduces the emergence of antimicrobial resistance, and leads to broader societal benefits.

Description of the problem:

Vaccines' market access processes are characterized by the development of recommendations by NITAGs followed by the assessment of health technology assessment (HTA) bodies in less than half of 27 EU member states. Despite that HTA for therapeutic drugs is well established, there is very limited experience in applying HTA methodologies to vaccines, especially for clinical assessments, as HTA methods and frameworks are traditionally geared toward therapeutics. However, following the adoption of the EU regulation on HTA, Joint Clinical Assessments (JCAs) of vaccines are expected.

Results:

To support a discussion on how to account for vaccine specificities in the JCA, Vaccines Europe has performed a project which aimed at developing a proposal for high-level guiding principles on processes and methodologies for clinical HTA for vaccines. The proposal is informed by findings of literature reviews on currently applied processes, methods, and clinical assessment frameworks of vaccines as well as the outcomes of an advisory board with scientific experts.

Lessons:

A proposal for high-level guiding principles for clinical HTA for vaccines is being developed based on both evidence and the advice from scientific experts which focuses on processes (e.g., horizon scanning, early advice, consideration of vaccine-specific expertise) and methods (e.g., unmet need, safety, efficacy/effectiveness, real-world evidence and technical characteristics of the technology). Lastly, the implementation of vaccines specificities in JCA represents a call for action.

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Needs for a thorough Joint Clinical Assessment of vaccines within the HTAR: perspectives of NITAGs

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Issue/problem:

NITAGs are independent expert advisory committees that provide evidence-based recommendations to the Ministry of Health to guide the introduction of new vaccines and formulate national immunization plans.

Description of the problem:

The evaluation of vaccines has become more and more complex. This is not only because the number of vaccines on the market and the diseases they target has increased, but also because a much wider range of population subgroups can be targeted, and for some diseases several vaccines are available and need to be compared. In addition, vaccines not only have an impact on individual well-being, but can also induce population-level effects and broader socioeconomic value.

Results:

NITAGs consider to a large extent similar key factors in their evaluation processes. These can be divided into context-free and context-specific aspects. Context-free aspects include effectiveness and safety. Local disease epidemiology, potential vaccine impact at population-level, cost-effectiveness and societal or cultural values and preferences are context-specific aspects. Collaboration is possible when jointly assessing the evidence related to context-free aspects, since this is usually easily transferrable across countries. In 2019, a network of NITAGs in the European Union and Economic Area countries was established under the coordination of the European Centre for Disease Prevention and Control. Within this network, working groups have been established and either performed themselves or supported external contractors in conducting systematic reviews on vaccines effectiveness and safety.

Lessons:

The increasing workload of NITAGs and the prospect of joint clinical assessments draw the attention to a number of practical issues to be solved, e.g., consensus on methodological guidelines for systematic reviews, processes to ensure that the products meet NITAGs expectations (content, quality, timing), and approaches how to consider unpublished data.

5.N. Workshop: Children first: do health systems pay enough attention to their youngest constituents?

Abstract citation ID: ckac129.330

Organised by: European Observatory on Health Systems and Policies
Chair persons: Ewout Van Ginneken (Germany), Dimitra Panteli (Belgium)

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This workshop aims to bring together a range of insights on how health systems have dealt with child health and health care, highlighting both successes and challenges. For children, access to health care is vital. It impacts their physical and emotional health and wellbeing and largely determines whether they can reach their full potential as adults, which is also important to their families and society at large. Consequently, it comes as no surprise that he 1989 UN Convention on the Rights of the Child, which was ratified by all European countries, guarantees a fundamental right to healthcare for all children. However, various national governments do not fully comply with the Convention, and evidence exists that children may not always enjoy the necessary access to meet their needs. In 2021, Doctors of the World (DoW) concluded that there are urgent questions about the welfare and health of vulnerable children across Europe, based on the increase in children seeking healthcare from DoW clinics instead of the national health system. This concerning trend is not captured well enough in available statistics. What is more, the COVID-19 pandemic and the Ukrainian refugee crisis raise additional concerns as to how health systems will deal with the observed increases in related paediatric sequelae and mental health needs. The aims of this workshop are therefore to stimulate discussion around better understanding children's access to health care and how it relates to health system performance, and provide impetus for new initiatives that can improve health care for children. The workshop will take a hybrid format, kicking off with three short presentations followed by a round table discussion and engagement with the audience. The presentations will cover the regulatory framework for children's access to health care in European countries; identified bottlenecks of health system performance specific to child services from a range of countries around the world; and the impact of COVID-19 on hospital care for children based on the example of one European country.

Key messages:

- Ensuring children's access to health care is now more important than ever; a lot more can and should be done at all levels.
- More and better data about children's health and health care access is necessary to enable effective policies; collecting it should become a health system priority.

Abstract citation ID: ckac129.331
Do EU countries comply with the right to healthcare under the UN Convention on the Rights of the Child?

Cristina Hernandez Quevedo

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Children's health status varies within and between European countries. To what extent this is associated with access barriers to timely and effective care children may face is not yet fully understood. Article 24 of the UN Convention on the Rights of the Child (UNCRC) guarantees a fundamental right to healthcare for all children, regardless of their legal status in terms of citizenship, residence, or insurance. Using information contained in the Health Systems in Transition reports produced by the European Observatory on Health Systems and Policies, additional relevant literature, and responses to a structured questionnaire filled out by key informants from all 27 EU MS and the United Kingdom, we evaluated whether European countries comply with the specific obligations that can be drawn from the UNCRC. While all countries considered have ratified the UNCRC, only four countries have included a specific disposition in their legislation that establishes an unconditional, universal right to health services for all children living in their territory. In other countries, the fragmented way of defining children's access rights can create gaps in legislation which can leave certain groups of children without coverage. Children with irregular residence are the most vulnerable group when it comes to eligibility problems, but other groups of children may also fall between the cracks or be only entitled to restrict-ed or conditional access to health care. These insights show that international treaties, such as the UNCRC, can help monitor health coverage and ensure that basic human rights to health services are guaranteed in times of crisis, such as the Covid-19 pandemic and the Ukraine Displacement, but may be insufficient without concrete transposition into national legislative frameworks.

Abstract citation ID: ckac129.332
Bottlenecks to child health service delivery – how can Health System Performance Assessment help?

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Health System Performance Assessment (HSPA) is an established tool that can help identify issues with the way health systems work to achieve their intended goals, improve transparency and account-ability, and provide stimulus for reform. However, HSPA frameworks tend to be adult-centric and therefore not generally sensitive to child health challenges. Using a new HSPA framework for Universal Health Coverage, we show how child health tracer conditions can be used to pinpoint system under-performance and flag major bottlenecks impeding service delivery overall. Based on the HSPA framework, health system bottlenecks can be traced backwards to explore possible origins (areas to be targeted for improvement) or forwards to understand potential implications for the achievement of health system goals. The following qualitative and quantitative data are used to highlight major bottlenecks to child health service delivery: eight health system-focused child health assessments which show that one of the main bottlenecks is weak primary care coverage of sexual, reproductive, maternal, newborn, child, and adolescent health services, leading to parents bypassing PHC in favour of hospitals; results from WHO missions (e.g. in Romania and Tajikistan) showing that paediatric patients were often admitted to hospitals for treatment, even for conditions that could be safely managed in the outpatient setting; quantitative data on responsiveness, user experience, client satisfaction and people-centredness from publicly available datasets and national datasets obtained in collaboration with WHO Country Offices for national level data, to contextualize the aforementioned findings.

Abstract citation ID: ckac129.333
What can we learn from the effects of the COVID-19 pandemic on hospital care for children in Germany?

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The COVID-19 pandemic created substantial disruptions in the delivery of health services around the world. Reductions in hospital admissions have been reported for several conditions in the adult population; less evidence currently exists for children. To what extent such changes reflect a risk for patients due to unmet care needs, or a ‘‘correction’’ of previous overprovision of care has not been thoroughly examined yet. Based on complete national hospital discharge data, we compare the top 30 diagnoses for which children were hospitalised in 2019, 2020 and 2021 in Germany. We also analyse the development of monthly admissions between January 2019 and December 2021 for three tracers of variable urgency and severity. Total admissions were approximately 20% lower in 2020 and 2021 compared to 2019. The composition of the most frequent diagnoses did not change dramatically across years, although changes in rank were observed. The number of admissions for acute lymphoblastic leukaemia (tracer 1) showed a slight increasing trend and a periodicity prima vista unrelated to pandemic factors. Appendicitis admissions (tracer 2) decreased by about 9% in 2020 and a further 8% in 2021, while tonsillectomies/adenoidectomies (tracer 3) decreased by more than 40% in 2020 and a further 30% in 2021; for these tracers, monthly changes are in line with pandemic waves. Observed variations in child hospitalisations reflect the effects of pandemic mitigation measures and/or changes in demand. In Germany, inpatient care for critical conditions appears to have been largely upheld, potentially at the expense of elective treatments. Complementary data on ambulatory care and health outcomes would enable a better understanding of change in healthcare patterns and effects on children’s health.

5.O. Workshop: Psychosocial impact and healthcare utilization after terrorist attacks

Abstract citation ID: ckac129.334

Organised by: EUPHA-PMH
Chair persons: Johan Bilsen (EUPHA-PMH), Jutta Lindert (EUPHA-PMH)
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Terrorist attacks can be regarded as a major public health issue, confronting not only political leaders with adequate answers to these threats, but also the public healthcare, and especially the public mental healthcare. The impact of terrorist attacks is mostly severe, widespread, affecting those directly exposed and their close ones, but also first responders, healthcare workers, local communities and even the society at large. While the directly involved are often confronted with severe physical and acute, often transient, traumatic stress symptoms, longitudinal studies increasingly show that a much larger group is affected by persistent mental health problems, such as posttraumatic stress disorders, depression, or a general undermining of their mental and physical wellbeing, sometimes seriously impairing their personal and social functioning. These problems may differ by severity of exposure and individual risk factors, but are also related to access to timely, appropriate and effective healthcare and psychosocial support. The mostly unpredictability of these threatening events, the urgency of response, and the often-chaotic circumstances are challenging factors to identify the most vulnerable people that need psychosocial care, and to organize optimal care. It also impedes the assessment of the efficiency of implemented psychosocial care. However, systematic planning and evaluating psychosocial care based on scientific evidence on the best practices is important to efficiently respond to and recover from mass casualty incidents such as terrorist attacks. Until now, scientific knowledge about the current state of utilization of healthcare by the affected population, and about the best practices taking into account specificity of certain vulnerable subgroups is still very scarce. In this workshop four speakers from different countries will present their research findings about the psychosocial impact of terrorist attacks, the way how this is addressed by society and the actual healthcare utilization of the affected people. Recommendations regarding a more adequate response are proposed. Roel Van Overmeire will talk about the long-term psychosocial care response by the Belgium government, from both the level of the policy, as well as from the perspective of victims. Lise Stene will present a register-based study of survivors’utilization of primary care and mental health services before and after the Utoya attack in Norway. Yvon Motreff will inform us about the psychological impact on first responders and their engagement in mental health care after the 2015 terrorist attacks in France. Finally, Ulrich Wesemann will further focus on mental healthcare provided to emergency responders after the Berlin terrorist attack in 2016 in Germany, and will specifically examine the outcome of crisis intervention in relation to gender and occupational characteristics.

Key messages:

- Public mental health impact of terrorist attacks is substantial and needs an adequate and differentiated psychosocial care response.
- Research on healthcare utilization after terrorist attacks is needed to strengthen public health preparedness.

Abstract citation ID: ckac129.335
Long-term psychosocial response in Belgium after the 22/03/2016 terrorist attacks

Roel Van Overmeire

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Introduction:

While many studies have shown how terrorist attacks can have a mental health impact, there currently is little insight into how governments try to aid victims of terrorist attacks. In this study we viewed the long-term governmental psychosocial care response after the attacks of 22/03/2016 in Belgium, from both the level of the policy, as well as from the perspective of victims.

Methods:

This study employed a qualitative design. First, we studied guidelines, reports, policy documents and other relevant grey literature concerning the governmental psychosocial care response to the terrorist attacks. Second, we interviewed 27 victims of the terrorist attacks on their experiences with terrorist attacks for the micro level. We analyzed these interviews using a reflexive thematic analysis.

Results:

On the policy level, a problem occurred in the transfer from responsibilities from the federal level to the community's level. Furthermore, there was no proper psychotraumatology network of therapists, which did not allow for the proper therapy to be easily sought by victims. This was noticed also by the victims, who had issues finding a therapist that fitted their needs and could help with their trauma-related disorders. Furthermore, on both policy level and victim level, a reoccurring problem is the lack of recognition and knowledge of the mental health issues occurring after disasters such as terrorist attacks.

Conclusions:

The Belgian long-term psychosocial care response to the terrorist attacks of 22/03/2016 was not well organized and left some victims without proper aid. To improve the psychosocial response after terrorist attacks in the long-term, a combination of both more knowledge and recognition is needed.

Abstract citation ID: ckac129.336
Changes in healthcare utilization after mass trauma: A register-based study of young survivors' utilization of primary care and mental health services before and after the Utøya attack in Norway

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Introduction:

Using register-based data, this study had a unique possibility to investigate how young survivors' use of primary care and mental health services (MHS) changed after a terrorist attack.

Methods:

We analyzed data on consultations with primary care physicians (PCP) and MHS among 255 survivors (48% female) of the 2011 Utøya youth camp attack in Norway three years before and after the attack, and their reason for encounter with the PCP according to the International Classification for Primary Care (ICPC-2).

Results:

The majority of survivors consulted PCP both before and after the attack, with a marked increase in psychological reasons for encounter after the attack. Few consulted MHS before the attack, while most survivors did after the attack. In total, 93% of female survivors and 88% of male survivors consulted PCP in the three years before the attack, compared to respectively 98% and 96% in the three years after the attack. Moreover, 17% of female survivors and 11% of male survivors consulted MHS in the 3 years before the attack, compared to respectively 80% and 65% in the 3 years after the attack. From the year before to the year after the attack, the mean yearly consultation rates (CR) increased two-fold for PCP and nearly 8-fold for MHS in female survivors, and more than two-fold for PCP and nearly 12-fold for MHS in male survivors. Both before and after the attack, the consultations rates for PCP and MHS were higher for female than male survivors. The levels of posttraumatic stress, depression and anxiety symptoms and somatic symptoms were also higher in female survivors both early and at long-term after the attack.

Conclusions:

Our study demonstrated that both PCP and MHS played important roles in providing healthcare for psychological problems in young survivors of terrorism in Norway. Potential implications for public health preparedness to mass trauma will be discussed in the presentation.

Abstract citation ID: ckac129.337
Mental health impact and mental health care among first responders following the Paris terror attacks in November 2015

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Introduction:

During the evening of 13 November 2015, a terror attack occurred in France in the Paris area. Overall, 130 people were killed, 643 were injured and several thousands were psychologically impacted. Thousands of first responders (FRs), including health professionals, firefighters, affiliated volunteers and police officers were mobilized that night and during the subsequent weeks. The aims of our study were to measure the psychological impact on FRs, and its associated factors 12 months after the 13 November 2015 terrorist attacks, as well as their engagement in mental health care and its associated factors.

Methods:

FRs who had intervened during the night and/or the aftermath of the terror attacks had the possibility of answering a web-based study 8-12 months after the attacks. They satisfied criterion A of the DSM 5 definition of Post Traumatic Stress Disorder (PTSD). PTSD and partial PTSD were measured using the PTSD checklist for DSM-5 (PCL-5) and depression with the hospital anxiety and depression (HAD) scale.

Results:

Overall, 663 FRs were included in the analysis. Prevalence of PTSD in our sample went from 3.4% among firefighters to 9.5% among police officers. Low educational level, social isolation, intervention on unsecured crime scenes and lack of training were associated with PTSD. Among FRs with PTSD, partial PTSD or depression, 38% sought mental health care. Mental health care engagement was associated with a history of mental health care, post-immediate support and the presence of PTSD, partial PTSD or depression.

Conclusions:

Our results highlight that improving access to mental health care for FRs after terror attacks is needed. Efforts should be made before and after potentially traumatic events to ensure mental health education for FRs. Special attention should be given to FRs living in social isolation, those with low educational levels and those who intervene in unsecured crime scenes.

Abstract citation ID: ckac129.338
Gender and occupational differences in post-terrorist mental health outcomes among emergency responders with and without crisis intervention

Ulrich Wesemann

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Introduction:

After the Berlin terrorist attack at Breitscheidplatz, the gender-specific evaluation of emergency responders (ER) revealed higher perceived levels of paranoid ideation among females. The occupation-specific evaluation revealed higher hostility among police officers and a lower quality of life among firefighters. The aim of this study was to examine the outcome of crisis intervention (CI) provided for ER deployed to this terrorist attack.

Methods:

In total, N = 55 ER were included (n = 37 with and n = 18 w/o CI). Stress, quality of life, post-traumatic stress disorder, and current psychological stress were assessed 4 months after the attack.

Results:

ER with and w/o CI were compared. Participants with CI showed lower quality of life in psychological health ($t(53) = 2.01$, $p = .050$) and higher depressive symptomatology ($t(44) = 2.51$, $p = .016$). Females with CI showed lower quality of life in social relationships ($t(12) = 2.46$, $p = .030$), whereas males showed more posttraumatic stress symptoms ($t(39) = .32$, $p = .026$). Emergency responders from NGOs with CI had higher phobic anxiety ($t(9.2) = 2.72$, $p = .023$). Emergency medical technicians with CI showed more somatic ($t(7.5) = 2.52$, $p = .037$) and depressive ($t(8) = 2.30$, $p = .050$) symptoms.

Conclusions:

This study provides evidence for differences in the mental health burden for ER with and w/o CI, in general and for subgroups of gender and occupation. There is no conclusive explanation for why ER with CI score worse on certain measures. It is possible that CI had a harmful influence due to the reinforcement of negative emotions in some parts of measures like the Critical Incident Stress Debriefing (CISD). While it is known that ERs are vulnerable to develop mental problems, and appropriate and timely help is recommended, it is important to critical evaluate the methods used and to take also into account the identified gender and occupational differences. Further research is needed to better understand the interaction of risk factors.

5.P. Oral presentations: Health promotion policies

Abstract citation ID: ckac129.339
Comparative Effectiveness in terms of Understanding of Nutri-Score and NutrInform in Spain

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Background:

Interpretive Front-of-Pack Labels (FoPLs) are supported by WHO as a key policy tool to promote healthy diets. At present, various FoPLs formats co-exist in the European Union (EU). However, as part of the Farm to Fork strategy, the European Commission stated it would adopt a single mandatory FoPL in 2022. The aim of this study was to analyze Spanish consumers reactions to Nutri-Score and NutrInform, two FoPLs that are currently the subject of debate in EU, testing preference through subjective understanding and perception but also performance through objective understanding of the FoPLs.

Methods:

The experimental study was conducted in 2021 on a representative sample of 1026 Spanish adults (50% women, mean age±SD = 46±14 years), through an online randomized questionnaire where participants were exposed to Nutri-Score or NutrInform. Performance of and preference for these two FoPLs were assessed in three food categories (Breakfast Products, Breakfast Cereals and Added Fats). Performance was tested using multivariate logistic regression while preference using principal component analysis and t-tests.

Results:

In terms of objective understanding, Nutri-Score was significantly associated with an increase in consumers' ability to identify healthier food products across all food categories compared to NutrInform (OR = 19.1 [14.2-25.7], $p < 0.0001$). On the preference dimension, Nutri-Score was perceived as significantly easier to use and was more liked than NutrInform (standardized PCA dimension resp. 0.32±1.58 vs. -0.29±1.66, $p < 0.0001$ and 0.080±1.18 vs. -0.072±1.17, $p = 0.039$) and participants found Nutri-Score more helpful to discriminate the nutritional quality of Breakfast Products and Breakfast Cereals (resp. 1.32±1.00 vs. 1.14±1.02, $p < 0.01$ and 1.33±1.00 vs. 1.00±1.03, $p < 0.0001$).

Conclusions:

Results of this study provide new evidence to support Nutri-Score in comparison with the NutrInform battery, on both performance and preference aspects.

Key messages:

- Nutri-Score better helps participants identify healthier food products than NutrInform.
- European Commission should consider results of this study in its decision on a harmonized Front-of-Pack Label.

Abstract citation ID: ckac129.340
Impact of Sugar-Sweetened Beverage Taxation Scenarios in Germany: A Comparative Modelling Study

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Objectives:

Taxing sugar-sweetened beverages (SSBs) is recommended to reduce the burden of obesity, cardiovascular disease (CVD) and type 2 diabetes (T2DM). The objective of this study was to quantify the potential long-term health and economic impact of different SSBs taxation scenarios in Germany using simulation models with different granularity.

Methods:

We used a multi-state life table Markov cohort (MSLT) and a microsimulation (IMPACT) model to simulate the impact of different SSB taxation assumptions and scenarios on CVD and T2DM in the German population aged 20 years and older over 20 years. Data sources included official population counts, anthropometric and dietary intake data from national surveys and published meta-analyses. Change in beverage consumption by sex and age under different taxation scenarios was estimated using de-novo national price elasticities and changes in body weight were based on an energy equilibrium model. We projected incremental disability-adjusted life years (DALYs) and healthcare costs, comparing results between both models.

Results:

Preliminary results from the MSLT model show that a 20% SSB excise tax in Germany could lead to moderate body weight reductions across all age-sex groups. Over 20 years, the tax would reduce healthcare costs by €753 million [95% CI: 527; 1,021] and save 24,380 DALYs [18,460; 33,900] from T2DM alone. Health and economic gains largely depend on the relevance of substitution effects, tax amount and taxed beverage categories. Results including CVD and comparisons with the IMPACT model are work-in-progress.

Conclusions:

We show that SSBs taxation in Germany has the potential to reduce healthcare costs and improve population health. The impact of any SSB tax depends on its implementation scenario, which behavioural assumptions hold, and the obesity-related disease outcomes considered for its evaluation. Further research should compare various obesity prevention approaches to support health policy priority setting.

Key messages:

- Taxation of sugar-sweetened beverages can reduce healthcare costs and improve population health in Germany.
- The estimated health and economic impact of sugar-sweetened beverage taxation critically depends on tax design and behavioural modelling assumptions.

Abstract citation ID: ckac129.341
How much of the unemployment effect on mental health is due to income? Mediation analysis in UK data

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Background:

Employment and income are important determinants of mental health (MH), but the extent to which unemployment effects are mediated by reduced income is unclear. We estimated the total effect (TE) of unemployment on MH and the controlled direct effect (CDE) not acting via income.

Methods:

We studied adults 25-64y from nine waves of the representative UK Household Longitudinal Study (n = 45,497/ obs = 202,297). Unemployment was defined as not being in paid employment; common mental disorder (CMD) was defined as a General Health Questionnaire-12 score $\geq$4. We conducted causal mediation analysis using inverse probability of treatment weights to estimate odds ratios (OR) and absolute differences for the effects of unemployment on CMD as measured in the same sweep, before (TE) and after (CDE) blocking the income pathway. The percentage mediated by income was 100*(TE-CDE)/TE, with standard errors calculated via bootstrapping. Multiple imputation addressed missingness.

Results:

The TE of unemployment on short-term CMD risk was OR: 1.66 (95% CI 1.57-1.76), with 7.09% (6.21-7.97) absolute difference in prevalence; equivalent CDEs were OR 1.55 (1.46-1.66) and 6.08% (5.13-7.03). Income mediated 14.22% (8.04-20.40) of the TE. Percentage mediation was higher for job losses (15.10% [6.81-23.39]) than job gains (8.77% [0.36-17.19]). Mediation by income was lowest for those aged 25-40y (7.99% [-2.57, 18.51]) and those in poverty (2.63% [-2.22, 7.49]).

Conclusions:

In the UK, a high proportion of the short-term effect of unemployment on MH is not explained by income, particularly for those who are younger or already living in poverty. Population attributable fractions suggested 16.5% of CMD burden was due to unemployment, with 13.9% directly attributable to job loss rather than resultant income changes. Further research is needed across different European countries to determine how different welfare regimes might moderate these effects, and to investigate longer-term effects.

Key messages:

- Unemployment has a clear detrimental effect on MH in the short-term.
- Only a small proportion of this effect appears to be mediated by income.

Abstract citation ID: ckac129.342
Do regional characteristics predict developmental delay? Analyses of German school entry examination

Stephanie Hoffmann

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Background:

Children's health and development are strongly linked to their living situation, including their family's socioeconomic position (SEP) and living region. However, research on the impact of the living region on children's development beyond family SEP is scarce. This study evaluated whether rurality and regional socioeconomic deprivation (DEP) are associated with children's development independently of family SEP.

Methods:

The study used population-based data of 5-6.5 years old children (n = 22,801) from mandatory school entry examinations (SEE) in the German federal state of Brandenburg, which were examined in 2018/2019. The SEE data have been linked with data on i. rurality that was defined by an inverted population density and ii. regional DEP that were provided by the German Index of Socioeconomic Deprivation. By binary multilevel models, the predictive values of rurality and regional DEP for global developmental delay (GDD) were evaluated, while adjusting for family SEP.

Results:

Children with high family SEP showed reduced odds for GDD compared to medium family SEP (female: OR = 4.26, CI95 = 3.14-5.79, male: OR = 3.46, CI95 = 2.83-4.22) and low family SEP (female: OR = 16.58, CI95 = 11.90-23.09, male: OR = 12.79, CI95 = 10.13-16.16). Regional DEP additionally predicted GDD, with higher odds for children from more deprived regions (female: OR = 1.35, CI95 = 1.13-1.62, male:

OR = 1.20, CI95 = 1.05-1.39). Rurality did not predict GDD beyond family SEP and regional DEP.

Conclusions:

In addition to family SEP, the regional DEP has an effect on children's developmental delay. Hence, Public Health should take into account regional socioeconomic conditions as determinant of health over the life course in addition to family SEP.

Key messages:

- Regional socioeconomic deprivation contributes to inequalities in children's development and health.
- Besides family SEP, regional socioeconomic circumstances are of particular interest to promote health over the life course.

5.Q. Oral presentations: Measuring the health of our population

Abstract citation ID: ckac129.343

Calculation of Purchasing Power Parities for Pharmaceutical Products via EURIPID database

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Background:

Purchasing power parities (PPPs) are indicators of price level differences for all goods and services across countries. Their calculation follows the ÉKS method (https://ec.europa.eu/eurostat/cache/metadata/en/prc_ppp_esms.htm). Prices of pharmaceuticals are collected by national statistical offices using different methods, from asking prices in pharmacies to retrieving scanner data. The sample is limited to 150 top-selling medicines, which are not available in all countries. Consequently, the PLIs (price level indices) and PPPs derived are sometimes based on only 50 pharmaceuticals. In a cooperation between Eurostat and EURIPID the PPP calculation was alternatively done with the EURIPID database for 28 countries.

Methods:

The study compared the PLIs/PPPs derived from the E20-2 ''Furniture and health'' survey (aka CGS) with those from EURIPID for 2018-2020. The main challenge was to identify comparable products from the 224,448 products in EURIPID. For this we grouped those that shared the same 1) ATC, 2) active substance(s) & strength(s), 3) pack size group and 4) dosage form group (e.g., oromucosal) resulting in 157,186 distinctive products compared to 1,928 included in CGS. We used the Gross Retail price (GRP) as defined in the Eurostat PPP manual.

Results:

The ranking of PPPs was similar in both approaches, with Switzerland and Iceland in the lead and Poland and Hungary in the end. Only for some countries, e.g. the Netherlands deviations were identified. The Pearson correlation between the 2020 PLI for the Euripid subsample using the asterisk method with all products marked as representative and the CGS results was 0,946.

Conclusions:

Results from EURIPID show the same trend as the CGS. It is possible to replace the national data collection by a central source. This would reduce the data collection burden on the statistical offices and allows a closer monitoring of the evolution of pharmaceutical prices (bi-annual PPP publication instead of current 3-year interval)

Key messages:

- To monitor affordability of medicines for all citizens it is important to compare prices on a regular basis with a simple tool as e.g. some products prices differed by 1000-times across countries.
- The EURIPID database (www.euripid.eu) allows detailed analysis of pharmaceutical prices in Europe and is available for free to non-commerical researchers.

Abstract citation ID: ckac129.344

A novel plot for the early alert of epidemic growth using regional targets: the doubling plot

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Background:

During the pandemic, restrictions set by the Italian Government were primarily based on the regional level of key parameters including hospitalization and incidence rates. We aimed to build a specific plot to monitor trends and trigger early alerts, with daily updates publicly available on a National Portal.

Methods:

A multidisciplinary team conceived and implemented a new composite plot, developing ad hoc R scripts on top of a specialised database, built in collaboration with the Ministry of Health. We calculated the doubling time Td as log(2)/log(1+r/100), where r is the daily change of target parameters and Td ranges between (0,+-infinity), and not determined for constant or missing values. We calculated Td daily, as either doubling (growth) or halving (decrease) time. To visualize trends, we assembled two different types of graphs: a bivariate plot showing the path of each point (Td, target parameter) over time, and a line plot of Td over time. The Y axis was inverted for doubling times, as lower Td indicate higher alert in this case. The two graphs were arranged in lines, using cutoffs for excessive high values for doubling times and low values for halving times. A third line was included to display trends of the target parameter over time.

Results:

The plot was successfully realized and published on the Portal for all regions in February 2021 (https://www.agenas.gov.it/covid19/web/index.php?r = english%2Fdoubling&q = ITA&t = 0). Since July 2021, we used the doubling plot to monitor the three main parameters adopted to set restrictions for Covid-19: a) occupancy rates in intensive care; b) occupancy rates in medical wards; c) weekly incidence rates. The plot highlighted growth trends and early alerts, particularly in the initial phases of growth.

Conclusions:
The doubling plot can provide useful information to trigger early responses for pandemic control in decentralised governance. R code is available open source from AGENAS for free use.

Key messages:

- The doubling plot was conceived and implemented on a National Portal to trigger early alerts of Covid-19 progression in Italian Regions and Autonomous Provinces.
- The plot could be rapidly adapted to legislative parameters and can be useful in different situations to monitor epidemic growth and support public health policies.

Abstract citation ID: ckac129.345
Network analysis of a COVID-19 outbreak in the west of Ireland in February 2021

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Notification and contact tracing systems of COVID-19 hold a vast amount of information on transmission chains of the virus. It can be hard to gain an understanding of these due to the number of individuals involved. Network analysis can be used as a method of visualising these systems, gaining understanding of transmission chains and as a potential tool for monitoring outbreaks. It can link cases together and show how far reaching initial infections were. Here, a system developed in the programming language R links the Irish infectious disease notification system and contact tracing system together and creates a network representation of the result. The system finds any cases or close contacts linked in any manner to the known cases. The result is a network from the earliest found case to the latest found case or contact related to the outbreak. A large outbreak of COVID-19 occurred in the student population in the West of Ireland in February 2021 with 449 cases linked to it by the Department of Public Health at the time. Using the system, 192 further positive cases were found to be linked to the outbreak. A total of 1,431 individuals were linked in some manner to it with 68% in the 19-24 age group and less than 1% in the 65+ age group. This takes a matter of seconds to run and highlights clusters within the outbreak, the largest of which had 96 cases and 121 not detected close contacts. Visualising the transmission chains also showed that there were no other large clusters outside of the outbreak at the time. A system such as this can link cases to outbreaks not previously linked, dramatically reduce the time taken to link cases together and visualise transmission chains to gain a deeper understanding of what is happening. This automated system frees up resources to allow for deeper investigation into cases and situations of concern. It also has the potential to link outbreaks together and spot previously unnoticed situations of concern.

Key messages:

- Network analysis is beneficial for the monitoring of the spread of an infectious disease like COVID-19.
- Here, 192 cases were found to be linked to an outbreak that was thought to have 449 cases in it.

Abstract citation ID: ckac129.346
Measuring Health Insurance Literacy in the Netherlands – first results of the HILM-NL questionnaire

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Background:
Many Western countries have healthcare systems that expect their citizens to make critical, well-considered decisions about which health insurance policy best fits their needs and preferences. There are indications that citizens struggle to fulfil this role due to the complexity of the healthcare systems and lack of skills, support or motivation. This can lead to citizens being sub-optimally insured, suffering inadequate coverage and facing unexpected costs. To understand how citizens choose and use a policy, the health insurance literacy measure (HILM) was developed in the US. It seems valuable to investigate the concept of Health Insurance Literacy (HIL) in other countries. This study aims to examine how HIL is distributed among citizens in the Netherlands; and to find out whether certain groups have more difficulty choosing and using a health insurance policy.

Methods:
We measured HIL using the HILM-NL questionnaire, a validated and translated version of the HILM. In February 2020, the HILM-NL was sent to 1,500 members of the Nivel Dutch Health Care Consumer Panel. The response rate was 54% (n = 806). Higher HILM-NL scores imply a higher self-assessed ability in choosing and using health insurance.

Results:
There is a wide variation in HIL among citizens in the Netherlands. The average total HILM-NL score is 55.14 (ranging from 21-84). Lower-educated citizens ($p<.04$) and citizens with lower income ($p<.01$) are relatively more likely to have lower HIL, than, respectively, higher-educated citizens and citizens with higher income.

Conclusions:
Citizens who completed less education or earn a lower income are relatively more likely to have difficulty choosing and using a health insurance policy. It is important to support these vulnerable groups, so that Dutch citizens in general will be better able to choose a policy that fits their needs and preferences. This should ensure that citizens are less likely have to deal with inadequate coverage and unexpected costs.

Key messages:

- There is a wide variation in HIL among citizens in the Netherlands.
- Citizens who completed less education or earn a lower income are relatively more likely to have difficulty choosing and using a health insurance policy.

6.A. Workshop: Strategies to build up health system resilience: Legacy of the COVID-19 pandemic

Abstract citation ID: ckac129.347

Organised by: Finnish Institute for Health and Welfare, Tampere University, Trinity College Dublin, University of Copenhagen, EUPHA-HSR
Chair persons: Ilmo Keskimäki (Finland), Johan Hansen (EUPHA-HSR)
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Health systems are the central part of infrastructure in societies and their smooth operation is important for the continuation of a wide range of critical operations in any country. The COVID-19 pandemic has actualised questions on health system resilience defined as the system's ability to prepare for, manage (absorb, adapt and transform) and learn from external shocks.. However, economic recessions as well as long- and short-term stresses related to aging, climate change and migration, and most recently a war have underlined that also in Europe the governments need to prepare their health systems to face different types of threats in order to guarantee effective protection to population health in their countries. The importance of the task to strengthen health system resilience has been comprehended at national and international level. International actors including WHO, OECD and World Bank have designed policy advice on strengthening health systems against external shocks, the European Union has launched programmes for preparing for future health emergencies, and individual countries are designing policy and system reforms allowing for health crises. In the workshop we address policies to strengthen health system resilience drawing on the experiences in three countries: Ireland which entered the COVID-19 pandemic with a legacy of the recent economic crisis hitting hard health care financing, Finland which has been implementing a major health care reform concomitantly with the pandemic, and Denmark which offers a case study on organisational learning from the pandemic within the hospital sector and chronic patient care. Based on these three case studies the workshop also contemplates whether learning from shocks is always helpful in terms of system transformation or whether they can also create path dependencies that weaken the systems' ability to prepare for unknown threats. The workshop will broaden the view by discussing the trends of health system reforms in European countries and considering international advice on system and policy reforms to strengthen health system resilience.

Key messages:

- Shocks create opportunities for reform and better performance and challenges through overloaded systems and fast decision-making.
- Assuming all shocks are like the last weakens preparedness and adaptability.

Abstract citation ID: ckac129.348
Strategies for developing preparedness and building legacy – learning from the experience of building Health System Resilience in Ireland

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Health system resilience to shocks is perhaps the biggest global challenge facing health systems in the 21st Century. Health systems face an increasing prevalence and likelihood of a broad range of shocks (including economic crises, pandemics, climate-related events, political upheavals, mass migration, conflicts and cyberterrorism) that can each undermine the ability of a health system to function well. In particular, the twin processes of dealing with the legacy of a health system shock and preparing for the next shock are distinct but related challenges that face policy makers today. In this presentation the authors will present key findings on improving preparedness and building a constructive legacy drawing from:

- the results of a recent systematic review on how health system resilience has been measured in high income countries over the last twenty years;
- the results of a recent realist review exploring the legacy of the economic crisis for the resilience of the response of the health system to COVID-19, and
- analysis of interviews with Irish policy makers, managers and analysts as they reflect on the different shocks encountered by the Irish system over the last fourteen years.

Triangulating these findings, the authors will reflect on the merits and challenges of measuring resilience and what the focus should be moving forward. Key strategies and approaches will be outlined to best prepare a system for a shock and to leave a positive legacy for the future.

Abstract citation ID: ckac129.349
Lessons and long-term implications of the covid-19 response in Denmark from a resilience perspective

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The paper focuses on crisis responses and resilience within hospitals. The study is based on structured expert interviews with medical directors in selected hospital departments in two of the five regions of Denmark and primary care physicians in the same regions. We investigate stage 3 (Shock impact and management) and stage 4 (Recovery and learning) within hospital organizations using Denmark as case country, and we pay particular attention to issues of ''organisational learning'', ''purchasing flexibility and reallocation of funding'', ''distribution of human and physical resources'' and ''motivated and well-supported workforce''. Particular attention is paid to care for patients with chronic care needs and lessons for the long-term resilience building in the health system. The study highlights strategic choices and lessons for the long-term resilience within hospitals. It demonstrates, how the initial strategy of organizing specific COVID-19 response units was abandoned relatively early, as it appeared more efficient to integrate COVID-19 patients in the regular specialized department structure. Emergency wards experienced increasing pressure during the pandemic as primary care clinics were referring (too) many patients suspected of COVID-19. This raises questions about capacity and relations between primary and specialized care in crisis situations. Management of human resources is crucial. While the initial phases of the pandemic response were characterized by flexibility and ''team-spirit'', there has been a negative long-term impact particularly among the nursing staff, where burnouts and attrition are major issues. Pandemic crises place significant strain on health systems and personnel. This raises issues about communication of strategies and principles for organizing efforts. The Danish health system managed the crisis adequately, but there are also lessons that should be learned regarding long-term implications and preparedness for future crises.

Abstract citation ID: ckac129.350
From COVID-19 to Health System Reform: Qualitative Insights on Resilience and Lessons Learned from Finland

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The pressure of COVID-19 on health system functioning has made policies to strengthen health system resilience a major theme of research. Accordingly, crises like COVID-19 can be seen as windows of opportunity for health system reforms to enhance health system resilience. In Finland, COVID-19 arrived on the eve of a major health system reform. In 2023 running health and social services will be transferred from 309 municipalities to 22 counties. While the reform was framed before the pandemic, we explore how lessons from COVID-19 matter for the future reform. Our results come from interviews of 53 top managers and civil servants in the year one of COVID-19, representing municipalities, municipal healthcare authorities and state agencies. The results offer a lookout to how national and local healthcare leaders view pandemic responses in connection to the future reform. Finland fared well in the pandemic compared to many countries e.g. in terms of excess deaths. However, our results reveal a tension between major issues in managing COVID-19 and implementing the reform. While the data suggest that dealing with a prolonged crisis proved challenging due to lack of trust, communication, and transparency between national and subnational actors in the health system, the dominant lessons learned and needs for reform among the interviewees build upon obvious fixes, such as ensuring supply of PPEs and ICU beds for the next pandemic. While being important in preparedness, these can build a legacy not tackling the root causes of lacking resilience and can be inconsistent with reform goals. The pandemic provides an opportunity to analyse the reformed system from a new viewpoint and may reveal weaknesses not considered in reform planning. Reforms can impact health system resilience in positive and negative ways. While different shocks may open new avenues for system transformation, they can also create path dependencies weakening the systems' ability to prepare for unknown threats.

6.B. Round table: Insights from COVID-19: Preparing for and responding to the next health emergency

Abstract citation ID: ckac129.351

Organised by: Institute for Health Metrics and Evaluation, Division of Country health Policies and Systems, WHO Europe
Chair persons: Maja Pasovic (USA), Elizabeth Serieux (USA)
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The COVID-19 pandemic has stretched national health care systems to its limits, underscoring the importance of advance planning for health emergencies and the role of health data and evidence for informed policy interventions and actionable strategies. The experience with the pandemic has demonstrated the constraints of existing health information systems and the negative impacts that the lack of actionable and timely data can have on the implementation of rapid response measures during emergencies. This workshop aims to assist participants to become better prepared to deal with future health threats, such as pandemics, by exploring the role of trust in pandemic preparedness and response, effective communication strategies during a pandemic, and the use of qualitative research for evaluation of pandemic response. The specific objectives are to share and discuss: (a) results and conclusions derived from an online qualitative survey of experiences and lessons learned by member states across the WHO European Region; b) results and conclusions derived from an IHME study exploring the factors that contribute to / predict pandemic preparedness, and (c) lessons learned in the process of developing and disseminating scientifically valid, timely evidence across the globe, to assist policymaking during a pandemic. Together, these topics present and explore what countries and populations can do to effectively mitigate the negative effects of a pandemic or other health emergencies. These strategies and lessons learned include building trust, communicating clearly and succinctly, and using qualitative methods and data to evaluate pandemic response. Collectively, these are all geared at improving the capacity to address such threats and unexpected emergencies in the future. The panelists will also reflect on successful tools and strategies developed to aid policymakers and country governments in their response to the COVID-19 emergency. The workshop will be in the form of a 60-minute round table discussion with three panelists. Each panelist will make a brief presentation on their specific area of research, followed by a discussion between the panel members and audience.

Key messages:

- Trust, transparent communication, and reliable and timely data are critical aspects of both pandemic preparedness and response.
- The importance of qualitative evaluation for exploring what worked during the pandemic and what innovations should become part of an enhanced health information system in the future is essential.

Speakers/Panellists:
Maja Pasovic
Institute for Health Metrics and Evaluation, Seattle, USA

Elizabeth Serieux
Institute of Health Metrics and Evaluation, Seattle, USA

David Novillo-Ortiz
WHO Regional Office for Europe, Copenhagen, Denmark

6.C. The revised EU health security framework

Abstract citation ID: ckac129.352
Organised by: DG SANTE and ECDC
Chair persons: Isabel de la Mata (European Commission - DG Sante)
Contact: David.GORRIA-CARDESA@ec.europa.eu

As a response to the pandemic, the Commission's communication of 11 November 2020 proposed building blocks for a European Health Union (EHU) and advocated the strengthening of existing structures and mechanisms for better EU level protection, prevention, preparedness and response against human health hazards. It recommended a reinforced framework for cross-border cooperation against all health threats to protect better human lives and the internal market as well as to maintain the highest standards in the protection of human rights and civil liberties, and a strengthened EU role in international cooperation to prevent and control cross-border health threats and improve global health security. By upgrading the EU health security framework for cross-border health threats, the building blocks of the European Health Union bring greater overall impact while fully respecting the Member States' competence in the area of health. Concretely, before the end of 2022, two pieces of legislation will have been adopted: the upgrading of Decision 1082/2013/EU and the strengthened mandate of the European Centre for Disease Prevention and Control (ECDC) and the European Medicines Agency (EMA) that go hand in hand. The new Regulation on serious cross-border threats to health, the overarching legislative piece of the EU Health Union Package, aims at a stronger and more comprehensive legal framework for the Union to better prepare and respond to serious cross-border threats to health and public health emergencies. It better governs actions at Member States and Union level on prevention, preparedness and response, surveillance, risk assessment, and early warning. Further, it ensures better arrangements for joint procurement at EU level. With its revised mandate, the ECDC will be able to issue recommendations to Member States regarding preparedness and response, host a new network of EU reference laboratories and establish an EU Health Task Force for crisis preparedness and rapid public health interventions in case of a major outbreak. The regulation reinforcing EMA's role in crisis preparedness and management of medicinal products and medical devices puts some of the structures and processes established during the COVID-19 pandemic on a permanent footing. EMA is now responsible for monitoring medicine shortages, as well as reporting shortages of critical medicines during a crisis. It will also coordinate responses of EU / EEA countries to shortages of critical medical devices and in-vitro diagnostics in crises. The EU Health Security Framework will link up to IHR (where EU is requesting to become a contracting party) and the pandemic treaty, and the parallel developments to improve pandemic preparedness and response in G7 and G20 framework (also new global health strategy). The revised legislation addresses the weaknesses evidenced by the COVID-19 pandemic and support actions that can be financed via the EU4Health programme and other EU funding instruments. DG SANTE and ECDC will present the new legislation; two Member States will share their views on the newly adopted legislation. HaDEA will present the funding opportunities through EU4Health to support the implementation of th
e two new legislation.

Speakers/Panellists:
Ingrid Keller
European Commission, Luxembourg, Luxembourg

Florina Telea
European Commission, Brussels, Belgium

6.D. Workshop: Strengthening awareness of obesity in Europe: from knowledge to action

Abstract citation ID: ckac129.353
Organised by: EUPHA-FN, EUPHA-CHR, WHO Europe
Chair persons: Iveta Nagyova (EUPHA), Licia Iacoviello (Italy)
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The obesity rates in Europe are constantly growing with a substantial input from the market towards unhealthy food products, a general carelessness or lack of knowledge of the general population, and a major drive of modern societies towards an obesogenic environment. With about half of European people having weight problems, strengthening the resources across institutions, scientific associations, and governmental bodies is highly warranted to try to counteract this major public health issue, which seems to have played a pejorative role over the last 2 years regarding the health risks related to the COVID-19 pandemic. Emerging evidence provides a more complex and multifaced understanding of obesity that it should be considered a disease far beyond the simple concept of excess of body weight, while characterized by a constellation of related comorbidities connecting chronic conditions. Excess body weight is considered a risk factor for cardio-metabolic diseases and certain cancers, but investigating the issue with a more holistic approach would add to this context also the psychosocial burden and a broader involvement of the immune system and inflammatory processes potentially responsible for most obesity-related chronic diseases. Scientific research is also investigating the role of diet-related nutritional and non-nutritional risk factors that may play a role in obesity and its health consequences, also in the context of European countries and the resulting differences depending on the traditional dietary patterns adopted. Moreover, current studies are exploring how dietary choices impact the environment aiming to a reform and a rethinking of the food systems, of citizen/customer preferences, and ultimately of dietary habits to invert the controversial long-term projections that put at risk the global environmental sustainability. The EUPHA Food and Nutrition Section, the Chronic Diseases Section, in collaboration with the World Health Organization (WHO), aim to propose a joint workshop to promote the current knowledge from the latest research on obesity and related chronic conditions, including an objective and more complex biological and societal examination of this public health problem, with a focus on diet-related risk factors and an analysis of how dietary choices may impact the environment. The workshop will have its focus on the presentation of the new WHO European Regional Obesity

Report accompanied with ground-breaking new research in the field. The experts will aim to provide new perspectives on a well-known public health issue, discussing about current strategies to tackle the obesity pandemic and possible scenarios for the near future.

Key messages:

- Obesity should be considered as a disease, not limited to excess body weight but investigated in a more complex context of comorbidities.
- Current research should also approach the study of obesity with a more holistic approach, including dietary factors and environmental impacts.

Abstract citation ID: ckac129.354
Key messages of the WHO European Regional Obesity Report

Kremlin Wickramasinghek

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Obesity is a complex multifactorial disease defined by excessive adiposity and is linked to an increased risk for many noncommunicable diseases (NCDs). Overweight and obesity affect almost 60% of adults and nearly one in three children in the WHO European Region. Recent estimates suggest that overweight and obesity is the fourth most common risk factor for NCDs in the Region, after high blood pressure, dietary risks and tobacco. It is also the leading risk factor for disability and obesity is linked to greater morbidity and mortality from COVID-19. And obesity is considered a cause of at least 13 different types of cancer including cancers of the breast, colorectum, kidney, liver and ovary, multiple myeloma and meningioma. None of the countries in the Region are on track to achieve the obesity related target set in 2013. Early studies from a number of countries in the Region indicate that the prevalence of overweight and obesity and/or mean body mass index has increased in children and adolescents during the COVID-19 pandemic. This latest WHO European report on obesity examines the growing challenge and impact of obesity in the Region, building on past publications and aligning with initiatives to tackle cancer. The report focuses on managing obesity throughout the life course and tackling obesogenic environments; it also considers more recent challenges, including problematic digital marketing to children and the impact of the COVID-19 pandemic on obesity prevalence. Policy options to prevent obesity are outlined for consideration by Member States together with a suite of population-level approaches. The report highlights the importance of including prevention and control of obesity within measures to build back better in the wake of the COVID-19 pandemic. Whilst highlighting that single intervention will not be sufficient in any country, it examines the challenges faced by countries to implement known interventions to tackle obesity.

Abstract citation ID: ckac129.355
Obesity, body weight stigma and biomedical oversimplification: moving beyond BMI

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Body Mass Index (BMI) is one of the most important factors considered to analyse health status. High BMI scores are usually associated with physical or mental disorders, such as cardiovascular disease, diabetes, inflammation, dyslipidemia and depression. However, obesity is usually characterised by the presence of various comorbidities that should be addressed as part of a unique, more complicated picture. Emerging evidence suggests that a deeper acknowledgment of the complexity of obesity as disease, including its comorbidities, should take place in the near future. Overweight, obesity and related disorders have been associated with direct healthcare-related costs and the indirect costs of productivity loss, mostly due to the presence of comorbidities rather than to body weight in general. The belief that weight loss is the best recommendation for people with high BMI as the only path to health could be questioned. In fact, it would seem that weight loss in some subjects does not necessarily coincide with any health improvement. Thus, the relationship between weight status and health expenditure is complex with particular reference to the fact that costs of disease are higher in high-comorbid profiles independently of weight status. Over the last years, researchers have also studied some conditions, such as metabolically healthy overweight and obesity. Recent studies deal with alternatives to conventional weight-loss approaches that could be more effective in health terms. Conventional methods of weight loss are based on calorie restriction and increased energy expenditure instead of unconventional methods, such as the weight-neutral program, which is based on the crucial concept of ‘‘mindfulness’’ to underline the importance of intuitive eating, self-care, pleasurable exercise and size-acceptance. The health benefits related to such types of approaches include physical, psychological and behavioural improvements.

Abstract citation ID: ckac129.356
Nutritional and non-nutritional dietary factors affecting obesity and chronic related disorders

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There is convincing evidence that diet quality represents one of the most important public health targets to prevent non-communicable diseases. Dietary risks alone have been estimated to be responsible for about 10 million deaths due to cardiovascular diseases, metabolic disorders, and certain cancers worldwide, with trends not expected to decrease. Results from meta-reviews and expert assessments are quite in line with robust key messages to deliver to the general public. From a nutritional point of view, lack of fibre, vitamins and antioxidants, and unsaturated fatty acids together with high content in free added sugars, sodium, and saturated/trans fats represent key features for unhealthy dietary patterns and are responsible for most diet-related non-communicable diseases. While the role of animal-derived foods is still controversial due to the registered excess consumption and the environmental impact, a general low intake of plant-derived foods remains a major detrimental factor for health. The concept of diet quality should thus overcome the over simplistic calorie-count when coming to prevent obesity and related non-communicable diseases, while an adequate communication on this matter to the public is highly warrant. Together with these general dietary recommendations relying on nutritional aspects affecting human health, emerging evidence is now also exploring the role of non-nutritional dietary factors. The level of processing, the alteration of the food matrix, the presence of additives (such as flavor enhancers, colorants, emulsifiers, artificial sweeteners, thickeners, foaming/anti-foaming agents, and preservatives) have been demonstrated to play a role in metabolic health and inflammatory-related disorders. These aspects are currently under investigation, but they might represent an underrated concern for public health due to the food market drive and a perfect fit into the obesogenic modern society.

Abstract citation ID: ckac129.357
New frontiers in risk assessments related to diets, health and the environment

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Based on the sustainable development goals agenda, public health experts should approach the study of planetary diets, environment, and health with a holistic approach that includes both human and planetary health. Modelling studies help in estimating priorities while attaining differences across countries. Future scenarios vary according to priorities to be set. When aiming only at fulfilling food-security objectives, studies suggest that reductions in premature mortality have few environmental co-benefits. In contrast, modelling studies that include environmental goals indicate the potential for reducing environmental impacts while improving diet quality and overall health outcomes, especially in high-income countries. The scenarios indicate that focusing on dietary changes towards healthy and balanced dietary pattern seems an ideal strategy to improve both mortality risk and the environmental impact, although the magnitude of the effects may vary across countries. Weight and dietary risk factors have traditionally been considered separate categories. A new approach can be proposed for attributing weight-related risks to food intake at global, regional, and national levels. When comparing current consumption patterns to diets that for each country minimise diet and weight-related risks, a total of 5 million weight-related deaths in 2019 were attributed to the overconsumption of refined grains, dairy, red and processed meat, sugar, and eggs, and to the underconsumption of oils, and legumes, among others. A large share of deaths attributable to high intake of animal source foods and imbalanced grain intake occurred in countries with the higher high human development index, while more than a third due to imbalanced sugar and oil intake occurred in medium ones. Attributing weight-related risks to food intake can inform food-based interventions for reducing the burden of preventable deaths associated with imbalanced weight levels.

6.E. Skills building seminar: 'Think global, act local'- using the Place Standard tool to support action on climate and health

Abstract citation ID: ckac129.358

Organised by: EUPHA-HIA, EUPHA-ENV
Chair persons: Odile Mekel (EUPHA-HIA), Peter Van Den Hazel (EUPHA-ENV)
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The global determinants of health act on our physical, social, and economic environments or ''places'', which impact on population health, wellbeing and inequalities. Climate change poses an increasing threat to health and equity. So tackling the consequences of the climate emergency is one of the most serious issues facing our places and it will lead to a transformation of people's lives. Good place-making is essential for designing a robust response to the climate emergency at a local level, such as taking local action to cut emissions (mitigation) and to increase resilience to local climate change impacts (adaptation). A place-based approach to addressing climate has the potential to deliver co-benefits to drive fair and just solutions that also support health, wellbeing, and equality. The Scottish Place Standard Tool (PST) is an effective and widely used tool originally created in a collaborative partnership between Public Health Scotland, Scottish Government, Architecture & Design Scotland, and Glasgow City Council for assessing a place, with a focus on health and wellbeing. As it syntheses complex evidence into 14 easily understood questions to develop a shared understanding of what matters in a place, it has proved to be an effective tool to facilitate a place-based approach, in which local communities, local government and third sector can work together to deliver improvements. Today it is used widely in Scotland, its application internationally has extended across 14 countries in Europe and worldwide it has been translated into at least 16 different languages. Whilst climate has been strengthened in the core content of the tool, both Scotland and Germany have recognised the need of additional support to really focus on climate issues and have embarked on separate simultaneous projects to enhance PST's ability to do so. The workshop aims to introduce the PST with a climate lens and share the different approaches from Scotland and Germany.

The objectives of the workshop are to:

- Provide a brief overview of the connection between climate, place, health and health equity.
- Introduce and compare recent work in Scotland and Germany, which both aim to build on the success of the original PST to strengthen climate considerations in the design and delivery of healthy and equitable places.
- Enable participants, through sharing learning from real-life examples gathered during piloting of the new PST climate resources, to consider how they might practically engage with climate and health through a place-based approach.

This will be achieved through an introduction to the key principles behind the PST, and presentations from Scotland and Germany on their respective approaches to strengthening the potential of the PST to address climate, health and equity, plus practical case study examples of climate action supported by the PST. Time will be provided at the end for practical involvement of the participants and for discussion.

Key messages:

- The climate emergency is one of the biggest challenges facing public health. The Place Standard Tool addresses the need to include climate change and health issues within a discussion about a place.
- Adding a ''climate lens'' to the Place Standard Tool offers the potential to maximise co-benefits to drive fair & just solutions that support health, wellbeing, & equality.

Abstract citation ID: ckac129.359
People, places and the climate emergency – the Scottish Place Standard Tool with a climate lens

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Since the launch of the Place Standard tool (PST) in Scotland in 2015 awareness has increased of the critical impact of the climate emergency on health and equity. A 2019 review of the PST, informed by emerging evidence and community and stakeholder feedback, confirmed the need to strengthen its contribution towards place-based climate action. This was partly achieved by integrating enhanced prompts within the PST itself, however with the increased focus of policy and action around climate adaptation and mitigation a knowledge and resource gap remained. So in 2020 PST partners* began work with experts from environmental organisations (Sniffer, Sustainable Scotland Network) and other partners to develop a ''Place Standard with a climate lens'' (PST CL). The PST CL toolkit was created through an iterative process integrating feedback from 10 pilot projects chosen to represent the varied communities, scales, landscapes and placemaking projects being undertaken across Scotland. It provides a suite of materials to use alongside existing PST resources to help placemaking conversations consider how climate change might play out in a local area. This ensures that local responses to climate change are designed holistically, delivered collaboratively, and helps achieve on other local priorities such as health, wellbeing and equity. This presentation will provide a brief overview of the project background, describe the Scottish PST with a climate lens, share case study examples from the piloting phases, and enable exploration of the learning from Scotland around the value of integrating health and climate in place-based approaches. While the Place Standard tool was not originally designed as a climate change tool, it is an effective method to support the design of local responses to the climate emergency. A ''climate lens'' can help us to plan the future of our places to maximise the health benefits and minimise the negative consequences of a changing climate.

Abstract citation ID: ckac129.360
Creating a German ''StadtRaumMonitor'' with a climate lens - The approach and design of the piloting

Patricia Tollmann

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Based on the Scottish Place Standard tool (PST), the Federal Centre for Health Education (BZgA) adapted and piloted a German version called 'StadtRaumMonitor' from 2019-2021 as part of a Joint Action 'Health Equity Europe' (JAHEE) funded by the EU Commission. The 'StadtRaumMonitor' was developed in cooperation with the NRW Centre for Health Nordrhein-Westfalen and the Ministry of Social Affairs, Health and Integration Baden-Württemberg under the leadership of BZgA and with scientific support from the University of Applied Sciences in Bochum. Based on the piloting and the findings of the accompanying scientific research, some adjustments were made to the PST and the website was relaunched offering extended functionality to users. Building on the successes of the 'StadtRaumMonitor', a follow-up project started in 2021: Recognising the health impacts of climate change and the need to include climate change issues when assessing the quality of places, the BZgA started a pilot project with the same project partners to adapt the tool to the context of climate change. The ''StadtRaumMonitor'' with a climate lens aims to address municipal climate adaptation for health promotion. The tool is inspired by the Scottish PST with a climate lens and was developed based on a systematic literature research, focus groups with experts and with actors in municipalities, as well as in participative cooperation with municipal stakeholders. After pre-test and subsequent adjustments, the tool is currently being piloted in four German municipalities, and an evaluation of the application of the tool is taking place. This part of the workshop aims to provide an example of the approach to the further development of an existing tool, here within the context of municipal climate adaptation and on the basis of the ''StadtRaumMonitor'', and thereby build competencies in this field. Furthermore, early insights into the piloting of the German PST with a climate lens will be given.

6.F. Skills building seminar: Digital health and communication

Abstract citation ID: ckac129.361

Organised by: EUPHA-DH
Chair persons: Stefan Buttigieg (EUPHA-DH), Anthony Staines (Ireland)
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Information has always been central to public health practice. As digital health develops it becomes increasingly central to health care delivery, health system management, and population health monitoring. Despite enormous investment, and great effort in collecting these data, much of the potential value of health care information is lost because of poor data architecture. Good design and interoperability are sometimes seen as obstacles to implementation. but in fact they are key to getting value out of health data systems. Tools and ideas developed over the last thirty years by bioinformaticians may be quite unfamiliar to public health practitioners. The intention of this seminar is to introduce some of these ideas, specifically syntactic and semantic interoperability, ontologies, and terminologies, and to show, using case studies, how these may fit into public health practice.

Key messages:

- It is necessary to have an excellent data architecture to get a good return on investment in healthcare ICT systems.
- Standards are key to interoperability, be that syntactic or semantic.

Abstract citation ID: ckac129.362
Case based approach to the application of standards and Interoperability in practice

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Digital infrastructure and connectivity is layered and requires a number of defined viewpoints in order for safe data flow and use to occur. To address context specific challenges to support communication in health and social care, health informatics standards supporting interoperability are key. In this skills building seminar we will introduce participants to a standards based roadmap for interoperability. We will provide examples of projects and resources detailing the process of engagement to optimise system design for sustainability through a use case based approach.

Abstract citation ID: ckac129.363
How ontology can be used to achieve semantic interoperability in healthcare

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Semantic interoperability allows machines to share, interpret and use data without ambiguity. Semantic Interoperability is a major concern in healthcare (c.f. the EU commission 2021 report on electronic record exchange formats). The lack of interoperability with regard to electronic health record (EHR) leads to fragmentation and a lower quality of cross-institution and cross-border healthcare. The simple choice of an interchange language (HL7, FIHR etc.)is not sufficient to ensure interoperability. Healthcare interoperability is associated with multi-level and multi-sectoral complexity, and this cannot be addressed without consideration of a range of people and needs, from application design to knowledge sharing. Each transaction needs to be defined in unambiguous details as part of a complete, consistent, coherent, and machine-readable set of specifications for interoperability between the machines to minimize any potential error. We propose a systematic process to achieve healthcare interoperability, working with healthcare professionals starting from design level to implementation level. In our seminar we will explain with examples how ontology can be used to achieve semantic interoperability in healthcare. Technical requirements, including the choice of tools (e.g. Protégé); data base (e.g. GraphDB); data model (i.e. Web Ontology Language 2 (OWL2); formal specification (i.e. Description logics (DL)); and the right syntax (RDF/XML). Will be introduced.

Abstract citation ID: ckac129.364
Terminologies matter - the case of ICNP and SNOMED-CT

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Terminologies can seem very abstract to end-users. While most health professionals will be familiar with some terminologies (for example MeSH (Medical Subject Headings), the controlled vocabulary thesaurus used for indexing articles for PubMed or ICD-10, WHO's terminology for disease coding), fewer will be aware of the depth and range of terminologies used in healthcare, nor of the central importance of multilingual standard terminologies in health care interoperability. Following a brief introduction to the use of terminologies, the integration of the International Classification for Nursing Practice (ICNP) the Systematized Nomenclature of Medicine - Clinical Terms (SNOMED CT) will be presented, as an example of the use of terminologies, and their ongoing curation, maintenance and development.

6.G. Workshop: The European Health Data Space 2: is Europe ready to maximise the re-use of health data?

Abstract citation ID: ckac129.365

Organised by: Sciensano (Belgium), Belgian Federal Public Health Institute Towards the European Health Data Space, PHIRI
Chair persons: Irini Kesisoglou (Belgium)
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The EU's Heads of State called in October 2020 to set up a European Health Data Space (EHDS): "The European Council welcomes the creation of common European data spaces in strategic sectors, and in particular invites the Commission to give priority to the health data space". As a response, multiple initiatives were set-up to engage the views and expectations from EU member states in the development of the upcoming legislative proposal on the EHDS for primary (EHDS1) and secondary use of health data (EHDS2). One of these was the launch of the Joint Action (JA) Towards the European Health Data Space (TEHDAS) in February 2021. The aim of TEHDAS is to support the European Commission (EC) and Member States (MS), identifying the challenges and providing concepts and options for the EHDS2. It is built on the needs and expectations of national and international stakeholders, citizens' engagement and existing infrastructure. The major expected outcome of this JA is a sustainable roadmap towards the EHDS2 implementation promoting the cross-border sharing of health data for secondary use. The EHDS2 will benefit population health by facilitating the timely exchange of and access to health data, improving not only the care of patients but also facilitating research, epidemiology, disease prevention and data-based policy decisions. This workshop aims to provide an overview of the preparedness of MS to join the EHDS for secondary use of health data, covering current state-of-play of health data management systems in the EU, barriers on the secondary use of health data, the ongoing work on the development and deployment of the EHDS2 infrastructure and finally, how population health research can benefit from the EHDS2. The workshop will begin with a short introduction on the TEHDAS JA, followed by a presentation on the outcomes of the TEHDAS country visits. In these country visits, the state-of-play of the health data management system and the preparedness to join the EHDS2 were mapped in 12 different EU MS. The next presentation will continue with the results from a study that collected more evidence on the barriers to cross-border sharing of health data for secondary use and options on how to overcome these. It will focus on the legal preparedness and barriers and will discuss how the options proposed by experts in the field align with the legislative proposal for the EHDS2. The audience will be able to give their opinion on the different options through an interactive voting poll during the session. Some of the options on how to overcome technical barriers will be taken further in the development of a pilot infrastructure for the EHDS2. Therefore, the last two presentations will focus on the development and deployment of this pilot infrastructure for the EHDS2 and the role and benefits that population health research will have in it. Throughout the workshop there will be discussion sessions between presentations to allow exchange of knowledge, experiences and opinions with the audience.

Key messages:

- The main outputs will support EU countries to prepare their health data management system for the EHDS2 based on the best practices and actions presented.
- The presentations will inform and align participants on the current work on the technical EHDS infrastructure that is being developed for secondary use of health data, the EHDS2.

Abstract citation ID: ckac129.366
Results from the TEHDAS country visits: State-of-play of 12 EU member states in relation to the EHDS2

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Successfully launching a sustainable EHDS requires a clear understanding of the current situation in Member States, taking into account the existing diversity. With this in mind, country visits are being carried out in a group of 12 countries: Denmark, Belgium, Hungary, Netherlands, Estonia, Ireland, Portugal, Finland, Czech Republic, Slovenia, Sweden, Germany. The aim of the country visits is to map the state-of-play of health data management in different countries and explore their preparedness to join the EHDS. The topics explored include: the health data sources available, the health data infrastructure (storage, access and interoperability), data quality assurance mechanisms, data governance, as well as resource and training needs and opportunities. Another aim of the country visits is to explore needs and expectations at national level, and how the EHDS can respond to them. This presentation will include an overview of the health data management systems of the 12 countries mapped, providing a snapshot of the situation across Europe. It will then present the findings on their preparedness to join the EHDS. Preparedness takes into account a variety of factors, including political will, as well as legal and technical factors. The presentation will further share the lessons learnt and best practices highlighted from the country visits. Finally, based on these findings, the presentation will close with an overarching view on the preparedness across Europe to deploy the EHDS for the secondary use of health data, EHDS2, as well as planned actions that would facilitate the implementation of the EHDS2 in different member states.

Abstract citation ID: ckac129.367
Barriers on cross-border sharing of health data for secondary use and options to overcome these

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Cross-border health data sharing is essential to facilitate vital health research into new treatments and to improve patient care and safety across Europe. The flagship European Health Data Space (EHDS) aims to promote better exchange and access to health data through the creation of a European-wide infrastructure. However, significant barriers to cross-border data sharing must first be resolved in order to fully ensure the successful functioning of the Data Space. To this end, the European Commission established a Joint Action (TEHDAS), as the policy development tool for the development of the EHDS. This presentation will be based around the findings of the recent TEHDAS report ‘Barriers to cross-border sharing of health data for secondary use and options to overcome them.’ The report draws on the results of a dedicated literature review, 133 case studies from across 23 countries and expert interviews to identify the primary barriers to cross-border data sharing and options to overcome these from the perspective of European data users (research and policymakers). The session will start with a concise presentation of the report methodology. The research team will then deliver an interactive presentation, in which they succinctly outline each barrier and policy option and ask participants to vote for their preferred policy option to overcome each barrier identified. EUPHA participants votes will inform the final TEHDAS recommendations on mitigations and solutions for barriers to cross-border data sharing which will be submitted to the European Commission for incorporation in the European Health Data Space legislative proposal.

Abstract citation ID: ckac129.368
EHDS2 pilot infrastructure for the secondary use of health data

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The EHDS2 Pilot consortium brings together 16 European partners (national platforms, research infrastructures, EU agencies and associations in the area of health) to respond to the EC’s call for projects to set up a test version of the future European Health Data Space (EHDS) for the secondary use of health data (EHDS2). It aims to build this pilot version of EHDS2 by interconnecting data platforms in a network of nodes, implementing and testing a first user journey for creating, deploying and running health data research projects at EU level. The network will investigate the technical tools and set up the standards allowing researchers to query the metadata of all nodes, to request selected data via a single application form and to analyze data across national nodes. To build this network, the EHDS2 Pilot will propose legal and technical frameworks based on use cases selected by the EC. These will also serve to illustrate the powerful impact of exploiting health data from several countries and address topics from population health to healthcare pathways, cancer, rare diseases and genomics. This presentation will give an overview of the planned activities by the coordinating team.

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The role of PHIRI in the EHDS2

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The Population Health Information Research Infrastructure (PHIRI) is setting the foundations for the design, implementation and deployment of a fully operative European research infrastructure on population health research in the next few years. In a nutshell, this effort represents setting up the principles and instruments for the governance of the reuse of data for research purposes in a number of aspects - the legal and ethical foundations for the mobilization of data, including sensitive data; how the different nodes in the infrastructure organize to respond multiple research questions in a federated manner; how to ensure high standards of data quality and data interoperability; and, how technological solutions can preserve a safe use of the data while enabling sound scientific outputs. PHIRI has been challenged to provide real-life solutions to each of these aspects. Acting as a demonstration project, PHIRI is currently providing solutions to researchers that are trying to solve their research questions. Building on this experience, in the future, PHIRI is expected to provide support and services to population health researchers that build their research on the secondary use of health data. Among those services: data discovery; data harmonization services (e.g., discovery and use of common data models and interoperability standards); technological services (e.g., playgrounds with synthetic data, secure process environments); research outputs archival (e.g., maintenance and dissemination of the knowledge base generated in the infrastructure); and, training and capacity building. Interestingly, PHIRI can be seen as a primer for the upcoming European Health Data Space for secondary use (EHDS2). In this workshop will be discussing how to line up PHIRI's vision and role within the EHDS2.

6.H. Workshop: Towards improved performance measurement and universal health coverage in oral health care

Abstract citation ID: ckac129.370

Organised by: European Observatory on Health Systems and Policies, Technische Universität Berlin, Radboud University, New York University
Chair persons: Ewout van Ginneken (Germany), Dimitra Panteli (Belgium)
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Oral diseases are increasingly recognized as one of the most prevalent conditions in Europe, affecting nearly half of the European population. They are the third most expensive diseases to treat in the EU and dental expenditures are set to rise substantially. Within EU countries, oral health policy and financing are most often separated from the general health system and vary considerably between countries with different public and private organisation structures providing oral health services, different levels of out-of-pocket payments for patients and a variety of financing models. Oral diseases are a main driver of unmet need and financial hardship in the EU and particularly affect poorer and marginalized groups. However, current provider payment systems prioritize expensive invasive and technology-based methods which drives public expenditure while disserving the healthcare system's central objective of better health outcomes and reducing waste. Moreover, broad and effective oral health promotion policy that spans various care settings and areas of life is not sufficiently implemented. Oral health care systems thus face complex challenges regarding efficiency, quality and integration of care which requires good evidence to steer oral health policy. However, current health information systems only collect few indicators on oral health and oral health care. There is thus need for an improved evidence base for more meaningful assessments and comparisons of oral health systems performance which would allow better informed policy decisions and enable more targeted and effective oral health interventions. In May 2021 the World Health Assembly approved an historic resolution on oral health which urges Member States to include oral health in universal health coverage (UHC) benefit packages and to shift from the traditional curative approach towards a preventive approach. Oral health and the urgent needs for improving the financing of oral health systems have thereby received increased policy attention also in Europe. In this workshop evidence from a cross-country comparison of oral health financing, access and provision in Europe will be presented and the lack of supportive information systems for oral health system performance assessment will be highlighted. Recent research activities will be discussed such as the Horizon Europe project DELIVER (DELiberative ImproVEment of oRal care quality) which aims to create a synergistic problem-solving ecosystem to improve oral health systems. Debates in oral health research and policy in Europe are influenced by global developments such as the WHO resolution. To this end, the recent call for urgent system reform and policy action to address the burden of oral diseases will be set in context and discussed.

Key messages:

- Oral care systems are still dominated by a traditional curative and technology-driven approach which fail to sufficiently encourage prevention and support holistic and integrated oral health care.
- Lack of harmonized data reporting on oral health and oral health system indicators impedes oral care systems performance monitoring and evidence-informed policy-making.

Abstract citation ID: ckac129.371
Global public health must end the neglect of oral health

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Oral diseases are among the most common health problems and constitute major public health challenges across countries and health systems worldwide. The main diseases dental caries, severe periodontal disease, oral cancer and toothlessness affect populations everywhere and show significant social gradients - poor, disadvantaged, rural, or otherwise vulnerable groups suffer from a much higher burden, while at the same time having more difficulties to access prevention and care. Similarly, low- and middle-income countries have the highest prevalence of oral diseases while their healthcare systems are ill-equipped to address the challenges. Due to the predominant clinical care model of dentistry that favours an interventionist approach requiring costly technology provided by a dentist, many health systems and large population segments are not able to afford even basic oral health care. Moreover, oral health has been largely absent from the global health arena for the last 20 years leading to faltering political priority and attention. This has changed recently with the convergence of several initiatives of global relevance, supported by advocacy of the wider oral health community. Following the first ever paper series on oral health in The Lancet, a Lancet Commission on Oral Health was established in 2019, which sparked a group of WHO member states to embark on a remarkable policy development process dedicated to oral health. We now have a Global Strategy for Oral Health and will soon have a Global Action Plan complemented by a comprehensive Monitoring Framework. In addition, work on defining Best Buys in Oral Health and other supportive workstreams are under way. The presentation will provide an introduction and overview to these global policy guidance frameworks that are shaping a new reform agenda for oral health as part of NCDs, Universal Health Coverage and the SDGs towards 2030. Particular implications for public oral health in Europe will be discussed.

Abstract citation ID: ckac129.372
Oral Health Care in Europe: Financing, Access and Provision

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With growing awareness of the large burden of oral diseases and how limited coverage affects both access and affordability, oral health policy has been receiving increased attention in recent years. This culminated in the adoption of the WHO resolution on Oral Health in 2021, which urges Member States to better integrate oral health into their universal health coverage and noncommunicable disease agendas. This study investigates major patterns and developments in oral health status, financing, coverage, access, and service provision of oral health care in 31 European countries. While most countries cover oral health care for vulnerable population groups, the level of statutory coverage varies widely across Europe resulting in different coverage and financing schemes for the adult population. On average, one third of dental care spending is borne by public sources and the remaining part is paid out-of-pocket or by voluntary health insurance. This has important ramifications for financial protection and access to care, leaving many dental problems untreated. Overall, unmet needs for dental care are higher than for other types of care and particularly affect low-income groups. Dental care is undergoing various structural changes. The number of dentists is increasing, and the composition of the health workforce is starting to change in many countries. Dental care is increasingly provided in group practices and by practices that are part of private equity firms. Although there are early signs of a shift towards more prevention of oral diseases, dental care overall remains focused on treatment. A lack of data affects all areas of oral health care and impede to inform policy-making on the underlying causes and the prevalence of oral disease, as well as the effectiveness of community preventive activities and oral health services.

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Horizon Europe: the DELIVER (DELiberative ImproVEment of oRal care quality) project

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Oral diseases and conditions affect more than 3.5 billion people worldwide. They are the 3rd most expensive diseases to treat in the EU and disproportionally affect vulnerable groups. In deviation from the UN and WHO goal of Universal Health Coverage, many EU citizens do not have access to quality oral care without financial hardship. To this end, the DELIVER (DELiberative ImproVEment of oRal care quality) project aims to enhance the quality of oral care through deliberative dialogue and action involving citizens, patients, providers, payers and policymakers. DELIVER will create a synergistic problem-solving ecosystem to convert deliberative dialogues into meaningful improvement of oral care quality. Using a mixed-methods research approach, DELIVER will co-develop and co-produce new quality improvement approaches in three phases. The 1st phase involves situational analysis, consenting of core quality indicators, and development of a EU-wide monitoring framework. The 2nd phase involves in-depth analysis of select quality improvement approaches: (i) PROMs/PREMs-based quality improvement in dental practices; (ii) community-based quality improvement for vulnerable groups; (iii) quality-oriented commissioning of oral health services. The regulatory determinants of oral care quality improvement will be scrutinized. In the 3rd and final phase, the knowledge gained in the 1st and 2nd phases will be merged into the DELIVER Quality Toolkit with manuals and digital tools for concretely actionable and context-adaptive approaches for oral care quality improvement. This presentation will give an overview of the DELIVER project and discuss how it can contribute to improving oral health systems.

6.J. Workshop: Precarious employment and its impact on social protections in the EU

Abstract citation ID: ckac129.374

Organised by: EUPHA-SSWH
Chair persons: Ute Bültmann (EUPHA-SSWH), Agnes Meershoek (Netherlands)
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The changing nature of work, resulting from technology, globalization, shifts in demographics, and other economic and political forces, poses many potential problems for workers, employers, and society today and for the foreseeable future. Moreover, the COVID-19 pandemic has revealed the importance of social protection systems, e.g. income security for injured or sick-listed workers. The pace of work is increasing, driven by increasing productivity demands and greater use of technology. The nature of employer-employee relationships is also changing rapidly, best exemplified by increases in what has been termed ‘‘nonstandard employment arrangements’’, such as gig economy work and short-term contracts. However, what is viewed as greater employment flexibility by employers may represent a more precarious job for workers, as compared to pay, benefits and security for those with long-term employment arrangements. Nonstandard employment is typically shorter in duration, leading to more jobs over a lifetime, with the potential for exposure to multiple and simultaneous risks, some of them new, combined with the possibility of more time spent in periods of unemployment or underemployment. Precarious employment has been linked to adverse effects on worker health and well-being. Although these employment arrangements can affect workers of all education and income levels, they disproportionately affect workers in lower socioeconomic strata. One of the major consequences of nonstandard employment arrangements is the potential loss of social protections, including social security, yet this has not been well addressed. Our workshop focuses on the changing work life across different EU member states and beyond, examining different types of precarious employment and their effects on health and social security benefits.

Prof. Ellen MacEachen will focus on how laws, policies and collective agreements in six EU countries, New Zealand and Canada protect the health of low wage and digital platform workers. She will address occupational and public health interventions for these workers in light of health risks related to the COVID-19 pandemic.

Dr. Solveig Osborg Ose will focus on precarious work, sickness absence and risk sharing between employers, employees and social insurance in nine north-western EU countries. Moreover, she will discuss the adaptation of social protection systems to cover all types of employment to avoid increasing inequalities.

Two experts Dr. Anita Tisch and Prof. Angelique de Rijk will reflect on the findings and discuss with the presenters and the audience the challenges, policies and practices needed towards employment and occupational safety and health social protections of precarious workers.

Key messages:

- Precarious employment has been linked to adverse effects on worker health and well-being. Workers in lower socio-economic strata are disproportionately affected.
- A major consequences of nonstandard employment arrangements is the potential loss of social protections, including social security, yet this has to be addressed.

Abstract citation ID: ckac129.375
Health protection policies for digital platform and low wage workers

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Background:

In the context of the COVID-19 pandemic, shifting employment and occupational health social protections of low-wage and self-employed digital platform workers are described and compared. Specifically, we examine how, across advanced economy countries, laws, policies, and collective agreements protected the health of low wage (e.g., service workers) and digital platform workers (usually classified as self-employed) including during the first three waves (2019-2021) of the COVID-19 pandemic. The overall goal is to inspire conversation, comment, critique and new research questions to tackle the issue of the employment, work and health of low wage workers and self-employed digital platform workers.

Methods:

Taking a comparative focus on eight advanced economy countries, this paper identifies legal efforts to address employment misclassification and challenges related to employee definitions that vary by the legal act. Debates about minimum wage and occupational health and safety standards as these relate to worker well being are considered. Finally, we discuss promising changes introduced during the COVID-19 pandemic that protect the health of low-wage and self-employed workers.

Results:

Overall, we describe an ongoing ‘‘haves’’ and a ‘‘haves not’’ divide, with on the one extreme, traditional job arrangements with good work-and-health social protections and, on the other extreme, low-wage and self-employed digital platform workers who are mostly left out of schemes. However, during the pandemic small and often temporary gains occurred and are discussed.

Conclusions:

In the context of an evolving social contract during the COVID-19 pandemic, this paper provides views on avenues for policy reform and research from employment and occupational health specialists across eight advanced economy countries.

Abstract citation ID: ckac129.376
Precarious work, sickness absence and risk sharing between employers, employees and social insurance

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Background:

The COVID-19 pandemic has revealed the importance of social protection systems including income security when health problems arise. Particularly the protection of those with precarious work felt short in some countries. For some time there has been an interest in the European variation in sick-pay schemes but still we still lack knowledge on country differences and similarities. This is particularly the case regarding precarious workers, while they have higher chances for sickness absence. Our aim is to understand, in the context of precarious work, the differences in risk sharing of sickness absence between employer, worker and social insurance.

Methods:

Data had been collected in a study on sickness absence follow-up regimes in nine countries (the Nordic countries (Sweden, Denmark, Finland, Norway and Iceland) and in Germany, the Netherlands, Belgium and the UK). Comparative statistics were collected and scholars familiar with their countries system were invited to answer a list of 51 questions on system characteristics. Data were re-analysed from the perspective of precarious work, using actor-network theory and insider-outsider theory of employment.

Results:

Countries with shorter employer periods of sick pay have stricter follow-up responsibility for employers as they are regarded gatekeeper except for The Netherlands. The tax-based systems that target all citizens offer more protection for precarious workers while the employee-focused systems define their target population more strictly, leaving precarious workers underserved. There is a large difference in how self-employed are supported or not.

Conclusions:

Despite small economic differences in the nine countries studied, the systems for dealing with sickness absence in the context of precarious work vary largely. Even though, in all systems those with secure jobs seem insiders and those with precarious work outsiders. Social protection systems should be updated to avoid an increasing inequality.

Speakers/Panellists:

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6.K. Workshop: Health Literacy in Health Care Settings in Europe: Practice experience, challenges and future needs

Abstract citation ID: ckac129.377

Organised by: Fulda University of Applied Sciences (Germany)
Chair persons: Katharina Rathmann (Germany)

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Health care organizations (e.g., hospitals, nursing homes, facilities for people with disparities) are increasingly required to create health literate structures and processes, to train staff in such a way that they make it easier for their users to behave in a health literate manner, to deal competently with health information and to navigate competently through facilities and the entire health care system. This approach is known as the concept of organizational health literacy (OHL). Meanwhile, different standards (fields of action) of organizational health literacy and assessment tools to measure health literacy on an organizational level are available, which address, among other issues, health literacy as part of the quality management system, the development of health-related information by involving users, or to facilitate navigation within and to health care facilities and through the health care system. In order to assess and to strengthen OHL in health care settings, an increasing number of projects in Europe and internationally conduct needs assessments and interventions to implement tools to strengthen OHL at the patient-/client-, staff- and organizational-level. The assessment and implementation is accompanied by different requirements, challenges and needs at different levels (i.e. clients, staff, management).

Thus, the workshop emphasizes the following objectives:

1. to present findings from OHL projects in European countries (Austria, Belgium, Germany, the Netherlands, Switzerland).
2. to present and to discuss methodological issues (e.g., needs assessment),
3. to highlight practical experiences when implementing measures to strengthen OHL, and
4. to discuss beneficial factors, challenges and helpful approaches (e.g., participatory or co-creation setups) for the implementation of OHL.

A total of five experts on the topic of 'health literacy in health care settings' will present and discuss the implementation of health literacy in health care settings in Central European countries.

Key messages:

- The Workshop highlights a synthesis of challenges and future needs that are evident for organizations and users at different levels (management, staff, clients).
- Beneficial factors are a supporting management and leadership staff, participatory approaches, communication tools, training staff in health literacy skills as well as clients/patients.

Abstract citation ID: ckac129.378
The Vienna self-assessment questionnaire for hospitals: Three explorative case studies in Belgium

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Background:

One way to develop adequate health literacy responsive policy and strategies in hospitals is the use of self-assessment tools to raise awareness, help prioritize action and mobilize stakeholders. In this study we have piloted the French version of the Vienna Health Literate Organisation (V-HLO-fr) tool in three hospitals to explore its feasibility.

Methods:

We performed explorative case studies in the three main hospitals of Liège (Belgium). Our mode of application of the V-HLO-fr was inspired by the 'RAND Appropriateness' method: first, individual members of an internal multidisciplinary panel filled out the questionnaire and then the results were discussed collectively in each hospital during a 'round table' meeting. The feasibility of the process was assessed by direct observation of the round tables and with semi-structured phone interviews

Results:

The V-HLO-fr tool was fully applied in the three targeted hospitals and the process seems to be acceptable, practicable and integrable. Its mode of application, formalized by taking inspiration from the RAND method, could be further improved, e.g. by paying more attention to recruiting and supporting participants. Strengths (e.g. the facilitation of patient navigation to the hospital) and weaknesses (e.g. the provision of easy to read, understand and act on health information materials) in terms of health literacy responsiveness have been highlighted.

Conclusions:

V-HLO-fr could be a suitable tool to create awareness and formulate targeted actions to further strengthen hospitals health literacy responsiveness.

Those explorative case studies give:

– an overall positive signal about the feasibility of the V-HLO-fr

– useful feedback to further formalize and refine its procedure of application.

Abstract citation ID: ckac129.379
Health literate settings in Austria

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Issue/problem:

Health literacy (HL) depends largely on how easy or difficult it is in a given situation to find, understand, evaluate and apply health-related information. HL is thus an interplay between personal skills and organisational requirements.

Description of the problem:

In 2018 the Austrian platform for HL initiated the focal point 'organisational framework conditions for strengthening health literacy'. Since then the needs of organisations are being assessed regularly and several strategies and initiatives have been launched to support organisational HL.

Results:

To support organisations and settings with the implementation of HL a ''starter kit'' consisting of a general practical guide and several settings specific self-assessment tools (SAT) has been developed. SAT currently exist for hospitals, primary care units, businesses, open youth work, schools and municipalities. For the settings of primary care units as well as open youth work certification processes have been developed, based on the SAT, distribution of high-quality health information and proof of communication trainings. Currently tools for general practitioners are being developed.

Lessons:

Experiences from workshops and pilot testing have shown that organisations need a variety of different tools and measures to help with the implementation of HL. Any type of support needs to be flexible and customisable to different needs and have a low threshold. What is needed most - apart from financial incentives - are settings-based workshops and personal consultation to raise awareness of what health literate organisations can achieve.

Main messages: Settings and organisations are important to increase HL in the population. Several settings in Austria have started to implement HL and are at different implementation statuses.

Abstract citation ID: ckac129.380
A multi-component health literacy intervention addressing needs of kidney patients and professionals

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Background:

Limited health literacy (LHL) is associated with faster kidney deterioration. To maintain kidney function, health care professionals (HCPs) promote self-management. However, in chronic kidney disease (CKD) care organizations, patients with LHL report multiple communication and self-management barriers. The need for health literacy responsive organizations, and multi-component interventions targeted at patients and HCPs, is recognized. We aimed to determine the objectives and strategies of such an intervention, and to co-create and evaluate it.

Methods:

First, we performed a longitudinal qualitative study among CKD patients with LHL (n = 24) and HCPs (n = 37) from general practices and nephrology clinics to assess needs and barriers, and to identify promising intervention objectives. Second, we included patients (n = 19), HCPs (n = 15), educators (n = 3) and students (n = 4) in an Intervention Mapping (IM) process to co-create and evaluate the intervention.

Results:

Grip on Your Kidneys (GoYK) addresses the competences of patients with LHL to self-manage CKD on the long-term, and the communication competences of patients and HCPs. Based upon patients' preferences, GoYK encompasses a visually attractive website and brochures to optimize self-management and a card to contribute to consultations. With HCPs, we developed a training to optimize their competences to support patients with LHL. Evaluation revealed the intervention was useful, comprehensive and fitting needs.

Conclusions:

Mapping the needs of CKD patients and HCPs, combined with a process of intervention co-creation, resulted in a multi-component, positively evaluated intervention. Implementation of this type of interventions in organizations is promising to improve care for patients with LHL. However, the effectiveness of these interventions requires further assessment.

Abstract citation ID: ckac129.381
Strengthening the Swiss health system by improving organizational health literacy: a practice-approach

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Issue:

Healthcare organizations represent vital points of contact and disseminators for people to find, understand, assess, and apply health information, and may thereby strengthen people's health literacy (HL). From a system perspective, healthcare organizations provide essential practices and structures to foster population health beyond their medical-based services.

Description of the problem:

Despite increasing research on the promising role of organizational health literacy (OHL) the current Swiss healthcare system provides insufficient support for healthcare organizations to address HL. In response, the Careum Foundation in Zurich recently launched a Center for Health Literacy to promote OHL - among other HL initiatives. A first step was a practice-oriented collaboration project with the Department of Health of the canton of Zurich, which started in 2019 to assess, implement, and improve HL in primary care organizations. Therefore, a self-assessment tool for OHL is being developed, implemented, and evaluated. In addition, the center started to shed light on HL in Switzerland, on HL and necessary competencies of health professionals. Moreover, it is investing in communication and expertise on OHL, and developing first ideas regarding health literate hospitals.

Results:

A first systematic evaluation of the self-assessment tool has demonstrated a significant potential to improve OHL, organizational development, and teambuilding processes in healthcare organizations. Connected through (inter)national networks, the Center for Health Literacy launches a practice approach to understand OHL as both medium and outcome of a health literate population.

Lessons:

We have learned that practice-oriented OHL initiatives can provide promising approaches to strengthen both population health and organizational development processes.

Abstract citation ID: ckac129.382
Organizational health literacy in health care: Results from a participatory project in Germany

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Background:

Health care facilities (i.e., hospitals, care facilities and integration assistance) play an important role in providing health-related information and strengthening health literacy (HL) of patients/clients, staff and at the organizational level. The project ''Development of Health Literacy in Health Care Facilities (EwiKo)' aims at implementing tools to promote and strengthen organizational health literacy (OHL) in health care institutions in Germany. Objectives are 1) to assess needs for strengthening OHL in pilot facilities and 2) to examine factors that are beneficial to strengthen OHL in health care facilities.

Methods:

N = 6 pilot institutions (n = 2 hospitals, n = 2 care homes for elderly people, n = 2 facilities for people with disabilities) and their members of the ''working groups on HL'' filled in a self-assessment tool to assess the level of OHL, accompanied by focus group interviews (n = 6-9 persons per pilot facility). Regarding conducive and obstructive factors when implementing tools to strengthen OHL, focus group interviews (n = 6-9 persons per pilot facility) and semi-structured interviews (n = 1 coordinator per organization) were conducted.

Results:

Results of the self-assessment tool showed a need to strengthen OHL in all types of health care facilities, particularly in the fields of action 'training of employees in HL tools', ''communication'' and 'participatory development and testing of documents, materials and services on HL'. Results of the focus group interviews showed a special need to strengthen OHL in the area 'HL of employees'. Beneficial factors by implementing tools to strengthen OHL are, for instance a supporting management, resources, a participatory approach and trainings by the project team.

Conclusions:

Due to the ongoing corona pandemic and accompanying challenges (e.g., personnel resources), it is comprehensible that health care facilities emphasize a need for strengthening HL of employees.

6.L. Round table: Digitally literate health workforce for a resilient future

Abstract citation ID: ckac129.383

Organised by: Young Forum Gastein, EUPHAnxt
Chair persons: Matthias Wismar (European Observatory)
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Currently, health systems worldwide are experiencing an unprecedented challenge after the shock caused by the COVID-19 pandemic. However, there lies an opportunity for renewal to strengthen health systems. The importance of collaboration becomes imperative in times of health workforce (HWF) shortages and demanding working conditions. This workshop, organised in partnership by the Young Forum Gastein and EUPHAnxt, will focus on connecting generations to explore, discover and share best practices for HWF education and (re)training in digital skills to deliver better patient care. The COVID-19 pandemic has accelerated digitalisation across many sectors including healthcare. Yet it has also served to highlight the digital divide, which has the potential to hinder health experts in providing optimal care. Concurrently, the demanding working conditions of the HWF can be improved by making use of digital tools. It is high time to discuss how digital literacy can be improved across a multigenerational HWF and how to empower the next generation of healthcare leaders to re-imagine health services. The workshop will bring different perspectives to the table - policy-making, science & academia, and governance - on the approaches for better intergenerational collaboration by making use of digital literacy. At the end of the session, participants will understand the realistic potential of digital literacy and how it can be used to ensure effective communication across the HWF, support the resilience of health systems, and ultimately, safeguarding patient care.

Key messages:

- Digital literacy is not a stable level of knowledge - the health workforce needs opportunities to advance their knowledge and (digital) skills.
- Acknowledging the shortages in health workforce planning, it is essential to ensure adequate skills of the health workforce personnel.

Speakers/Panellists:
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6.M. Workshop: Models of care in prison: addressing infectious diseases during and after the pandemic in EU/EEA

Abstract citation ID: ckac129.384

Organised by: EMCDDA, WHO, UNIPI, EUPHA-PHPP, EUPHA-IDC
Chair persons: Sara Mazzilli (Italy), Sofia Ribeiro (EUPHA-PHPP)
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According to the latest data, in 2019 about 497,000 people were held in prison on any given day in the EU. However, the number of people who pass through European prisons each year is considerably higher. Due to infrastructural and population characteristics, individuals in contact with the criminal justice system face multiple and complex health care issues, including a higher prevalence of communicable diseases than the general population, and severe clinical outcomes when infected. The high turnover of people coming from the most disadvantaged segments of the population, together with the daily inflow/outflow of prison staff and facilities characterized by overcrowding, poor ventilation increase the risk of air-borne virus outbreaks. People living in prison are substantially more likely to experience drug-related problems than their peers in the community. Incarceration is associated with increases in blood-borne diseases-related risk behaviour among people who inject drugs. People living in prisons, because of the scarcity or lack of availability of needles, syringes and condoms, often share injecting equipment, tattooing and shaving materials, and practice unprotected sex. Individuals in contact with the criminal justice system often come from marginalized groups of society with a higher burden of poverty and discrimination, and with limited access to healthcare. Despite tailored preventive interventions should be implemented among vulnerable groups at the community level. Prisons can represent a point of access to integrated prison-community healthcare and social services. Delivering health protection and harm reduction programmes in prisons not only benefits the prison population but also has the potential to reduce the risk of transmission of some infectious diseases in the community, intervening earlier in the natural history of disease. The WHO has long supported the concept of prison health as an inseparable component of public health. However, a number of challenges hampers the successful implementation of such a concept, including the need for evidence-based decision making, inter-sectoral partnerships and adequate monitoring systems. Due to structural and operational reasons, conducting solid research and monitoring activities in prison settings is challenging and often available studies are mono-centric. This workshop will provide attendees with a comprehensive overview at European level of infectious diseases prevalence in prison populations and health services provided in detention facilities. The discussion of three European project collecting successful models of care for hepatitis elimination and implementation of vaccination services in prisons will create the context for an in-depth analysis of key challenges for prison health implementation and may help promote awareness that targeted interventions are feasible and effective in reducing infectious diseases burden among people living in prison and the community at large.

Key messages:

- Existing European initiatives contribute to building the evidence for tailored prevention & control interventions in prison settings.
- Adequate and effective prisons healthcare contribute to achieving the UN's SDGs through improving health, reducing health inequalities and providing a fairer and safer society for all.

Abstract citation ID: ckac129.385
Burden of infectious diseases in prison settings and services offered

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Introduction:

The WHO Prison Health Framework was developed to assess prison health system performance and support Member States (MS) in improving their prison health systems. Moreover, it shall enhance MS capacity to evaluate: the impact of changes in governance models, progress in service provision and improvements of the health status of people in prison (PiP).

Methods:

The framework informed the 2021 data collection round of the Health In Prisons European Database Survey. Invitations were sent to all 53 MS of the WHO European Region. Those MS nominating a focal point and providing valid answers were included in the analysis.

Results:

Answers were obtained from 36 MS, representing a total of 613,497 PiP. Access to immunization was very good across all MS, with the highest for COVID-19 (90% of MS provide it in all prisons). Vaccination against HBV was only available in all prisons of 25 MS. Access in all prisons to HIV post and PrEP were reported, respectively, by 78% and 58% of MS. Screening for diseases at entrance was common for HIV, HCV and HBV. In all prisons of 35 MS soap was provided for free, while needles & syringes and lubricants were only provided free of charge, respectively, in 3 and 4 MS. 5 MS did not have therapeutic spaces to tackle drug problems in any prison, in 73% of those having, accessibility was restricted to some prisons. HIV prevalence ranged from 0-16% and treatment was accessible to 55-100% of those diagnosed. Prevalence of HCV ranged from 0-34%, with access to treatment ranging from 0-91%. The most common format of health records in European prisons was paper based (44%).

Conclusions:

Prison-based data collection systems resulted in limited capacity for extraction so that some countries were unable to provide any data on disease prevalence or treatments offered. Given the scarcity of data on this topic obtained from real-world and not from ad-hoc studies, this snapshot provides an important contribution to public health.

Abstract citation ID: ckac129.386
Overview of availability of harm reduction interventions in European prisons

Linda Montanari

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Introduction:

Prisons are high-risk environments for the transmission of drug related infections, due to over-incarceration of people who inject drugs; often inadequate healthcare, substandard prison conditions; and others. An overview of the availability and coverage of prison-based harm reduction interventions in Europe is presented.

Methods:

National Focal Points of the EMCDDA (30) collected 2019 data, which were integrated with findings from the European funded project HA-REACT (Joint Action on HIV and Co-infection Prevention and Harm Reduction).

Results:

Prison based harm reduction interventions are available in European countries, but only few of them are available in most countries and often with a low coverage (e.g. less than 10% of prison population in Opioid Substitution Treatment (OST) in most countries). Interventions available in most countries (20 or more) include: HIV, HBV, HCV testing (29), OST continued from community (29), Referral to HIV treatment upon release (28), HIV treatment (27), Referral to HCV treatment upon release (25), HCV antiviral treatment (25), Testing for TB (23), HBV antiviral therapy (25), OST initiated in prison (22), Treatment for TB (21), Vaccination for HBV (20). Interventions available in 10 to 19 countries are: condom distribution (19), OST (re)initiated before release (17), prison/community guidelines for implementation of OST (13).

Interventions provided in < 10 countries include: distribution of disinfectant (9), condom with lubricant (9), take-home naloxone (5), needles and syringes programs (3).

Conclusions:

Compared to the community, the availability and coverage of harm reduction interventions in European prisons are limited and large information gaps exist. Scaling up harm reduction in prison can achieve important individual and public-health benefits.

Abstract citation ID: ckac129.387
Viral hepatitis micro-elimination: models of care and barriers to implementation in 5 EU/EEA prisons

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Introduction:

Coverage of essential prevention and control services and adequate monitoring schemes for viral hepatitis are often suboptimal in prison settings. Yet, evidence shows that targeted interventions are feasible and effective in reducing viral hepatitis burden and decreasing virus circulation among people living in prison and the community at large. To promote transferability and improvement of prison health quality in EU/EEA the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) will identify and disseminate models of care for viral hepatitis elimination in prisons.

Methods:

The models of care were gathered using a data collection tool that has been designed for this purpose based on the literature review and agreed with an expert advisory group. Based on the results of the data collection, a survey for healthcare staff working in 5 selected prison institutions in the EU/EEA has been developed.

Results:

The following models of care were collected: HCV micro-elimination in prison; transitional care for HCV treatment or HBV prevention/treatment; HCV or HBV care services tailored to women living in prison; HBV or HAV/HBV vaccination in prison settings. Harm reduction and drug treatment services in the prison are essential at all steps of the prevention and continuum of care. Among barriers identified were: engagement of people living in prison and prison governance structure, availability of infrastructural and human resources, daily prison organisation, inter-sectorial collaboration within prison and between prison and community services, training for prison staff and lack of systematic monitoring.

Conclusions:

Evidence of effective and acceptable interventions in prison to prevent and control viral hepatitis is essential to foster inclusion of prison setting within national elimination programmes. Intra-EU benchmarking may help promote awareness, to allocate adequate resources, monitor of impact and ultimately the achievement of the elimination goal.

Abstract citation ID: ckac129.388
COVID-19 vaccination in prison settings: a model to design tailored vaccine delivery strategies

Lara Tavoschi

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Introduction:

Vaccinations are one of the most powerful preventive tools discovered by modern medicine. Although expanded programmes of immunization are well established in EU/EEA, significant immunity gaps and suboptimal coverage are registered among specific populations, including people living in prisons (PLP). PLP are also at increased risk to vaccine-preventable diseases (VPD) with potential outbreak in prison, e.g. flu, COVID-19, as well as other VPDs such as HBV. The EU-funded project RISE-Vac, aimed at collecting models of care developed during the pandemic to design tailored vaccine delivery strategies that could be extended beyond the sole COVID-19 vaccine.

Methods:

Through a survey to healthcare staff working in prisons in six countries of the EU/EEA (Cyprus, France, Germany, Italy, Moldova, UK) we collected information on the implementation of COVID-19 vaccination program. The following areas were investigated: challenges & barriers encountered, workload distribution, education & training activities for prison staff and PLP, referral strategies after release, immunization information system.

Results:

The respondents reported that in prisons COVID-19 programs have been implemented efficiently. Strategies for optimal management of the vaccination campaign included: week-day dedicated to vaccination services when vaccines were delivered and immediately administered to overcome cold chain challenges; new staff recruitment & task shifting; administration of booster doses within prison premises for released individuals; distribution of informational material both to PLP & prison staff.

Conclusions:

Our results show that universal immunisation campaigns are feasible, acceptable and effective in places of detention when there is commitment to implementing them. Evidence from the pandemic situation may inform future provision of expanded immunization programmes.

6.N. Oral presentations: Perinatal and infant public health

Abstract citation ID: ckac129.389
What matters to families about the healthcare of preterm or low birth weight infants

Lisa Hurt

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Introduction:
Preterm and low birth weight (LBW) infants have complex long-term healthcare needs. The impact on families of caring for a sick infant is increasingly understood, with consequences for attachment and bonding and parental health and wellbeing immediately after birth and beyond. In this qualitative evidence synthesis, we aimed to understand what matters to families about the care provided to preterm or LBW infants in hospital and the community.

Methods:
We searched nine databases and the reference lists of included studies for eligible studies using qualitative methods examining the views of families on healthcare for preterm or LBW infants. We used the Critical Appraisal Skills Programme checklist for qualitative studies to assess study quality and the GRADE-CERQual approach to assess confidence in each review finding. Studies were sampled after data saturation, and thematic synthesis techniques were used for analysis.

Results:
203 studies were eligible for inclusion. We selected 49 studies from 25 countries for the analysis, based on methodological quality, data richness and on ensuring representation from settings with varying resources. Eight analytical themes were identified. Confidence in most results was moderate to high. What mattered to carers was a positive outcome for the child; active involvement in care; support to cope at home after discharge; emotional support for the family; the healthcare environment; their information needs were met; logistical support was available; and positive relationships with staff.

Conclusions:
Enabling a positive post-natal period for families of small and sick infants is difficult. Experiences of care for preterm or LBW infants vary, but we found high consistency in what matters to families. This information can be used to shape global recommendations on support for infants and carers. More research is needed on what matters to parents who receive community-based care, especially in low resource settings.

Key messages:
- We found high consistency across settings in what matters to families in the care of preterm infants.
- Understanding carers views and values ensures that care can be planned to meet the needs of infants and families.

Abstract citation ID: ckac129.390
Contraception free of charge for young women in Tuscany: an interrupted time series analysis

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The Regional Health Authority of Tuscany, ITALY, launched in November 2018 a public program providing all contraceptive methods free of charge to all young residing women after medical evaluation at free family counselling centres. We aimed to explore the effect of the regional program on five outcomes - abortions, contraception provision, access to family counselling centres, conception, and outpatient service utilization for six sexually transmitted diseases (STDs). These outcomes were retrospectively computed from January 2016 to December 2020 using regional administrative databases, and then expressed as both annual rates per 1,000 and monthly rates per 100,000 women aged 14 to 25 years and residing in Tuscany. We ran interrupted time series (ITS) models to analyze how the trends in monthly rates changed over time after the intervention (set in November 2018). The decline in annual abortion rates per 1,000 women doubled from 2016-2018 (-9%, from 7.0 to 6.4) to 2018-2020 (-17%, from 6.4 to 5.3). ITS models revealed a significant post-intervention decrease in monthly abortion rates (-0.61, -1.11 to -0.12) and a significant increase in both access rates to counselling centres (87.60, 77.77 to 97.43) and contraception provision rates (16.75, 0.31 to 33.19). Conception rates fell significantly just in under-18 women (-0.84, -1.39 to -0.28). A significant reduction in outpatient service utilization rates for STDs emerged for N. gonorrhoeae, HSV, and HPV. As a prime example of similar initiatives in Italy, the free contraception program of Tuscany promoted access to counselling and contraception services among young under-25 women, empowering the entire care pathway. As a result, abortion rates declined significantly in this group. The wider access to counselling centres to obtain free contraception and overall enhancement of the pathway might have fostered sexual education and reproductive health, leading to a reduction in teenage conception and STD spread.

Key messages:
- This study proves the effectiveness of the free contraception campaign of Tuscany in reducing abortions and empowering the entire care pathway, providing further evidence for policy accountability.
- Therefore, this study supports the maintenance of this program and suggests the potential benefits of implementing and promoting similar initiatives in other Regions.

Abstract citation ID: ckac129.391
Preventing HIV infection in pregnancy: a comprehensive ANC-based intervention in Western Uganda

Stefanie Theuring

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Introduction:
Pregnant women in sub-Saharan Africa represent a high-risk group for HIV infection, but most endemic countries including Uganda do not engage specific HIV prevention measures in pregnancy. This longitudinal study aimed to assess outcomes of a comprehensive, ANC-embedded strategy to prevent seroconversions during pregnancy in Western Uganda.

Methods:
HIV-negative ANC clients were administered an HIV risk assessment tool, followed by individual risk counselling. They received a fixed appointment for repeat HIV testing after three months. Those attending ANC without partners obtained

formal partner invitation letters. At follow-up after three months, women not attending repeat testing were reminded via text message. Post-intervention risk behavior engagement was captured. We analyzed uptake of the intervention, HIV incidence rate, and associations with risk behavior.

Results:

Of 1081 participants, 116 (10.7%) reported risk behavior engagement at first ANC visit, 148/1081 (13.7%) were accompanied by partners. The repeat test visit was attended by 848/1081 (78.5%) women, 42 (5.0%, $p < 0.001$) reported post-intervention risk behavior engagement, and 248 (29.4%, $p < 0.001$) were accompanied by partners. Seroconversion occurred in two women. In multivariable logistic regression, rural facility clients compared to urban ones (aOR 3.96; 95%CI 1.53-10.26), and women with positive or unknown partner HIV-status (aOR 2.86; 1.18-6.91) and partner alcohol abuse (aOR 2.68; 1.15-6.26) had increased odds for engagement in risk behavior despite the intervention.

Conclusions:

After our intervention, risk behavior in pregnancy was reduced by half, and partner attendance had doubled compared to baseline. Our cohort showed a 0.76/100 women-years HIV incidence rate compared to 2.85 in pre-intervention data from the same setting. Clients from rural settings and women experiencing precarious partner situations require special attention to reduce risk behavior engagement during pregnancy.

Key messages:

- HIV incidence in pregnancy in Western Uganda can be significantly reduced through a comprehensive, ANC-based counselling intervention.
- Pregnant women from rural settings and those experiencing precarious partner situations require special attention regarding sexual risk behavior.

Abstract citation ID: ckac129.392
Predictors of delayed vaccination in infants born in Tuscany, Italy: an area based cohort study

Vieri Lastrucci

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Background:

Timely vaccination is essential to protect infants from vaccine-preventable diseases. The aim of the study was to evaluate the determinants of vaccination timeliness for hexavalent (HEXA) and measles-mumps-rubella (MMR) vaccines.

Methods:

The study is part of the PREHMO project funded by Tuscany Region, Italy. Data on the 2017 and 2018 full birth cohorts of Tuscany (N = 41,493) were retrieved from the Birth Registry and linked to those of the Vaccine Registry up to 24 months after birth. Sociodemographic and at birth characteristics of mothers and infants were retrieved. The primary outcome was the timeliness of HEXA 1st and 3rd doses, and MMR 1st dose. Timeliness was defined as the administration of the dose a day after the period recommended by the vaccination schedule. Multiple logistic regression models were performed.

Results:

For all the vaccines considered, a significantly increased risk of delayed vaccination was observed in preterm infants and in infants born in hospital of second level of newborn care, while infants conceived by assisted reproductive technologies and first-born infants showed a significantly decreased risk for delayed vaccination. Multiple births, small for gestational age status, maternal unemployment, and rural residence were significantly associated with an increased risk of delayed HEXA-1 vaccination (OR 1.31, 95%CI 1.13-1.51; OR 1.12, 95%CI 1.03-1.22; OR 1.06, 95%CI 1.01-1.13; and OR 1.1, 95%CI 1.03-1.16). As for MMR vaccination, a low maternal education was significantly associated with high risk of delay (OR 1.12, 95%CI 1.06-1.18), while rural residence, maternal foreign nationality and female sex were significantly associated with a decreased risk of delay (OR 0.91, 95%CI 0.87-0.96; OR 0.82, 95%CI 0.78-0.87; and OR 0.95, 95%CI 0.91-0.99).

Conclusions:

Several common and vaccine-specific predictors of vaccination timeliness were identified. Strategies to improve a timely vaccination should take into account these predictors.

Key messages:

- Several maternal and infants factors may influence vaccination timeliness of routine immunization in childhood.
- Tailored vaccination strategies are needed to improve vaccination timeliness in infants at high-risk of delayed vaccination.

Abstract citation ID: ckac129.393
An integrated care pathway for maternal and childcare: evidence from Ethiopia, Tanzania, and Uganda

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Performance monitoring and evaluation are key to quality improvement in maternal and child healthcare in Sub-Saharan Africa. This study presents the experience of designing and implementing bottom-up and integrated performance evaluation tools for care pathway to monitor and manage maternity healthcare services. The research project involved four health districts and relative reference hospitals, supported by the NGO Doctors with Africa CUAMM in Ethiopia, Tanzania, and Uganda. The maternal and childcare pathway developed consists of 23 indicators, calculated at hospital and district level, relating to pregnancy, childbirth and first year of life phases. The authors developed staves and performance maps, as graphical representation tools, to display longitudinally integrated health services provision performance along the continuum of care. Substantial variation was observed between the phases of each maternal and childcare pathway and across the care pathways of the different analysed settings. The most impressive results across the four settings are: 1) regarding pregnancy phase, that women tend to attend more than four antenatal classes, still with a quite high drop-out rate, and are largely tested for syphilis, 2) with respect to childbirth, that there are varying percentage levels in terms of C-sections, episiotomies and peri/intra-partum asphyxia cases, and 3) as it regards first year of life, there emerges scope for improvement considering the vaccination coverages attained for pentavalent, measles and polio vaccinations. Thanks to the collaboration with local managers and health professionals, the maternal and childcare pathway allowed to monitor the changes in the quality of maternity services provided within the analysed contexts. The benchmarking approach encouraged local professionals to learn from other settings. The use of such tool allowed the development of targeted quality improvement actions, shared among all involved stakeholders.

Key messages:

- In collaboration with local professionals, we designed and implemented an integrated pathway for maternal and childcare, covering the phases of pregnancy, childbirth and first year of life.
- Benchmarking performance results encouraged collaboration among professionals and allowed the identification of actions to improve the provision of maternal and childcare services.

6.O. Workshop: Urban design interventions for fostering mental health and mental health literacy

Abstract citation ID: ckac129.394

Organised by: Darmstadt University of Applied Sciences (Germany)
Chair persons: Evangelia Chrysikou (EUPHA-URB)
Contact: helena.mueller@h-da.de

With roughly half of the global population living in cities and an expected rise up to 85 % by 2050, urban environments are central to public health. Yet, they are often perceived as health risk factors due to e.g., noise, pollution, crowding, and anonymity. Indeed, mental disorders show higher incidence in urban contexts compared to rural areas, generally increasing, e.g., due to the Covid19-pandemic as well as to climate change. However, we argue that there is also a rich potential of urban environments to act as resource for mental health and to address mental health issues in the public space. Design interventions such as urban furniture, art and information elements can act as perceived affordances, signifiers and situative stimuli to influence health behaviour, social discourse and individual mindsets regarding mental health. Furthermore, by considering their unique potentials and resources during the design process, the specific surroundings of these interventions can become an integral part of the actual design. As a result, this might change citizens' perspective on the urban setting as such. While there exists a large body of literature as well as case studies focusing on physical health promotion by urban design interventions, evidence regarding its mental correlate is still scarce. This workshop aims at collecting and elaborating on features in the urban space as potential resources to foster mental health as well as mental health literacy. To that aim, first, three seven-minutes-presentations introduce different disciplinary perspectives on the topic: Starting from a psychological point of view, the relationship between urban environments and mental health will be outlined. Based on insights from human geography, social determinants of urban settings will be elaborated and participatory approaches will be presented as a crucial method for designing effective intervention. Synthesizing these insights, the role of design to influence health behaviour will be discussed and afterwards illustrated using the example of a trail-based design concept as the backdrop for the interactive part. In the second part of this session, first, co-creation methods (such as mindmapping and brainwriting) will be applied together with participants to brainstorm relevant categories, features and potentials of the urban space to foster mental health and mental health literacy. Participants will then be asked to contribute their expertise from their specific field of work particularly with regards to increasing mental health literacy in citizens. This exercise will be highly valuable for participants to acquire interdisciplinary knowledge regarding the influence of urban design interventions and mental health and broaden their perspective and knowledge regarding urban mental health and the built environment. Learnings and variations of this exercise could be also applicable in other settings such as rural communities or semi-public spaces.

Key messages:

- This workshop aims at understanding how features of the urban space can be utilised to foster mental health and mental health literacy.
- By co-creatively sharing and elaborating on insights from various disciplines, participants broaden their horizons regarding the interrelations between the urban built environment and mental health.

Abstract citation ID: ckac129.395

Risk factors and potentials for fostering mental health and wellbeing in urban space

Helena Müller

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People shape their physical environments - and vice versa. As such, cities provide both resources (e.g., job opportunities, cultural diversity) as well as stressors (e.g., crowding, noise pollution) to their residents and visitors. In this context, numerous studies illustrate a considerable influence of the built environment (townscape, architecture) on health and well-being of interacting people. This impact ranges from physical aspects (e.g., traffic safety, particulate matter) to psychological processes (e.g., stress, loneliness) and behavioral aspects (e.g., physical activity, social behavior). At the same time, phenomena such as homelessness, crime, or mental disorders (e.g., substance addictions, schizophrenia) occur more frequently in cities compared to rural areas, illustrating causal as well as selective processes in the relation of urban environment and mental health. Increasing overall incidences in mental disorders (especially anxiety disorders and depression), the short-term shortage of psychotherapeutic care as well as the long-term economic burden on the health care system ask for a twofold strategy in public health: a) an extension of preventive measures with low threshold, i.e., accessible by large shares of the population, b) an extension of mental health literacy, which will empower the population to be attentive to mental health issues in themselves and others and which in turn can help to reduce stigmatization. While urban green and blue spaces have been researched in terms of restorative environments - allowing to regenerate resources consumed during the day - the built environment is still a resource for this strategy that has received insufficient attention to date. Utilizing the urban built environment not only as restorative but also informative and engaging environments thus affords an opportunity to address and potentially foster mental health and mental health literacy in citizens across socioeconomic backgrounds.

Abstract citation ID: ckac129.396
Potentials of participatory approaches for urban mental health

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Aspects of mental health, society, space and environment share entangled relations being studied in health geography. Recreational spaces as well as places that are commonly perceived as strenuous, unsafe, or highly stressful are unevenly distributed within urban areas, which is also associated with spatial differences in mental disorders. Spaces in general represent social constructions that reflect power inequalities; they are filled with subjective emotional resonances and sometimes visualize stigmatization of specific groups. As such, the interplay of socio-demographic factors, socio-economic factors and built environment is complex. To capture these entanglements represented in heterogeneous user groups, participatory approaches promise valuable insights. Yet, despite their great potential for fostering mental health in urban space, participatory approaches are still less common in health geography. Therefore, critical voices question whether the limitations of marginalized groups have been sufficiently considered in this field of study so far. Similar challenges arise in urban planning processes: Specific (vulnerable) groups such as children, women, foreign residents, and people with disabilities or elderly people are insufficiently included in planning processes, leading to an underrepresentation of their needs in the resulting environments. To tackle this shortcoming, the approach of co-creation offers a process in which participants jointly develop a solution without being the object of research or interview partners, but creators. Using rather practical or creative (e.g., joint mapping of the built environment, photo-elicitation) than discursive techniques allows contributions from population groups otherwise often excluded from planning processes. Despite certain limitations, participatory approaches promise the possibility to develop appropriate and just solutions in urban mental health.

Abstract citation ID: ckac129.397
Design strategies to influence health behaviour and mental wellbeing in the urban setting

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The design of objects, spaces and systems can have a profound influence on the behaviours as well as emotional and cognitive states of the people confronted with it. With regards to health behaviour, elaborating on Schwarzer's HAPA model (1992), the Design Model for Health Behaviour Change - DMHBC (Rehn, 2018) proposes the use of the built environment to act as situative barriers or opportunities to change health behaviours and overall health promoting mindsets. Regarding urban space and mental health, most environmental stimuli and related behavioural patterns focus on consumption (e.g. retail stores) or daily routines (e.g. commuting). Using objects such as specifically designed furniture, installations and other elements to act as perceived affordances and stimuli can affect both cognitive-emotional states as well as specific behavioural responses. For instance, based on the research on mindfulness, drawing people's attention towards their own bodily sensations (e.g. breath) by playful interactive installations or information signs can increase feelings of calm, appreciation and contentment. The same applies to design interventions that guide one's view towards otherwise overlooked urban features (e.g. natural scenery). While mindfulness and relaxation are powerful techniques for increasing mental health, many other approaches (such as physical activity, social interactions etc.) can be found to have similar benefits. In fact, the orchestrated combination of various forms of stimuli might prove to be more effective than the sum of the individual interventions as they create a subsequent chain of stimuli that form a coherent experience. This approach poses particular potentials to foster mental health in vulnerable groups that usually suffer most from urban environmental risk factors. Thus, providing public and open access stimuli and affordances in this way, can have a significant effect on overall urban public health and reduce social inequalities at the same time.

6.P. Skills building seminar: Children and young people: engaging the unheard stakeholder

Abstract citation ID: ckac129.398

Organised by: EUPHA-CAPH, EUPHAnxt
Chair persons: Hellen Skirrow (UK), Jinane Ghattas (EUPHAnxt)
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Global shocks from the COVID 19 pandemic have disproportionately impacted children and young people (CYP) and their families. Underlying health disparities have widened as a result of disruptions to healthcare, education and economic impacts. There are compelling arguments to engage children and young people in rebuilding society and systems from emerging public health threats including the covid 19 pandemic, the climate crisis and conflicts. Children and young people like others in society have a right to be involved in decisions that impact their lives and health but are too often unheard. Engaging those affected most by health policy ensures relevance and can improve adoption of interventions. Involving children and young people in strategic decision making can also improve their citizenship skills and improve health literacy. Although many children and young people have contributed to debates and publicly demonstrated their collective views on a variety of issues such as climate change, movements including #timesup, #Blacklivesmatter and #Metoo, their voices are seldom heard in policy and decision making arenas. In 2021, EUPHA CAPH and EUPHANxt sections collaborated to host the inaugural Engaging the Unheard Stakeholder workshop, supporting 2 young people aged <25 to attend the EPH and lead the workshop. (links). CAPH is now committed to make this a regular feature as part of our action plan to support young voices in public health.

Learning outcomes:
- Develop insight into innovative ways to support and engage young people in public health policy making.
- Practise advocacy skills to facilitate young people's voices in research & policy

Activities:
Participants will hear from young people who are championing activism or have been involved in shaping public policy.
Interactive skills building breakout session involving role play and scenarios to challenge their unconscious bias and learn skills as 'active bystanders' to empower young people

Key messages:
- Despite major movements where children and young people have demonstrated their views on a variety of issues such as climate change, their voices are seldom heard in policy and decision making arenas.
- Public health professionals can advocate, support and engage children and young people in public health policy making but lack awareness and skills in advocacy to do this effectively.

6.Q. Skills building seminar: Integrating social inequalities in the burden of disease framework

Abstract citation ID: ckac129.399

Organised by: COST Action CA18218– European Burden of Disease Network
Chair persons: Brecht Devleesschauwer (Belgium)
Contact: Brecht.Devleesschauwer@sciensano.be

Driven by the influential Global Burden of Disease (GBD) study, the burden of disease (BOD) approach has gained wide interest at national and international level to quantify the state of health and health inequalities. Central to the BOD approach is the Disability-Adjusted Life Year (DALY) metric, which quantifies the health impact of diseases, injuries and risk factors as the number of healthy life years lost compared to a counterfactual scenario of perfect health all life long. The BOD approach offers a valuable platform to quantify social inequalities in health, i.e., differences in health status by socioeconomic and sociodemographic characteristics. This is highly relevant, as health inequalities penalising socially disadvantaged groups are one of the most consistent, and persistent, findings in epidemiology, for almost every health outcome and socioeconomic indicator. Monitoring social inequalities in health is therefore a key priority for national health authorities. There are different ways by which social inequalities can be integrated in the BOD framework, but all come with important data challenges. Individual-level stratification is a common approach for quantifying inequalities by age and sex, but is more challenging for other sociodemographic and socioeconomic indicators. Area-level stratification allows for ecological analyses between BOD estimates and indices of social deprivation. Social inequalities can also be assessed using comparative risk assessment, by which the relative risk for adverse health outcomes in function of social position is to be quantified. This skills building workshop will present the methods that have been applied in different national burden of disease studies to include social inequalities, including a discussion of their strengths and weaknesses. By providing a step-by-step presentation of how the methods have been applied, attendees will gain unique insights in the different ways by which social inequalities can be integrated in the BOD framework.

Key messages:
- The burden of disease framework offers a valuable platform to quantify and monitor social inequalities in health, which is a key priority for health authorities.
- Attendees will receive an overview of the different ways by which social inequalities can be integrated in the burden of disease framework, including a discussion of their strengths and weaknesses.

Abstract citation ID: ckac129.400
Using individual-level stratification as an approach to integrating social inequalities into the burden of disease

Carl Baravelli

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Substantial social inequalities in almost all non-fatal and fatal health outcomes are one of the most consistent and universal epidemiological findings. Therefore, monitoring social inequalities in health is considered a key priority for researchers and policy makers. The Global Burden of Disease Injuries, and Risk Factors Study (GBD) is the most comprehensive worldwide observational epidemiological synthesis of data to date. However, currently, the GBD Study does not include the potential to stratify associated metrics, such as the disability-adjusted life years metric, by different socioeconomic factors, such as education or income level. Although The GBD Study does include the Socio-Demographic Index, this measure is only useful when comparing between, and not within, countries or regions. We conducted a Cox regression analysis using a national longitudinal prospective cohort study design and registry-based data linked at the individual-level. We stratified on educational groups and investigated cause-specific mortality rates over a 30-year period, adjusting for age, sex and 5-year age cohorts. We also calculate years of life lost (YLLs) stratified by educational groups, standardised by age, and presented for specific years - to investigate trends over time. We discuss the benefits and limitations of this "individual-level" stratification approach as one possible solution to the integration of social inequalities into the GBD study or when using a burden of disease framework approach more generally.

Abstract citation ID: ckac129.401
Inequalities in the disease burden in Scotland: an area level analysis

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In the context of increasing demand for evidence-based policy, attempts to address or mitigate the effects of disadvantage have been usefully informed by comprehensive indices of multiple deprivation. These indices combine indicators on a range of dimensions of deprivation to classify neighborhoods or localities. Through combining information on fatal and non-fatal health loss, burden of disease studies allow planners and policy-makers to have a better understanding of the contribution of different diseases and injuries to the total burden of disease. These estimates can be augmented through studies, stratified by investigating inequalities in the burden of disease due to area-based deprivation. Doing so, helps contribute to discussions about where prevention and service activity should be focused to address health inequalities. The Scottish Burden of Disease study uses the Scottish Index of Multiple Deprivation (SIMD) as means to report on of the extent of inequality in the burden of disease in Scotland between people living in the areas of greatest, and of least, multiple deprivation. The SIMD quantifies deprivation based on data zones, a geographical unit comparable to a postcode. Using pooled and weighted data from seven domains (employment, income, crime, housing, health, education and geographic access), each data zone is given a composite rank out of 6,505 data zones. The composite rank was then converted to a decile, with 1 assigned to the 10% most deprived data zones and 10 to the 10% least deprived. In this presentation we will show the key steps involved in undertaking an area-based analysis of health inequalities in the burden of disease in Scotland using results from the Scottish Burden of Disease 2019 study, and from our monitoring of COVID-19 disability-adjusted life years.

Abstract citation ID: ckac129.402
Reducing educational inequalities in mortality: a comparative risk assessment approach

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Educational inequalities in mortality are increasingly recognized as one of the main challenges for health policy. Studies comparing European countries have shown that such inequalities are substantial almost everywhere, but that there are important variations between countries, suggesting great scope for reduction. However, identifying this scope is difficult because it requires comparative information about the educational distribution of mortality rates, risk factors and relative risks. In this presentation I show how this can be done, by quantifying the impact of a theoretical equalization of the distribution of several known risk factors for mortality, in a comparative risk assessment approach. Harmonized data set on mortality (from register data) and risk factors (from survey data) by educational level for 21 European populations in the early 2000s were applied. The impact of the risk factors on mortality in each educational group was determined using Population Attributable Fractions (PAF). The impact on inequalities in mortality was estimated applying two counterfactual scenarios: a theoretical upward levelling scenario in which it is assumed that inequalities in the risk factor were completely eliminated, and a more realistic best practice scenario, in which it is assumed that inequalities in a risk factor were to be reduced to those seen in the country with the smallest inequalities for that risk factor. The analysis shows how information on risk factors, mortality rates and relative risks can be combined from different data sources and provide a meaningful analysis of the European mortality burden that can be linked to educational inequalities in risk factors. The analysis also shows that upward levelling scenarios and best practice scenarios demonstrate a theoretical potential for reducing inequalities in mortality.

7.A. Round table: Sustainable health system responses to meet the chronic health care needs of refugees from Ukraine

Abstract citation ID: ckac129.403

Organised by: Centre for Global Chronic Conditions, LSHTM, WHO Europe, Observatory on Health Systems and Policies
Chair persons: Natasha Azzopardi Muscat (WHO Europe), Martin McKee (UK)
Contact: adrianna.murphy@lshtm.ac.uk

Background:

Since Russia's reinvasion of Ukraine on 24 February, more than 5 million people have fled the country. Most have gone to the neighbouring countries of Poland, Slovakia, Hungary, Romania, and Moldova. This vulnerable population has significant healthcare needs. Among the most challenging to address will be chronic non-communicable diseases (NCDs), including mental disorders, as these require long-term, continuous care and access to medicines. NCDs are already the biggest contributor to disease burden among Ukrainian adults. About a third have hypertension and 7% have diabetes. Refugees are also at increased risk of mental disorders due to exposure to trauma and ongoing daily stressors. Host country health systems are faced with the challenge of ensuring accessible and affordable care for NCDs and mental disorders to this population. There is no consensus on the most effective and sustainable approaches for achieving this.

Objectives:

This workshop will provide a platform for sharing knowledge to support host country health systems. The objectives of the workshop are to i) identify sustainable health system approaches to providing quality health care for NCDs and mental disorders to refugees from Ukraine, and ii) establish research priorities to support host country health system decision-making.

Format:

The workshop will consist of a panel with 4 speakers, followed by a roundtable discussion. Each panel member will make a short presentation (5 min) related to health system responses for NCDs and mental disorders in refugee populations. They will highlight challenges faced in the current crisis and evidence of approaches that have worked in other refugee contexts. The roundtable discussion will focus on the adaptation of evidence-based approaches to countries hosting refugees from Ukraine, and the research needed to support this. Interventions will be made by representatives from countries hosting refugees, including from WHO country offices, and from the WHO Europe Migration and Health Programme. All workshop participants will be invited to contribute. The discussion will be chaired by Natasha Azzopardi-Muscat, Director of the Division of Country Health Policies and Systems, WHO European Regional Office. A report on the conclusions of the workshop, including research priorities to support host country health systems, will be published.

Key messages:

- Health systems receiving refugees from Ukraine will face challenges in providing them long-term and affordable care for NCDs and mental disorders.
- Drawing on evidence, the workshop will help to identify sustainable health system responses to NCDs and mental disorders, and priorities for research to support host country health systems.

Introduction
Adrianna Murphy
LSHTM, London, UK

Impact of the crisis in Ukraine on neighbouring health systems
Kayvan Bozorgmehr
Bielefeld University, Bielefeld, Germany

Financing to meet the chronic health care needs of refugees
Triin Habicht
Senior Health Economist, WHO Barcelona Office for Health Systems Strengthening, Barcelona, Spain

Implementing responsive integrated mental health care for refugees
Sergiy Bogdanov
Centre for Mental Health and Psychosocial Support, National University of Kyiv Mohyla Academy, Kyiv, Ukraine

Ensuring continuous access to NCD treatment among refugees
Sigiriya Aebischer Perone
Geneva University Hospitals, Geneva, Switzerland

7.B. Workshop: Labor migration, the food supply chain and the COVID-19 syndemic: Germany, Netherlands, and the USA

Abstract citation ID: ckac129.404

Organised by: Bielefeld University (Germany)
Chair persons: Nora Gottlieb (Germany), Seth M Holmes (USA)
Contact: lforst@uic.edu

The agriculture and meat-processing sectors employ, largely, (im)migrant workers in Germany, the Netherlands, and the USA. Deemed "critical infrastructure," workers in the food supply chain (FSC) were particularly vulnerable to SARS-CoV-2 infection due to poor adaptation of policies and practices related to health, immigration, and work. The pandemic has shone a light on preexisting inequalities and risks related to precarious and hazardous work, particularly for (im)migrant workers. We conducted harmonized policy analyses in North-Rhine Westphalia, Germany, in the Netherlands, and in Illinois, USA on measures taken during the pandemic and how they affected migrant workers. These three regions host large businesses in meat-processing and agriculture. They saw significant COVID-19 outbreaks, with widespread health, social and economic repercussions. Public health effects included higher risk for all communities in the region; social effects included local lockdown measures; economic effects included food supply problems, euthanized animals, and financial losses due to the temporary closure of businesses. In our workshop, we will deliver three brief presentations on (im)migration, labor, and occupational safety and health policies during the COVID-19 syndemic in Germany, the Netherlands, and the USA. We present results of our analysis, highlighting similarities and differences between the EU-member states Germany and the Netherlands, on the one hand, and the US, related to the employment and exploitation of migrant workers from the global South/East in the global North/West. We highlight issues to be addressed in future global emergencies. The pandemic has prompted occupational safety and health measures in the FSC. However, agro-industrial sectors in Western Europe and the US heavily rely on precariously employed workers (e.g., seasonal, temporary and/or subcontracted workers). This may impact the extent to which preventive measures "work" for these populations: even when good policies are formulated, information exchange, collaboration, and enforcement by relevant agencies and immigration authorities is critical. Without such cooperation, the realization of stronger social protection of (im)migrant workers is are left to the good will of the employer. Structural drivers in the form of policies related to mobile labor, (im)migration and employment, superimposed on segmented labor markets and discriminatory practices, drove significant morbidity among (im)migrant workers. The following discussion will synthesize insights from the three contexts, and provide an opportunity to brainstorm with workshop participants to facilitate cross-national collaboration on this issue.

Key messages:

- Food supply chain workers are at the intersection of discrimination in health, employment, and migration.
- Comparative analysis provides a rich framework to guide management of vulnerable sectors, workers and workplaces during future pandemics.

Abstract citation ID: ckac129.405

Labor migration, the food supply chain and the COVID-19 syndemic: Germany, Netherlands, and the USA

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In Germany, the COVID-19 syndemic has brought questions regarding precarious labor migration in the food supply chain (FSC) to the forefront of the public debate. An analysis of responses to COVID-19-related challenges in agriculture and meat-processing pinpoints similarities and differences between the two industries, offering lessons for workers' health and safety, and for the improvement of the FSC's systemic resilience. Agriculture and meat-processing were highlighted as ''essential'' during the COVID-19 syndemic in Germany. In agriculture, amidst lockdowns and border closures, special arrangements allowed permits for migrant workers to harvest seasonal and perishable produce, thus ensuring food supply and mitigating economic loss. Bilateral agreeements with countries neighbouring the EU were concluded to increase temporary labor migration for seasonal work; while COVID-19 specific occupational health standards were set. In meat-processing, which emerged as a hotbed for COVID-19 in Germany, the public debate problematized the contradictions between migrant workers' essential contribution to the economy on the one hand, and their poor working and living conditions on the other hand. Here, the pandemic led to new legislation, prohibiting subcontracting in the meat processing industry and requiring higher standards for the housing of temporary migrant workers. While the long-term outcomes of these reforms remain to be seen, enforcement of health standards and other social rights will need attention. The German case, thus, underscores the importance of structural changes for ensuring social protection and dignified working conditions for labor migrants, which can, in turn, improve fairness, sustainability and systemic resilience of the FSC.

Abstract citation ID: ckac129.406
Essential EU mobile workers in the Dutch food supply chain: occupational safety and health policies during and after the Covid-19 pandemic

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The pandemic has revealed the dependence of many labour markets on EU mobile ((im)migrant) workers, particularly in sectors designated as essential for national economies. Despite many EU workers falling under the label of 'essential workers', they are nonetheless vulnerable to unhealthy and unfair working and living conditions linked to the type of work they perform (manual), the conditions of their employment (highly flexible) and their lack of social networks that makes them dependent on their employers for housing and health. Taking EU mobile workers in the meat and distribution sectors, two specific Food Supply Chain sectors in the Netherlands, as a case study, this contribution discusses how in the Netherlands protection during the Covid-19 pandemic was organized for this group of workers in relation to protective measures at the work place, quarantining, pay during periods of quarantine and protection against job loss, and access to public health services (testing, vaccines), topics that generated a great deal of insecurity among EU mobile workers. The analysis is based on data provided by a survey among 153 EU mobile workers (May-July 2021), 35 interviews with Polish and Romanian workers, and 50 interviews with national stakeholders. The aim is to problematize the disjuncture revealed by the pandemic between an EU legal regime that prioritizes mobility and national arrangements around welfare and social protection that leave many mobile workers vulnerable. We argue that EU free movement of workers needs to be flanked by measures to ensure that the people who move do so under decent and fair conditions.

Abstract citation ID: ckac129.407
Health equity and worker justice: the food supply chain during the COVID-19 pandemic

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The COVID-19 pandemic has brought into stark relief the health, safety and security threats facing people in the US and around the globe. As stay-at-home orders were instituted, most economic activities closed or required work from home; however, companies in the Food Supply Chain (FSC) continued to operate, considered ''essential businesses.'' The meatpacking and agriculture sectors in Illinois - 79,000 and 55,000 workers, respectively - are largely populated by (im)migrant workers, some on short-term work visas and many of whom are part of the informal (cash) economy. Only a tiny percentage of meatpacking and no agriculture businesses are unionized in Illinois or most of the USA. Initially, FSC workplaces were not re-configured for social distancing; sanitation and entry procedures were not instituted; workers were not offered personal protective equipment (PPE); and no plans were made for quarantine of infected workers or isolation of COVID-exposed workers. Lack of paid sick leave for these workers, who earn subsistence wages and whose employment is extremely precarious due to immigration status, added pressure for them to continue to work while infectious. Investigation and enforcement of health and safety was taken on by local health departments rather than the occupational safety and health enforcement agency. Finally, these workers, who live in congregate housing and share transportation, carried the virus from work to community and community to work. We review US laws related to immigration, labor, and occupational health and safety before and during the pandemic, as well as epidemiological data. We will highlight the changes required to address ''work'' in the web of contagion during an infectious disease epidemic. Protection of workers' rights, as well as a clearer understanding of the integral connection between workplace and community, will be a likely ''side effect'' of these efforts.

7.C. Workshop: Towards a true European Health Union: milestones, drivers and barriers

Abstract citation ID: ckac129.408

Organised by: European Observatory on Health Systems and Policies
Chair persons: Matthias Wismar (European Observatory)
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European health system responses to the COVID-19 pandemic have also demonstrated that European integration in health and health systems add value beyond what individual Member States can do: ranging from the joint purchase of medicines to providing large budgets for building back better. With a true European Health Union we will strengthen our health systems beyond crisis preparedness and response, which is necessary as we are facing the evolving perma-crisis, We will need to strengthen our health systems in general always with a view to Universal Health Coverage and improving health system performance. The European Health Union can work to help strengthen health systems, which may include support for Member States research, learning from best practices, investment but also common solutions including new or extended EU mandates, new arms-length bodies, as well as more coordination or harmonization. It has also taught us that we cannot wait to strengthen our health systems as we are in Europe in a perma-crisis.

The panel will address the following questions:

- Where are we with our progress towards a true European Health Union?
- What policy change is needed to create a true European Health Union?
- What would be the role of the true European Health Union strengthening and supporting Member States?

We will zoom in on the 1) existing public health mandate of the EU, 2) the impact of other EU-policies on health and health systems, 3) the new economic governance and, 4) the role of the EU in global public health

Key messages:

- A true European Health Union will strengthen universal health coverage and health system performance.
- A true European Health Union goes beyond crisis-preparedness and respons.

Speakers/Panellists:

Scott Greer
University of Michigan, European Observatory on Health Systems and Policies, Ann Arbor, USA

Anniek de Ruijter
University of Amsterdam, Amsterdam, Netherlands

Eleanor Brooks
University of Edinburgh, Edinburgh, UK

Thibaud Deruelle
University of Lausanne, Lausanne, Switzerland

7.D. Workshop: Older adults' resilience and vulnerability to COVID-19: 2-years results of multicentric LOST project

Abstract citation ID: ckac129.409

Organised by: University of Pavia (Italy)
Chair persons: Anna Odone (EUPHA-DH, EUPHA-IDC), Silvano Gallus (Italy)
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COVID-19 pandemic and consequent mitigation and containment measures greatly impacted people's daily life. Older adults, especially those with chronic conditions, have paid the highest price for the emergency. Indeed, they are the most at-risk of severe and deadly forms of COVID-19; they deal with unmet healthcare needs because of considerable pressure on healthcare systems; they are at higher risk of worsening lifestyles, mental and socioeconomic status. In this context, we designed and are currently conducting the multi-partner project LOckdown and lifeSTyles in Lombardia (LOST in Lombardia), funded by AXA and Lombardy region. We will present the design and outputs of a telephone-based cross-sectional study conducted in the fall of 2020 on a representative sample of adults aged more than 65 years living in Lombardy. Researchers from the University of Pavia, Mario Negri Institute of Pharmacological Research, Vita-Salute San Raffaele University, Insubria University, University of Genoa, Bocconi University, Health Protection Agency of Bergamo and Brianza are involved. This project aims to evaluate the COVID-19 pandemic impact and nationwide stay-at-home order on a wide range of behavioural and health-related outcomes among the older population and provide useful evidence to plan, implement, and evaluate targeted prevention programmes and welfare policies facing pandemic consequences.

The workshop will be structured as follows:

We will first set the scene by focusing on the determinants of SARS-CoV-2 infection in the older adult population.

The second panellist will discuss changes in healthcare services use and delivery during the pandemic. Sociodemographic, physical and mental health-related determinants' roles will be thoroughly analysed.

Data on the access to hospital in older adults with chronic conditions from two local health Units from the Lombardy region, Italy during the first wave of the pandemic wee also presented.

We will then provide two original contributions about lifestyle changes.

In the first one, we will present data exploring how Mediterranean diet adherence has changed. A Mediterranean COVID-19 Pandemic Score was computing by scoring modifications in the consumption of nine food groups and five diet-related behaviours, and predictors of favourable changes will be debated.

The fifth panellist will open up about the mental health burden. The prevalence of depression, anxiety, insomnia and hopelessness before and during the COVID-19 lockdown will be assessed, identifying subgroups at higher risk of mental distress due to pandemic-associated restrictions.

In the end, we will engage in a fruitful discussion with the audience on the data presented and practical public health implications, exploring how they can inform critical policy debates addressing health system resilience and health inequalities at the European and global levels.

Key messages:

- Public health management of older people and chronic patients represents a major challenge within and beyond pandemic times, as they have been disproportionally impacted by COVID-19.
- Evidence-based recommendations are needed for the post-pandemic phase, and the results on successes and failures from one of the worst-affected regions provide guidance for the rest of Europe.

Abstract citation ID: ckac129.410
Assessing determinants of SARS-CoV-2 infection in a large older adult representative sample

Giansanto Mosconi

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Most COVID-19-related deaths occurred in older adults, however to date, evidence on determinants of SARS-CoV-2 infection in this population is limited and mostly based on case series without a comparison group. A telephone-based cross-sectional study was conducted in November 2020 on a representative sample of 4,400 people aged $\geq$65 years from the Italian region of Lombardy. We determined the prevalence of participants reporting a SARS-CoV-2 infection in the period between the onset of the pandemic and the time of the interview. To investigate the determinants of the infection, we estimated odds ratios (OR) and their corresponding 95% confidence intervals (CI) thorough unconditional multiple logistic models. We further evaluated if the infection was a determinant of a worsening in mental health wellbeing. Overall, 4.9% of participants reported a history of SARS-CoV-2 infection. No significant relationship between sex and infection was observed. SARS-CoV-2 infection was less frequently reported in subjects aged $\geq$70 (OR = 0.55; 95% 0.41-0.74) compared to 65-69 years. We didn't observe any trend after 70 years of age. Participants reporting at least one chronic condition had a lower infection rate compared to healthy subjects (OR = 0.68 95% CI: 0.49-0.93). Separated/divorced subjects more frequently reported infection than married/cohabiting ones (OR = 2.33 95% CI: 1.29-4.20). Self-reported history of SARS-CoV-2 infection resulted being a determinant of an increase in depressive symptoms (OR = 1.57; 95% CI: 1.17-2.10). In this large study - among the few assessing the determinants of SARS-CoV-2 infection in a representative sample of older adults -, the prevalence of a history of infection in November 2020 approached 5%. We found that persons aged 70 and above and those with chronic conditions, thus individuals with likely less social interactions, were less frequently exposed to SARS-CoV-2 infection.

Abstract citation ID: ckac129.411
Healthcare services access during the COVID-19 pandemic among older people

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The COVID-19 pandemic strongly impacted older people, not only in terms of clinical outcome but also in care provision. Investigating trends of changes in healthcare services access among older subjects during the pandemic, along with studying potential determinants, is of utmost interest to identify the most at-risk individuals. We used data from LOST in Lombardia, a cross-sectional study conducted on a representative sample of 4,400 older adults (aged 65 or more) in autumn 2020. Data were collected about lifestyles, mental health, and access to healthcare services before and during the pandemic. To investigate potential determinants of changes in healthcare access, we presented prevalence ratios (PRs) estimated through multivariable log-binomial regression models. Twenty-one per cent of the participants increased telephone contacts with general practitioner (GP), 9.6% specialist visits for a fee, while 22.4% decreased GP visits, 7.5% ED access, 6% hospitalisations, 12.3% outpatient visits, 9.1% diagnostic exams. The prevalence of the cancellation or delay of medical appointments by the patient's decision was 23.8%, with higher proportions among men, among individuals aged 75 or over as compared to those aged 65-74, and among individuals with a higher self-reported economic status (p-value<0.05). People with comorbidities more frequently cancelled or postponed visits, reduced ED access or hospitalisations. Moreover, individuals with worsened mental health status showed a higher prevalence to cancel or delay visits and to reduce ED access. The decrease in healthcare provision and consultations could result in mortality and morbidity excess. Our results should inform targeted intervention to bridge the gaps and overcome the health inequalities that the pandemic has deepened. Exploring the underlying reasons and determinants for healthcare avoiding or delaying among the most vulnerable groups is crucial for epidemic preparedness and planning future interventions.

Abstract citation ID: ckac129.412
COVID-19 impact on hospitalizations in older adults with chronic conditions: a real-world analysis from Lombardy, Italy

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Background:
Healthcare delivery reorganization during the COVID-19 emergency may have had a significant impact on access to care for older adults with chronic conditions.
Methods:
We investigated such impact among all adults with chronic conditions aged $\geq$65 years, identified through the electronic health databases of two local health agencies - ATS Brianza and ATS Bergamo - from the Lombardy region, Italy. We considered hospitalizations for 2020 compared to the average 2017-2019 and quantified differences using rate ratios (RRs).
Results:
Overall, in 2017-2019 there were a mean of 374,855 older adults with $\geq$1 chronic condition per year in the two ATS and 405,371 in 2020. Hospitalizations significantly decreased from 84,624 (225.8/1000) in 2017-2019 to 78,345 (193.3/1000) in 2020 (RR 0.86). Declines were reported in individuals with many chronic conditions and for most Major Diagnostic Categories, except for diseases of the respiratory system. The strongest reductions were observed in hospitalizations for individuals with active tumours, particularly for surgical ones. Hospitalization rates increased in individuals with diabetes, likely due to COVID-19-related diseases.
Conclusions:
Although determinants of the decrease in demand and supply for care among chronic older adults are to be further explored, this raises awareness on their impacts on chronic patients' health in the medium and long run.

Abstract citation ID: ckac129.413
Gender and socioeconomic inequalities in changes in a Mediterranean lifestyle among elderly Italians

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The COVID-19 pandemic and the adoption of restrictive measurements to control the SARS-CoV-2 spread disrupted general population lifestyles including dietary behaviours. However, there is poor knowledge on potential socioeconomic and gender disparities in dietary changes. We conducted a telephone-based survey during fall 2020 on a sample of 4,400 participants representative of the population aged 65-99 years living in Lombardy, Italy. Changes in a Mediterranean lifestyle were assessed retrospectively by asking participants to report modifications in the consumption of nine food groups and five diet-related behaviours (e.g., consumption of organic and local foods) compared to the previous year (2019). We then computed a Mediterranean COVID-19 Pandemic Score (MedCovid-19 Score), reflecting changes during pandemic, ranging from -14 to 14, with increasing values indicating improvements in line with a Mediterranean lifestyle. Overall, 18.3% of the study participants worsened their Mediterranean lifestyle (MedCovid-19 Score <0), 35.1% remained stable (MedCovid-19 Score = 0), while 46.6% reported improvements (MedCovid-19 Score ≥1). Predictors of favourable changes toward a Mediterranean lifestyle were educational level (OR = 1.52; 95% CI 1.19-1.95 for postgraduate vs lower education), wealth (OR = 1.52; 1.14-2.02 for high vs low wealth), and skilled manual occupations (OR = 1.57; 1.28-1.92 vs white collars). Women were more likely than men to move away from a Mediterranean lifestyle (OR = 1.86; 1.58-2.21). In conclusion, improvements in line with a Mediterranean lifestyle prevailed in almost half of a large sample of elderly Italians surveyed during the COVID-19 pandemic. However, changes towards a Mediterranean lifestyle were disproportionately distributed across gender and socioeconomic strata. These findings were similar to those from the general population of the Moli-sani study, where it was observed that healthful dietary changes were associated greater wealth.

Abstract citation ID: ckac129.414
It never rains but it pours: COVID-19 pandemic impact on mental health in older adults

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Italy was the first country to be hit by the 2019 coronavirus disease (COVID-19) in Europe holding one of the highest clinical burdens. Older adults are those paying the highest price for the COVID-19 emergency. Within the Lost in Lombardy project, a web-based cross-sectional study assessing the prevalence of depressive and anxiety symptoms, hopelessness and insomnia before and during the COVID-19 pandemic, was conducted on a representative sample of 4,400 older adults aged 65 years or more from the Lombardy region recruited between November 17th and 30th 2020. The prevalence of depressive symptoms increased by + 112% during the pandemic, anxiety symptoms by + 136%, insufficient sleep by + 12%, unsatisfactory sleep by + 15%. Feelings of hopelessness were more frequent among women compared to men (15.1% vs. 10.4%) and increased with increasing age. A worsening in each of the four specific mental health outcomes was more frequently observed in women (OR = 1.50, depression; OR = 1.31, anxiety; OR = 1.57, sleep quality; OR = 1.38, sleep quantity), in subjects who decreased their physical activity during the pandemic (OR = 1.64, depression; OR = 1.48, anxiety; OR = 2.05, sleep quality; OR = 1.28, sleep quantity), and with increasing number of pre-existing chronic diseases (p for trend<0.001 for depression and anxiety; p for trend = 0.010 for sleep quality; p for trend = 0.012 for sleep quantity). A worsening in depressive symptoms was more frequently observed in more educated subjects (p for trend = 0.008), while a worsening in anxiety symptoms in subjects living in main towns compared to outskirt with an economic status below the mean. The use of at least one psychotropic drug - mostly antidepressants/anxiolytics - increased by + 26% compared to pre-pandemic. The protection of the mental health status of this vulnerable segment of population needs to be recognized as a real public health priority.

7.E. Oral presentations: The interface of climate and nutrition

Abstract citation ID: ckac129.415
Improving nutrition through carbon reduction policies: an online randomized experiment

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Background:
There has been increasing policy interest in changing dietary patterns to reduce diet-related diseases and improve

population health. Meanwhile, the food choices people make every day have a determining impact on the climate change, with food systems responsible for a third of global greenhouse gas emissions. Current policies focused on dietary health are designed, implemented and evaluated in relative isolation, and there is a critical open question concerning the extent of possible synergy with an additional focus on carbon removal.

Methods:

We analysed the changes in UK households' food purchases from an online, randomized control experiment (n = 3933) designed to contrast respondents' current food purchase behaviour with that under a range of potential tax and labelling policies targeting improvement in dietary health, alone or combined with those designed to reduce carbon emissions. We assessed changes in the healthiness of food baskets between interventions through indicators of: i) purchase of calories; ii) % of calories purchased from 23 food groups; and iii) relative changes in nutrient composition of food purchased.

Results:

Food labelling and fiscal measures for both health and decarbonisation have a positive impact on dietary health, by reducing the calorie content of food purchases ($p < 0.001$). Adding carbon reduction considerations into health policies achieves nutritional improvement by further reducing fat and increasing fibre, resulting in a reduction of up to 193 kcal/person/day (95%CI: 172-214).

Conclusions:

With an additional focus on planetary health, the combined (health + carbon) tax and food labelling policies could achieve a reduction in calorie content at a magnitude close to the Public Health England's estimate of average excess calories consumed by adults (195kcal).

Key messages:

- Policies focused on achieving both nutrition and carbon reduction goals could achieve greater improvements in food choices and produce win-win scenarios.
- There is a need for greater dialogue and policy development between public health and environmental researchers, practitioners and policy makers.

Abstract citation ID: ckac129.416
The ultra-processed food content of school meals and packed lunches in the United Kingdom (2008-2017)

Jennie Parnham

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Background:

British children have the highest ultra-processed food (UPF) intake in Europe, which is linked to adverse health outcomes. Schools are posited as a setting for dietary intervention, yet the level of UPFs consumed at schools is currently unknown. This study aimed to describe the UPF content of school food in the UK, explore the UPF content of school meals and packed lunches (food from home) and examine whether UPF differs by children's household income.

Methods:

A pooled cross-sectional analysis of primary (4-11 years, n = 1,895) and secondary schoolchildren (11-18 years, n = 1,408) from the UK's National Diet and Nutrition Survey (2008-2017) was conducted. Food diaries recorded student's meal-type (school meal/packed lunch). UPF intake was defined using the NOVA food classification system. Quantile regression models assessed the association between meal-type and lunchtime UPF intake (%kcal and % grams). Models were stratified by school phase (primary/secondary) and interacted meal-type with income.

Results:

Schoolchildren consumed most of their lunch as UPF, with higher median intakes in secondary schoolchildren than primary schoolchildren (77.8 %kcal vs 72.6 %kcal). School meals were associated with lower median UPF intake (%kcal) in both primary (-20 percentage-points[pp] [95% CI -22.2, -17.4]) and secondary schoolchildren (-11pp [-16.0,-7.0]) compared with packed lunches. Results were similar when UPF %g was analysed. Overall, income was inversely associated with UPF content. However, in primary schoolchildren there was no significant income gradient in the UPF(%g) content of school meals.

Conclusions:

In the first nationally representative study, we showed that on average UPF intake was high in all UK schoolchildren. Higher UPF intakes were observed in packed lunch consumers, secondary schoolchildren, and those with a lower income. Procurement policies must be revaluated to protect children from high UPF intake.

Funders: NIHR School for Public Health Research

Key messages:

- In the first study of ultra-processed food content of UK school food, we show that children consumed around three quarters of their energy as ultra-processed food at lunch.
- Children who were older, took food from home or were from a low-income household were more likely to consume higher levels of ultra-processed food. Regulation is needed to protect these children.

Abstract citation ID: ckac129.417
Changes in retail food environments around schools over 12 years in Flanders, Belgium

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Background:

Food environments influence food preferences, in particular among children. Besides their homes, children spend most of their time in and around the school. This study mapped changes in retail food environments around primary and secondary schools in Flanders between 2008 and 2020. In addition, associations between those indicators and children's weight status were assessed.

Methods:

The food environment near primary and secondary schools was mapped using three spatial indicators: 1) The density of different types of food retailers within 1000m road distance from the school entrance, 2) the percentage of schools with at least one food retailer of a certain type within 1000m road distance from the entrance, and 3) the median walking distance from the school entrance to the nearest food retailer of a certain type. Associations between the density of convenience stores, as well as fast food outlets around the schools and the weight status of the schools' children were assessed using generalized linear models adjusted for level of urbanization, socio-economic status of children at school level and sex.

Results:

Food environments near schools in Flanders were found to be unhealthy, with a significant increase in fast-food outlets and convenience stores between 2008 and 2020. Food environments near schools with a higher proportion of children from a poor socio-economic background were found more unhealthy than those near schools with a lower proportion of such children, regardless of the urbanization level. A significant positive association was found between the density of fast food outlets as well as convenience stores around primary schools and the weight status of children aged <6 years and 6-12 years.

Conclusions:

Food environments around schools in Flanders became more unhealthy over time and were associated with children's weight status. The government therefor has the responsibility to create healthy food environments near schools to protect children's health.

Key messages:

- The food environment near schools became more unhealthy between 2008 and 2020.
- The food environment near schools was associated with younger children's weight status.

7.F. Pitch presentations: Applying eHealth solutions

Abstract citation ID: ckac129.418
Implementing an eHealth tool to improve referral services for obstetric emergencies in Sierra Leone

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Background:

Maternal health remains a major issue of concern in Sierra Leone. In the main referral maternity institution, Princess Christian Maternity Hospital (PCMH), up to 25% of maternal deaths occur during or shortly after transit from another health facility. There is an urgent need to improve referral systems between peripheral health units (PHUs) and PCMH. Our aim was to pilot and evaluate an eHealth tool facilitating referral of obstetric emergency cases through effective teleconsultation between PHUs and PCMH.

Methods:

A web application was designed to capture unclear or complicated delivery cases at PHUs and request respective telemedical counselling from the referral institution PCMH. The eHealth tool was piloted at 10 PHUs in Western area urban and rural in August 2021. Necessary devices were provided and delivery staff was trained to use the app. In December 2021, we conducted focus group discussion with 3-6 delivery staff at five PHUs and at PCMH to evaluate utilization and outcomes of the tool.

Results:

All participants perceived the eHealth tool as an improvement of referral procedures. Response time from PCMH after a request for counselling from a PHU was mostly <30 minutes. The main perceived advantage of the tool was the systematic documentation of obstetric complications and procedures. This relieved staff from fear of wrong treatment accusations, and recorded communication with PCMH made processes and responsibilities transparent. Another important benefit was PCMH staff being already prepared to receive a specific emergency case after use of the app, thus reducing the 'third delay' within the referral facility. As a major obstacle to smooth referral despite the eHealth tool, a lacking ambulance system was mentioned as a critical gap.

Conclusions:

Exceedingly positive user experiences with this simple tool seem to make an expansion to more PHUs worthwhile. Benefits of using the app in more remote districts in Sierra Leone should be further investigated.

Key messages:

- Delivery staff in Sierra Leone was capable of using a web app for telemedical counselling in a useful and effective manner.
- The eHealth tool was perceived as very helpful in systematically and transparently documenting emergency delivery cases and treatment procedures.

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Attitudes and experiences towards the IMMUNI App among Sapienza university students: a pilot study

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Background:

IMMUNI is an app that was created to help fight epidemics, starting with COVID-19. The app has a contact tracing feature but its diffusion in Italy was low. In this pilot study, we investigated university students' attitudes and experience towards the IMMUNI app.

Methods:

This cross-sectional study was conducted at Sapienza University of Rome between 14 April and 19 April 2021. An online survey was administrated to university students of medical area. A multivariable logistic regression model was built to identify app download's predictors. Adjusted odds ratio (aOR) and 95% confidence interval (CI) were calculated.

Results:

We collected 247 questionnaires (response rate: 78.2%). More than half of the students (65.0%) didn't download IMMUNI app mostly because of the belief that it was useless (30.0%). By contrast, the main reason for downloading was sense of duty (40.0%). Experience with the app was limited but the process was judged as lacking for the technical difficulties. As for hypothetical incentives, feedback on how the download could help against the pandemic was considered as the most effective (3.5 out of 5). In the multivariable analysis, higher likelihood of download was associated with higher fear of contagion for family and acquaintances (aOR:1.50, 95% CI: 1.01-2.23) and higher rating to the health management of the emergency (aOR: 1.33, 95% CI:1.00-1.76). The highest odds of download were found for participants who have been advised to download the app (aOR: 3.21, 95% CI:1.80-5.73). On the other hand, greater belief that the virus came from a laboratory was negatively associated with the download (aOR: 0.75, 95% CI: 0.60-0.93).

Conclusions:

Strategies aimed at raising students' awareness on the importance of health technologies, restoring confidence in health authorities, and limiting disinformation around SARS-Cov-2 should be devised. In addition, the app could be enriched with positive feedbacks for users, and some technical issues should be fixed.

Key messages:

- The spread of digital technologies for public health purposes is fostered by trust in health institutions and improving health literacy and user engagement.
- An efficient and user-friendly technology is recommended.

Abstract citation ID: ckac129.420
The Italian investment in telemedicine: a breakthrough model of care in primary care

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Issue/Problem:

Aging populations, worsening burden of chronic disease and recent pandemic has accelerated awareness and the importance of telemedicine in providing continuity of healthcare.

Description of the problem:

AGENAS is the public body responsible for the implementation of telemedicine investment (€1 billion) in the context of the NextGenerationEU plan. AGENAS has built up a working group expert panel to define the technical and informatics features of the investment. The project consists of the realization of the national telemedicine platform and the regional telemedicine services. Italian regions will implement telemedicine services based on the national guidelines defined by AGENAS, that will also monitor it through key performance indicators outlined on the basis of best practices and scientific evidence of multidimensional evaluation.

Results:

National telemedicine platform will improve, optimise and standardise telemedicine services throughout the Country, considering what may already be available in regional and local healthcare contexts. Regarding telemedicine services in regional context, that will be implemented within the NextGenerationEU, they will be focused on the telemonitoring of high prevalence conditions (i.e. cardiological, respiratory, diabetes, neurological and oncological) as well as other services such as televisit, teleconsultation and teleassistance. Connecting patient's home with healthcare system provide benefits for patients and their families, who will be able to interact with healthcare professionals, obtaining consultation and monitoring of their health.

Lessons:

The implementation of the investment, aiming at improving equity and integration of care, will contribute to provide real world evidence about usage, benefits and potential risk of the telemedicine in primary care for the management of chronic diseases.

Key messages:

- The investment under the Next Generation EU plan it is the lifetime chance to transform Italian healthcare service and draw a new framework to cope with the high demand in telemedicine.
- Improving telemedicine services will determine a breakthrough in management of patient with chronic diseases in the Italian primary care sector.

Abstract citation ID: ckac129.421
Mobile phone filmmaking in health promotion. Addressing problematic social media use in Swedish youth

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Background:

Digital media is an important part in the everyday lives of young people. However, hate, threats, and harassment on social media is becoming a global public mental health issue among youth. To promote mental health in this age group, this issue needs to be addressed, and community-based health promotion, in particular participatory interventions, are needed to make measures taken meaningful for youth. The aim of the study was twofold; to teach participatory mobile phone filmmaking to Youth Community Center (YCC) staff; and to investigate how they assess this method regarding feasibility, relevance, costs, resources needed, and time considerations.

Methods:

YCC staff participated in a two-day mobile phone filmmaking training. Group interviews that were recorded and transcribed verbatim were conducted and field notes were taken. Data was deductively analyzed in accordance with Elo and Kyngäs (2008).

Results:

YCC staff found the technology was easily accessible and the method needs limited extra resources. It has the potential to promote creativity and can be used as a means to involve young people in describing the issue in their own words, and to find a solution to the issue at hand. The method also has the potential to reach and engage the whole community as organizing a mobile phone film event is part of the process. Time consumption was not perceived as an issue, as staff is free to plan activities as they see fit.

Conclusions:

According to YCC staff, participatory mobile phone filmmaking has the potential to promote positive interactions on social media among youth. This in turn has the potential to promote wellbeing of young people. Recommendations are that this method is tested among young people and investigate if it is a helpful intervention to promote mental health in this age group.

Key messages:

- Participatory mobile phone filmmaking may be useful in youth mental health promotion.
- The method is cheap, easily accessible, and have the potential to involve the whole community.

Abstract citation ID: ckac129.422
Application of the patient navigation model with people experiencing homelessness: a scoping review

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Background:

Barriers in accessing healthcare services are a common issue that contributes to the disproportionately poor health outcomes in people who experience homelessness. A possible way to overcome these barriers and meaningfully engage with this under-served population is through the implementation of the so called patient navigation (PN) models. We conducted a systematic scoping review to gain a better understanding on how PN models are utilized with people experiencing homelessness and other comparable populations and to identify their features, barriers and facilitators to their implementation and their outcomes.

Methods:

A systematic scoping review was done based on a predetermined protocol. We conducted a search of Web of Science, PubMed/Medline and Scopus databases on the 15th of June 2021. A narrative analysis of the included studies was conducted.

Results:

Our search yielded 1203 hits, and after removing 475 duplicates, we were left with 728 publications of interest.

Finally, 21 studies have been included in the review, comprising of nine review articles and 12 individual studies, with most studies stemming from the USA. Results show that PN models are consistently associated with improvements in a wide range of health related outcomes, mostly with timely access to healthcare services. Implementation strategies and measurements used in assessing PN models show heterogeneity between studies. However, a number of consistencies were found including; a longitudinal approach, using of non-clinical navigators who share similarities to the participant groups and who engage as facilitators. Additional considerations for gender and age may further improve the outcomes.

Conclusions:

In order to improve on the success of the PN models and their application in removing barriers to healthcare access for people experiencing homelessness, more research is needed that focuses on the feasibility, acceptability and scalability of the approach outside the USA.

Key messages:

- People experiencing homelessness experience considerable barriers in accessing healthcare service leading to disproportionately larger burden of disease as well as lower life expectancy.
- Patient navigation models have a great potential in removing barriers and facilitating timely access to healthcare services in people experiencing homelessness.

Abstract citation ID: ckac129.423
mHealth platform improved health worker's compliance to WHO's IMNCI guideline in Nairobi, Kenya

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Poor access to quality health services, especially in urban slums, is a global challenge. Given similar challenges in Nairobi's Kibra informal settlement area, we collaborated with the Langata/Kibra sub-county health management team to conduct a pilot program for improving the quality of child health services delivered by health care providers (HCPs). The pilot introduced a digital mHealth platform to HCPs working in Kibra informal settlement area in Nairobi. This mHealth platform was compliant to WHO's recommended guideline for integrated management of newborn and child illnesses (IMNCI) and was designed to help sick child assessment, diagnosis and management by HCPs. We aimed to determine if using this digital platform, coupled with supportive supervision and community outreach, would lead to improve compliance to the IMNCI guideline for assessment, diagnosis and treatment of sick children. We conducted baseline (February 2019) assessment, trained selected HCPs on the mHealth platform on handheld android tablets, conducted end line (March 2020) and measured any change in HCP's compliance to IMNCI guidelines. Total 89 HCPs were the mHealth platform users during end line assessment. When asked about the choice of antibiotic for treating childhood pneumonia, we found proportion of HCPs who preferred Amoxycillin dispersible tablet, the recommended treatment for childhood pneumonia, increased from 3% at baseline to 38% at end line. Proportion of HCPs who were aware that antibiotics should NOT be used for the management of simple diarrhea increased from 14% (at baseline) to 50% (at end line). At end line, more than 90% HCPs were found compliant in their practice to IMNCI guidelines for sick child assessment, diagnosis and management. These results demonstrate the use of the IMNCI compliant mHealth platforms as a potential important effective way to improve capacity and compliance among HCPs who are serving communities like Kibra informal settlement in Nairobi, Kenya.

Key messages:

- WHO recommended IMNCI compliant mHealth platform enables health care providers to offer quality child health care.
- Using mHealth platform to ensure WHO's IMNCI guideline implementation by health care providers might have potential impact on saving sick children's lives from preventable deaths.

Abstract citation ID: ckac129.424
Digitalization-induced changes in health and social care work - perceptions of professionals

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Background:

Digitalization has increased rapidly in health and social care and plays an increasingly important role in the daily work of health and social care professionals. The effects of digitalization are often viewed from the societal and economic perspectives, and less from the perspective of the changing health and social care work. This study examined how health and social care professionals perceive the effects of digitalization on their work.

Methods:

Eight semi-structured focus-group interviews were conducted in four Finnish health centers at the end of 2020. The participants ($n = 30$) were nurses, physicians, and social workers. Qualitative content analysis with inductive approach was used to analyze the data.

Results:

Four main categories emerged from the perceived effects of digitalization: 1) two-way changes in workload and pace (reduced/increased work, accelerated/slowed pace of work, duplication of work/saved employee resources), 2) changes in the content and nature of work (reallocation of work, emergence of new tasks, new skills needs, diversification of service provision), 3) changes in work community communication and interaction (improved interaction and communication, strengthened multidisciplinary collaboration, complicated remote interaction, reduced encounters) and 4) improved flow of patient information and information security (improved data transfer, patient monitoring and data protection).

Conclusions:

Digitalization-induced changes in health and social care work seem to be manifold and often two-sided. It has the potential to ease the work and offer other benefits, but at the same time it may complicate work in other respects, especially if the system does not support work tasks or the usability is poor. When implementing new digital services and pursuing benefits, more attention should be paid to assessing and considering the potential disadvantages to minimize additional strain among already burdened health and social care professionals.

Key messages:

- The perceived effects of digitalization on health and social care work are often two-sided and can contribute to the well-being of professionals.
- Monitoring the use of digital services and the experiences of professionals about them, as well as identifying their skills needs and training aspirations is crucial.

7.G. Pitch presentations: Health data and assessments

Abstract citation ID: ckac129.425
Presenting a Social Value Database and Simulator for Public Health

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Background:
There is increasing recognition that Public Health Institutes need to build on the traditional value for money approach, to find ways to capture, measure and show the full range of their outcomes, impacts and related value. As part of a drive to measure value and impact in public health and demonstrate how investment in health can contribute to an Economy of Well-being, Public Health Wales has developed an interactive database to capture and illustrate the social value of public health services and interventions.

Methods:
Scoping reviews of both academic and grey literature were undertaken to populate a database of health economics evaluations of public health interventions, focusing on Social Return on Investment (SROI). In addition, a simulated methodology was developed which allows the evidence to be manipulated and made relevant to individual contexts to help inform investment decisions at a local level.

Results:
To date, the database has accumulated an excess of 50 SROI evaluations of various public health interventions, across areas including mental health, behaviour change, physical activity, nutrition, employment and primary care. The evaluations are based on European and International contexts, are published in both grey and academic sources, and are of varying quality.

Conclusions:
SROI is a credible method for measuring the value of wider social, economic and environment outcomes achieved from public health interventions. The Social Value Database and Simulator presents a collation of studies and analysis utilising innovative health economics methods.

Key messages:
- Public Health Wales' Social Value Database and Simulator collates economic evaluations of public health interventions, to be used by policy makers to enable improved investment in health and well-being.
- Social Return on Investment is a credible method for measuring the wider impact created by public health interventions.

Abstract citation ID: ckac129.426
Validity of self-reported diseases from health surveys: comparisons with registry data in Denmark

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Background:
The validity of self-reported disease prevalence estimates in health surveys may be low when compared to data from medical records in administrative registers. Such discrepancies reflect a low content validity of the survey question, which may ultimately compromise the application of these survey data for public health purposes. The aim of the present study was to examine the agreement of self-reports of seven diseases with data from administrative registers, both overall and by sociodemographic characteristics.

Methods:
Prevalence estimates of self-reported current and/or previous diabetes, asthma, rheumatoid arthritis, osteoporosis, myocardial infarction, apoplexy, and cancer, respectively, were derived from the Danish National Health Survey in 2017 ($n = 183{,}372$ adults aged ≥ 16 years). Individual-level data were linked to registry data on the same diseases. Sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), kappa, and total agreement between self-reported and registry-documented prevalence estimates were examined.

Results:
For all included diseases, the specificity was >92%, and the sensitivity varied between 59% (cancer) and 95% (diabetes). NPV was >94% for all diseases and PPV varied between 13% (rheumatoid arthritis) and 93% (cancer). Total agreement varied between 91 % (asthma) and 99% (diabetes), whereas kappa was lowest for rheumatoid arthritis (0.21) and highest for diabetes (0.88). Sociodemographic variables were significantly associated with total agreement with sex, age, and educational level exhibiting the strongest associations.

Conclusions:
Overall, total agreement, specificity, and NPV between self-reported and registry-documented disease prevalence estimates are high, but PPV and kappa vary greatly between diseases. The latter findings reflect a low content validity of the applied survey question for specific diseases. This should be taken into account when interpreting similar results from surveys.

Key messages:
- The validity of self-reported disease prevalence estimates may be low when compared to data from medical records. We found positive predictive values and kappa to vary greatly between diseases.
- Future studies should aim at designing survey questions properly in order to ensure a high content validity of the applied question.

Abstract citation ID: ckac129.427
European HPC cloud infrastructure for managing SARS-CoV-2 data in compliance with GDPR

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The Connecting European SARS-CoV-2 Cohorts to Increase Common and Effective Response to SARS-CoV-2 Pandemic (ORCHESTRA) consortium, led by University of Verona (Italy), brings together key European academic experts and research institutions in infectious diseases, data management and High Performance Computing (HPC) from 26 organizations (extending to 37 partners) from 15 countries. The project aims to create a new pan-European cohort built on existing and new large-scale population cohorts in European and non-European countries to significantly impact on the responsiveness to SARS-CoV-2. The integration and analysis of the very heterogeneous characteristics of SARS-CoV-2 data coming from many different sources such as EHR, retrospective and prospective patient registries, and related ‘omics’ data (incl. genomics, proteomics and transcriptomics) can benefit of data analytics enabled by HPC, where both high compute performance and fast storage capabilities are immensely important. During the first year of the project, a dedicated HPC cloud infrastructure have been designed and partially deployed to fulfill the functional requirements for data management ensuring healthcare data confidentiality/privacy, integrity and security in compliance with the European GDPR regulations. The result is an infrastructure for Data Management composed by three main layers: National Data Providers; National Hubs (one for each HPC center involved: CINECA - Italy, CINES - France and HLRS - Germany), to centralize data at national level and to support data storage, sharing and analysis on data ingested from the National Data Providers; ORCHESTRA Data Portal: the pan-European portal for sharing aggregated data and results. Currently data collection is on going; at the end of the project, clinical centers are expected to have enrolled more than 10.000 patients with about 50.000 samples for the prospective studies.

Key messages:

- The SARS-CoV-2 crisis made evident the need to manage and analyse very heterogeneous health data coming from many different resources across different countries.
- The HPC cloud infrastructure released for the Orchestra project can act as a model to manage future public health threats.

Abstract citation ID: ckac129.428
Cost-effectiveness of two psychological treatments for the reduction of alcohol consumption

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Background:

Up to 7% of the Swedish population meets criteria for harmful use or alcohol dependency but only 10-20% seek treatment. One of the most recommended psychological treatments for controlled drinking is Motivational Enhancement Therapy (MET). Behavioural Self-Control Training (BSCT) is another treatment that is unique in that it is based on the psychology of learning and specifically focused on skills training. To our knowledge, no previous studies exist that evaluated the cost-effectiveness of BSCT for alcohol use disorders (AUD). The aim of this study is to assess the cost-effectiveness of BSCT compared to MET for patients with AUD aiming for controlled drinking over the longer-term from a societal perspective.

Methods:

We modelled a cohort of patients with AUD who aim for controlled drinking, over a 10 year time horizon, and estimated the expected costs and outcomes of BSCT and MET. The model reflects the epidemiological transitions between drinking states, which reflect different levels of daily alcohol intake. Each drinking state is connected to temporary or long-term complications attributable to alcohol consumption, different costs and utilities. The data was sourced from a randomized trial evaluating the effectiveness of MET vs BSCT. Risks for complications and associated costs, utilities and mortality were sourced from the literature.

Results:

Compared to MET, BSCT resulted in less total QALYs gained (4,7 vs 6,6 QALYs per patient). MET remains a cost effective treatment compared to BSCT [incremental cost-effectiveness ratio (ICER) = SEK 8497,79 per gained QALY] and a No Intervention scenario BSCT [incremental cost-effectiveness ratio (ICER) = SEK 16321,07 per gained QALY] at a threshold of 500.000 SEK per QALY.

Conclusions:

This study suggests that MET should remain the recommended treatment for AUD patients with a goal of controlled drinking in favor of BSCT.

Key messages:

- Motivational Enhancement Therapy should remain the recommended treatment for AUD patients with controlled drinking as their goal.
- A future study comparing Motivational Enhancemente Therapy to Behaivoral Self Control Training as recommended treatment in patients wanting to achieve abstinenece is suggested.

Abstract citation ID: ckac129.429
Personalised Medicine in shaping sustainable healthcare: a Delphi survey within the IC2PerMed project

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Background:

Personalised medicine (PM) has the potential to transform health systems and make them more sustainable, by making the population healthier and allocating resources efficiently. European Union and China have become world leaders in the field of PM, increasing collaborations worldwide. In this context, the EU Commission in 2020 launched the IC2PerMed (Integrating China in the International Consortium for Personalised Medicine) project to provide key solutions to enable the convergence of European and Chinese stakeholders toward a common approach in PM.

Methods:

From a mapping exercise of policies and programs in PM in EU and China, we identified 20 priority items for shaping sustainable healthcare. Such items were submitted to several Chinese and European experts in PM involved in a 3-round Delphi survey. Experts were asked to review the items’ content and rate their validity and relevance on a 5-point Likert scale. Priorities reaching a Content Validity Index of more than 79% were included, between 70 and 79% were revised, and less than 70% were excluded.

Results:

Of 20 priorities submitted, 9 reached consensus. The priorities hinge on the resources allocation, defining in advance priority investment, and identifying new payment models for public reimbursement, health technology impact, and assessment importance, while integrating end-user perceptions into the whole innovation process. In addition, the pivotal role of multidisciplinary and cross-sectorial collaborations emerged. Ethical, legal, and social implications and the related costs should be always considered in policymaking, evaluation, and management of technological innovation.

Conclusions:

Integrating resources and setting a clear agenda for the implementation of PM would lead to a faster and more efficient translation into clinical practice. Developing policies valuing all the stakeholders’ contributions would implement PM adoption.

Key messages:

- Healthcare systems sustainability is a priority and PM could make the population healthier and help allocate resources more efficiently, hence reducing the overall costs of healthcare.

- The inter-sectoral collaborations in healthcare are fundamental to achieving the best standard of care. All stakeholders and policymakers should engage to foster sustainability.

Abstract citation ID: ckac129.430
Validation of a national checklist for continuous service improvement in a decentralised framework

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Background:

Previous studies allowed defining a novel checklist for the participatory evaluation of person-centredness in hospital care using 243 items, grouped in 4 main areas, 12 sub-areas and 29 criteria. We aimed to validate a reduced set of core items that could be continuously used for service improvement in Italy.

Methods:

Validation was performed using data collected during the last national survey carried out in 2017-2018 in N = 387 acute care hospitals from 16 out of 21 Italian regions. Descriptive measures for each item were used to assess eligibility for factor analysis, applied separately on each of the 4 main areas originally identified. Varimax rotation with eigenvalues>1 was used to optimise factor structure. Items with an item-total correlation>0.30 and factor loadings>0.4 were attributed to individual factors. Items with inter-item correlation coefficient>0.70 were included in a list of candidate mergers, submitted to expert opinion. Cronbach's alpha was used to assess overall internal consistency.

Results:

A total of 183 out of 243 items included in the original checklist were submitted to factor analysis. Overall values of Cronbach's alpha ranged between 0.77-0.90, indicating a high consistency. A total of 67 items were finally attributed to 4 main areas, allocated as follows: 16 items in 4 sub-areas for 'Person-oriented organisational and care processes', 16 items in 4 sub-areas for 'Physical accessibility, livability and comfort of the facilities', 15 items in 3 sub-areas for 'Access to information, streamlining and transparency', and 20 items in 4 sub-areas for 'Taking care of the relationship with patients and citizens'.

Conclusions:

A simplified checklist including a manageable number of items that can be easily managed to evaluate hospital services was identified through an objective validation process. The national experience can provide valuable lessons for the application of participatory approaches of person-centred care.

Key messages:

- A standardised checklist has been validated using survey data collected through a participatory process in Italian regions.
- The checklist can be used to evaluate and improve person-centered hospital services through a manageable number of items and factors.

Abstract citation ID: ckac129.431
Burden of disease assessment for Germany and its regions – results from the BURDEN 2020 study

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Background:

Epidemiological measures such as incidence, prevalence, or deaths are essential for monitoring population health. However, evaluating them in isolation cannot adequately compare and assess the relative importance of different diseases. Assessments of the burden of disease (BoD) are therefore of growing importance in supporting health policy decisions. Using disability-adjusted life years (DALY) as a summary measure of population health, BoD integrates morbidity and mortality in a transparent approach.

Methods:

Within BoD methodology, deviations in the health of the population from an 'ideal' health status is quantified in the unit of life years. DALY are the sum of years of life lost due to death (YLL) and years lived with disability (YLD). While YLL describe the gap between age at death and statistical life expectancy, the indicator YLD quantifies years lived with a disability or disease. Calculations were based on different primary and secondary data sources for Germany, especially cause-of-death statistics, epidemiological survey data, and statutory health insurance data.

Results:

In Germany, there were about 12 million DALY in 2017, the equivalent of 14,584 DALY per 100,000 population. Coronary heart disease contributes the most to the overall burden of disease, followed by lower back pain and lung cancer. In women, headache disorders and dementias account for more DALY as compared to men. Men have a higher burden of disease from lung cancer or alcohol use disorders. Pain disorders and alcohol use disorders lead the DALY rankings for both sexes in younger adulthood. The burden due to cardiovascular disease, COPD, and diabetes mellitus increases with age and also varies by region.

Conclusions:

The results suggest age- and gender-specific prevention as well as regional health care needs. BoD studies therefore provide comprehensive data for population health surveillance and can support health policy decisions.

Key messages:

- The importance of specific diseases as measured by DALY differs greatly by age and gender, highlighting the need for targeted prevention measures.
- Regional patterns emerge for cardiovascular disease, COPD, and depressive disorders, among others, which may indicate health care needs.

7.H. Workshop: Lessons Learned Workshop from JAHEE- the importance of evaluation

Abstract citation ID: ckac129.432

Organised by: JAHEE
Chair persons: Raffaella Bucciardini (Italy), Bernadette Kumar (EUPHA-MIG)
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Joint Action Health Equity (JAHEE) was a Joint Action financed by the Third Health Programme 2014-2020 of the European Union. It was developed in the period June 1, 2018 - November 30, 2021, and involved 24 countries. It represented an important opportunity for member states to work together to address health inequalities and achieve greater equity in health outcomes across all groups in society in all participating countries and in Europe at large. The results of JAHEE show that almost all participating countries have increased their level of action to address health inequalities and strengthened their capacities in some important policy domains. 76 actions to contrast health inequalities were started during the Joint Action and a final Consensus Policy Document was produced including a set of cross-cutting recommendations. The proposed workshop will discuss the 3-year JAHEE project in the European region and through presentations and active participation review JAHEE actions, results of internal and external evaluations and discuss the main lessons learned. The session will go beyond sharing information and disseminating results and focus on what the JAHEE evaluation has taught us and how it can help improve health equity interventions in the future.

We plan to have:
a) Presentations
1. Short introduction to JAHEE and Actions
2. Presentation Internal Evaluation
3. Presentation External Evaluation

After the presentations there will be opportunity for interactive sessions with the participants to further explore the case studies and issues raised around evaluation and equity

b) Interactive Group Discussion
- What do the JAHEE evaluations findings add?
- What aspects of the evaluation were missing? What could have been improved?
- How can the lessons learned from the evaluation be applied to interventions in equity/ migrant health?

3) Feedback from Groups
4) Summary and Conclusions

Key messages:
- No data no progress.
- Apply an equity lens: Evaluation in health equity actions is important for the sustainability of actions and contributes to the implementation of good practices.

Abstract citation ID: ckac129.433
Short introduction to JAHEE and Actions

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Reducing health inequalities is on the agenda of many countries. Despite an increasing concern and awareness on health inequalities a wide gap exists in Europe in terms of political response. The main objective of JAHEE was to strengthen a cooperative approach among participating countries and implement concrete actions to reduce health inequalities. The partnership was composed of 24 countries including many strategically most relevant public health institutions in the European Union, which contributed with different backgrounds, skills and know-how to the achievement of the project objectives. The main results will be presented.

Abstract citation ID: ckac129.434
JAHEE internal evaluation

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The evaluation of the project for both the intermediate and the final report was based on an internal evaluation conducted by Work Package on Evaluation and on an external evaluation conducted by the Center for Global Health Inequality Research (CHAIN). The project evaluation as based on systematic and continuous monitoring of processes, outputs and outcomes indicators aimed to guarantee the achievement of the planned objectives and the identification of the lessons learned for future health inequalities programs. The main results will be presented.

Abstract citation ID: ckac129.435
JAHEE external evaluation

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The general aims and evaluation blocks concerned the extent to which JAHEE achieved its objectives, and the identification of lessons learned for future health inequalities programmes. More specific aims included: • Producing knowledge: to understand the outcomes of JAHEE and build knowledge on health inequalities. • Influencing decision-making: to produce results that can guide the development of policies and initiatives tackling health inequalities. • Accountability: to clarify responsibilities and outcomes of JAHEE. • Lessons learned: to provide recommendations for future initiatives.

The evaluation was grounded in five evaluation blocks: relevance, effectiveness and impact, sustainability, dissemination, and added value. The main results will be presented.

Abstract citation ID: ckac129.436
Interventions on health equity in the future

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A final reflection on the importance of evaluation aspects will be proposed at the end of the workshop.

7.J. Pitch presentations: Occupational health and social support

Abstract citation ID: ckac129.437
Labor and social protection gaps impacting health of non-standard workers: An international study

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Background:

Labor regulations and social protection structures are intended to protect workers, but the needs of those in precarious and non-standard employment (NSE) are often missed, which may negatively impact health and well-being. The aim of this research is to document how workers in NSE in six countries - Belgium, Canada, Chile, Spain, Sweden, and the US - with varying policy contexts experience aspects of employment that are linked to health.

Methods:

We employed a mixed methods approach for this study. To understand policy contexts, we analyzed country-level labor regulatory and social protection frameworks using 2019 Organization for Economic Cooperation and Development data. To understand the experiences of workers in NSE, we conducted 250 in-depth interviews with workers at different levels of employment precariousness between January and June 2021.

Results:

Overall, European countries have the most social expenditures and North American countries have the weakest labor market regulations. In all these varying contexts, workers in NSE reported multiple unmet needs, e.g., inadequate paid sick and parental leave and unemployment compensation. These unmet needs occur due to various barriers, including poor enforcement, legal loopholes, or required minimum employment time. Workers' living accommodations are also affected, as home financing or rental contracts are dependent on permanent employment. In response, they tended to rely disproportionately on individual or family resources for financial and social support rather than on government or employer resources.

Conclusions:

Findings suggested that diverse labor regulatory and welfare regime contexts are unsupportive of workers in NSE due to multiple gaps in policies essential to public health. The shifting of responsibility for key employment and social supports to individuals and their families is likely to increase health inequities for workers in NSE.

Key messages:

- Our study documents multiple policy gaps affecting key employment-related social determinants of health among workers in NSE.
- This occurred across diverse labor and social structure contexts in six countries.

Abstract citation ID: ckac129.438
The influence of onset of disease on exit from paid employment among workers in The Netherlands

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Background:

This study investigates the influence of onset of disease on exit from paid employment, and whether this differs across diseases and sociodemographic groups.

Methods:

Register data from Statistics Netherlands on medication prescription was linked to information on employment status and demographics. Persons who were employed in 2009 and 2010, and who did not use medication for the selected disease in 2009 (n = 5,889,036) were followed-up during 9-years. Six diseases were identified based on medication prescription in 2010 and 2011: cardiovascular diseases, inflammatory diseases, diabetes mellitus, respiratory diseases, psychological disorders, and psychotic disorders. Four pathways out of paid employment were defined: disability benefits, unemployment, no income, and early retirement. Cause-specific Cox Proportional Hazards regression analyses were performed, with interaction terms for age, sex, and migration background.

Results:

Onset of disease increased the likelihood to exit paid employment, with strongest associations for psychotic disorders (HR 2.91, 95% CI 2.81-3.02) and psychological disorders (HR 2.01, 95%CI 1.98-2.04). Onset of disease was most strongly associated with disability benefits, followed by unemployment. The influence of psychological and psychotic disorders on disability increased until around middle-age, after which it decreased. The influence of mental health problems on exit from paid employment was stronger for persons with a non-native Dutch background and males.

Conclusions:

Onset of diseases, especially mental health disorders, is a risk for early exit from paid employment. Effective interventions are needed to enhance an inclusive workforce and prevent involuntary loss of paid employment.

Key messages:

- Onset of all diseases increased the likelihood of exiting paid employment, through disability benefits, followed by unemployment.
- Onset of psychological and psychotic disorder had the strongest association with exiting paid employment, especially among males and workers with a migration background.

Abstract citation ID: ckac129.439
Workplace social support, mental health and work functioning among young workers

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Background:

Young adults with a history of mental health problems (MHPs) report lower work functioning (WF) compared to their peers without a history of MHPs. The identification of modifiable, protective workplace factors, such as workplace social support, is needed to increase WF.We examined the moderating role of workplace social support from supervisors and co-workers in the prospective association between MHP trajectories from childhood to young adulthood and WF among young adults.

Methods:

The most recent 2019/2020 data of N = 861 young workers, participating in the 18-year follow-up Dutch TRAILS (TRacking Adolescents' Individual Lives Survey) cohort study, was used. MHP trajectories for internalising and externalising problems included measurements at ages 11, 13, 16, 19, 22 and 26. Supervisor and co-worker social support were measured at age 29. WF was assessed at age 29. Logistic regression analyses were conducted to examine the moderating role of workplace social support in the association between MHP trajectories and WF.

Results:

Four trajectories were identified for both internalising and externalising problems. Young adults with high-stable MHP trajectories reported more often low WF (ORs 3.73 (95% CI 2.28-6.12) and 2.88 (1.78-4.65) for internalising and externalising problems respectively) than those with low-stable trajectories. Higher supervisor and co-worker social support were associated with a lower odds for low work functioning (adjusted ORs ranging from 0.67 (0.54-0.83) to 0.84 (0.71-1.00)). No moderating effect of workplace social support was found for the association between MHP trajectories and WF.

Conclusions:

Both supervisor and co-worker support were shown to be important for all young workers, regardless their history of mental health problems. Occupational health professionals should create awareness among employers and employees that workplace social support is beneficial for young adults' work functioning.

Key messages:

- Both supervisor and co-worker social support are important for all young workers' work functioning, regardless of their history of mental health problems.
- Creating awareness of the impact of workplace social support on young adults' work functioning among employers and employees should be a priority area for occupational health practice and policy.

Abstract citation ID: ckac129.440
Individual differences in sustainable working life: genetic and environmental contributions

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Background:

Previous research of aetiology of interruptions in working life have shown that both genetic and environmental factors contribute to individual differences in sickness absence (SA) and disability pension (DP). However, we still lack knowledge about etiological factors contributing to sustainable working life. The aim was to study the importance of genetics, shared (mainly childhood) environmental factors, and individual (unique) environmental factors for remaining in the work force over the life-course, i.e., having a sustainable working life.

Methods:

The study population include 108,275 twin individuals born 1930-1990 (53% women) with comprehensive national register data on social security, health, and demographic factors. We utilized two measures of sustainable working life: 1) employed at least two consecutive years (n = 21,348), without interruptions due to SA (>14 days), DP, or unemployment; 2) 22-years of sustainable working life, i.e., those who were employed all years from 1994 to 2016 (n = 12,931) without SA (>14 days), DP, or unemployment. Old-age pension, emigration, or death were censored. The final sample included same-sexed twin pairs of known zygosity; monozygotic pairs n = 11,403 and dizygotic pairs n = 13,354. Classical twin modelling was applied to estimate the relative contributions of genetic and environmental factors to individual differences in sustainable working life.

Results:

Individual differences for two consecutive years of sustainable working life were explained by genetics 36%, shared environment 8%, and unique environmental factors 56%. For 22-years of sustainable working life genetics accounted for 18%, shared environment 46%, and unique environmental factors for 37% of individual differences.

Conclusions:

Individual variation in sustainable working life is due to both genetic and environmental factors. Environmental experiences that twin siblings share while growing up is of importance, especially for long-term sustainable working life.

Key messages:

- Childhood environmental circumstances as well as environmental exposures later in life seem to outweigh genetic influences on long-term sustainable working life.
- From a public health perspective, the importance of family and surrounding environment on sustainable working life implies a potential for workplace or societal interventions, or individual support.

Abstract citation ID: ckac129.441
Sources of perceived social support and emotional difficulties in late adolescence

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Background:

Late adolescence is a life phase when mental health problems are common. Social support is, however, associated with less problems. Social support stems from different sources with the family being the main provider in early life while friends gain in importance during adolescence. Using the Multidimensional Scale of Perceived Social Support (MSPSS), this study investigates the relative importance of different sources of support for emotional difficulties in girls and boys.

Methods:

Data was derived from the Swedish population-based cohort study Futura01 (girls: n = 2105, boys: n = 1673). Adolescents in the final year in compulsory school (aged 15-16 years) were sampled in 2017 and followed up in 2019 (aged 17-18 years). Perceived social support was measured at 17-18 years by the MSPSS scale. Emotional difficulties were measured at 15-16 and 17-18 years by the Strengths and Difficulties Questionnaire (SDQ) subscale. Linear regression analysis was used to study associations between support sources and emotional difficulties at 17-18 years, adjusting for all support sources, family type, upper secondary school program as well as prior emotional difficulties.

Results:

Among girls, emotional difficulties were associated with perceived support from family (b = -0.22; 95% CI -0.29; -0.15) and friends (b = -0.26; 95% CI -0.35; -0.18) but not significant others (b = 0.00; 95% CI -0.10; 0.11). Among boys, emotional difficulties were associated with support from family (b = -0.10; 95% CI -0.18; -0.02), friends (b = -0.17; 95% CI -0.25; -0.09) and significant others (b = -0.13; 95% CI -0.22; -0.04).

Conclusions:

The negative association between perceived social support and emotional difficulties, irrespective of prior emotional difficulties, suggests that support has a protective effect. In late adolescence, support from friends and, to a similar degree, the family seems to matter for mental health. Support from significant others did however not show a protective effect in girls.

Key messages:

- Adolescents aged 17-18 years with higher levels of perceived social support report less emotional difficulties.
- Efforts to increase family and friend support are relevant for adolescent mental health.

7.K. Workshop: The implementation of ''Good or Best Practices'': what can we learn from each other?

Abstract citation ID: ckac129.442

Organised by: RIVM (Netherlands), BZgA (Germany), Finnish Institute of Health and Welfare
Chair persons: Djoeke Dale Van (Netherlands), Christin Rossmann (Germany)
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Introduction:

The value of evidence-informed development and implementation of public health measures and practices - often called ''good'' or ''best practices'' - has been widely acknowledged in order to effectively address public health challenges. Yet information on such measures and practices remains insufficiently accessible to practitioners, policy and decision-makers. On a national level, several European countries have developed ''Best Practice Portals'' in order to support the uptake, implementation and dissemination of acknowledged public health best practices or policies.

Objective:

Six countries in Europe with a national ''portal'' have recently compared the rationale, structure, and processes used by their respective national portals, gaining first insights into how development and implementation of best practices can be further supported from a national level. The workshop will present these first insights, as well as further promising approaches to facilitate access to best practices, such as innovative digital tools which local public health actors, policy and decision-makers may use to inform selection of best practices for their contexts.

Methods:

The workshop starts with three presentations to introduce and to illustrate the topic. In the second half of the workshop we ask for an active contribution of the participants. For interaction, the open space method will be used.

Programme:

1. Three presentations of 10 minutes with 1-3 questions:
- The presentation of the results of a survey in Poland assessing the decision-makers' needs with regard to the implementation of best practices/evidence-informed policymaking
- A descriptive case comparison of six European program registries and the European Best Practice Portal, illustrating different approaches to support implementation of evidence-informed public health measures and practices
- Presentation of a digital tool to support evidence-informed planning and implementation of healthy and active environments by local public health actors

2. Discussion with the open space method (20 min)

In each of the four corners of one room, there is a flipchart with a moderator and a discussion question. Every participant is free to choose one of the flipcharts to discuss the topic with other participants who have chosen the same topic. The participant is free to go to another corner if he/she wants to join also other discussions. Discussion topics are:

- What are the advantages and limitations of national best practice portals in supporting the implementation of evidence-informed practices?
- What are other strategies to improve implementation and what makes them successful?
- How digital planning tool can be useful in evidence-informed planning and implementation??
- How can national portals collaborate with the EU Best practice portal?

3. Conclusion (10 min): every flip chart moderator reflects on their discussion, presenting 3 of the most important findings.

Key messages:

- National best/good practice portals have an important role to play in supporting the implementation of good/best practices.
- Different strategies should be employed to facilitate implementation of evidence-informed practices.

Abstract citation ID: ckac129.443
The way from stakeholders' needs research to the public health policy and practice

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The implementation of the project ''ProfiBaza'' was the unique opportunity to effectuate a data set with the possibility to showcase for the first time in Poland which public health (PH) interventions are taken and whether they cover population health needs. In order to be forethoughtful to this challenge, the needs of stakeholders within the health system were investigated. Particularly, considering the widely recognised knowledge-practice gap in the PH field. We would like to demonstrate the results of a needs analysis related to: the accessibility assessment of the information about PH interventions; the need of establishing a good practices database regarding health promotion and disease prevention; the possibility to use research findings in PH practice. All those would be presented from the perspective of researchers, politicians, decision makers and PH institutions. This research was conducted as a questionnaire-based survey and focus group interviews. Researchers were asked to assess the compatibility between the PH research and the population health needs. The group of health sector decision makers were questioned about the usage of the information available in the ProfiBaza for the process of evidence-based decision making; local government politicians - to assess their readiness to implement health programmes, use the good practices database and build partnerships for health while representatives of various sectors - to assess the need of initiating a knowledge translation platform via the launched ProfiBaza system. The results of the research demonstrate that there is a need for: solidified collaboration between different types of PH stakeholders, mobilization, coordination, sharing experiences, creating networks of cooperating institutions, which will enable the effective response to emerging challenges and opportunities and to counteract the phenomenon of dispersion of efforts in improving health and reducing social inequalities in health.

Abstract citation ID: ckac129.444
Promoting implementation of ''Good and Best Practices'' through Health Promotion and Prevention Registries

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Health promotion and disease prevention programme registries can play an important role in increasing transparency of ''good/ best Practices'' and promoting their implementation. In the EU, there are different approaches to how registries seek to support the implementation of practices. However, there is limited knowledge of the extent to which there are informative differences or overlaps in the mechanisms chosen for accreditation, capacity building and implementation. This presentation focuses on six national registries in the EU (Finland, Germany, Italy, Netherlands, Poland, Slovenia) and the European Public Health Best Practice Portal. Information was obtained through a working group on Good/ Best Practice Portals, established in 2019. Information on the process of adding good/best practices to the registry and on measures that promote implementation was gathered and evaluated through a descriptive case comparison. The comparison suggests that implementation can be promoted through different approaches for capacity building measures and incentives for implementation. The latter included funding resources, titling/ awarding of practice and professional feedback in only a few registries. Registries may be useful not only for transparency of good and best Practices but also for implementation through capacity building and several incentives. The information provided in this presentation may be informative in guiding development of similar resources elsewhere and a starting point for discussion on how to support best the implementation of good/ best practices.

Abstract citation ID: ckac129.445
Promotion of healthy living environments in communities: a digital planning tool for local public health actors

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In their function as overarching settings, communities have a controlling role and political competence for the development and implementation of healthy living environments in Europe. However, the establishment of health-promoting structures is often hampered by a lack of resources and know-how, and decisions in practice are mostly based on personal experiences or standard procedures, which are often not in line with scientific findings and evidence-informed decision making. In the area of physical activity and older people, a digital planning tool (''Impulsgeber Bewegungsförderung'') compromising tools for needs assessment, interventions and information on physical activity, process management, legal issues and funding is being built to support the implementation of practices by local public health actors. This presentation will introduce the digital planning tool and its process evaluation. A mixed-method approach was applied to answer the question of whether and how the application can succeed in community settings and which additional needs of local actors exist. Initial steps of the recruited socio-economically disadvantaged model regions were setting up local steering committees and needs assessment using the tool. The model regions confirmed the usefulness of the tool in their day-to-day work, but used it with varying frequency. Among others, the tool helps to raise awareness among key actors, to reflect on their own work, or to identify funding sources. Wider use of the digital tool may lead to more evidence-informed actions in health promotion and prevention. The evaluation of the digital planning tool in a small area of health promotion will provide initial insights into how to support the implementation of activity-promoting living environments on a local level.

7.L. Workshop: New roles and innovative skill-mix in nursing across Europe: trends and lessons for implementation

Abstract citation ID: ckac129.446

Organised by: WHO Europe, Technische Universität Berlin
Chair persons: Margrieta Langins (Canada), Claudia Maier (Germany)
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Many countries in Europe are changing the roles and skill-mix of their nursing workforce. A sufficient and well-skilled nursing workforce has shown to be key for population health, most recently demonstrated during the Covid-19 pandemic. An increasing number of countries have introduced Master-level education for nurses to work in advanced practice nursing (APN) roles. These changes in the educational systems have implications on patients, clinical practice, teams and health systems. Moreover, many countries are re-orienting their health services from hospital to primary health care and prevention, driving new roles for nurses. The relevance of high-quality education and upskilling has been exemplified during the Covid-19 pandemic, where nurses had to quickly adapt to new treatment and caregiving situations in challenging work environments. Objectives of the workshop. This workshop will provide an overview of research and policy developments in Europe, drawing on recent research. First, an overview of innovative skill-mix changes in nursing will be presented and evidence on health outcomes, based on a study from the European Observatory on Health Systems and Policies. Second, research from Germany in five innovator hospitals will be presented, a country which is still at an early stage with integrating nurses in advanced roles. The panel discussion will address innovations in APN research, practice and policy lessons in Europe and with in-depth insights from four countries (Netherlands, Finland, Switzerland, Germany). In the Netherlands, the policy instrument "experimental law" has led to full practice authority for Nurse Practitioners, its impact on practice as well as barriers and enablers will be addressed. In Finland, the focus will be on recent evidence on the expanded role of nurse prescribers, the policy process and early evidence on impacts for nurses and patients. In Switzerland, the lack of regulation and reimbursement schemes restrict advanced practice, whereas drivers comprise changes in population needs, education (master and doctoral level) and reduced workforce availability. Developments at the national and cantonal level and the evaluation of innovative care models with APNs will be presented using case examples and recent research (e.g. university hospitals, primary care). The panelists will discuss implications for research, policy and nursing management, also taking into account the Covid-19 pandemic and other unexpected "health shocks" which have shown to impact considerably on nurses' roles in practice. Lessons will be shared on strategies for a well-qualified and -resourced nursing workforce integrated in systems. The format is 'regular workshop' with two presentations and a panel discussion with experts from four countries.

Key messages:

- Multiple innovative nursing skill-mix model exist, with promising outcomes for individuals and population groups if nurses are well trained and equipped.
- Implementation of APN roles requires enabling policy contexts, sufficient funding, clinical leadership, teams that are open to innovations, and strong nurses that take on APN roles.

Abstract citation ID: ckac129.447
Overview of innovative skill-mix changes in nursing across Europe

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Background:

Many countries in Europe and worldwide have implemented new professional for nurses or are in the process of implementation, yet, an overview of the evidence on skill-mix changes has been missing. This study has analysed skill-mix innovations in nursing, evidence on outcomes and lessons for implementation.

Methods:

An overview of systematic reviews, following a protocol plus country case studies, as part of an international study. The literature search was performed in six databases, with search terms covering skill-mix whereby the nursing profession played a key role. Screening was performed by three researchers after high interrater reliability rates were achieved. Analyses were performed for the nursing professions, a typology of skill-mix changes (task-shifting and role expansion) and evidence on outcomes.

Results:

A total of 42 systematic reviews were identified on nurses working in new roles. The roles varied considerably, ranging from nurse prescribing to advanced practice nursing and nurse-led clinics. Nurse-led chronic care programmes were frequently identified, with overall positive outcomes on several health outcomes, e.g., for patients with diabetes or cardiovascular diseases. Nurses were also working in advanced roles in health promotion and prevention, e.g., performing screening programmes, showing equivalent quality of care compared with doctors if adequately trained. Several skill-mix models to enhance care coordination and integration were identified, suggesting that when tailored to the needs of specific population groups, particularly for vulnerable groups, may improve health outcomes or access to services.

Conclusions:

The roles of nurses are increasingly diversifying and expanding internationally. Sharing country experiences on how to effectively educate the workforce to be prepared for these new roles and ensure smooth integration is critical.

Abstract citation ID: ckac129.448
Implementation strategies to integrate academically qualified nurses in German innovator hospitals

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Background:

In Germany, the number of Bachelor and Master programs for nurses has increased significantly over the past 20 years but the recommended target of 10%-20% of academically qualified nurses has not yet been reached. In university hospitals, it was 3% in 2018. Major challenges for hospital managers are to attract and retain academically qualified nurses in clinical practice, with some hospitals doing better than others.

Methods:

In 2020, semi-structured interviews (n = 18) were conducted with chief nursing officers, nurse managers, nurses, and physicians working in five innovator hospitals, characterised by a high willingness to change the work environment, improve quality of care, and increase the number of academically qualified nurses. The interviews were recorded, transcribed, and analysed using Atlas.ti. Mayring's qualitative content analysis method was applied.

Results:

Recruiting, retaining, and integrating academically qualified nurses varied in the five hospitals studied but all provided time and/or financial support for nursing students. Those with a longer tradition of attracting academically qualified nurses were following a hospital-wide strategy. CNOs or other leaders motivated nurses to enrol in a degree program, provided close support for clinical projects (e.g., on the ward) and when starting a career (e.g., coaching), and fostered individual career planning. Specialised tasks for nurses with a master's degree were leadership roles or specialised patient care. Taking over additional clinical or scientific activities according to their qualification was seen as beneficial to integrate the nurses. Barriers were the limited acceptance of graduated nurses by nurses with a vocational training, low staffing levels, and limited political support.

Conclusions:

Recruiting and retaining graduated nurses takes efforts by hospitals in the current situation of a nation-wide nursing shortage. A hospital-wide approach can be a way to overcome this challenge.

Speakers/Panelist:

Inge Rinzema
V&VN VS, Dutch Association of Nurse Practitioners, Utrecht, Netherlands

Johanna Heikkilä
JAMK University, Jyväskylä, Finland

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7.M. Round table: Preparedness & response for emergency situations: joined forces of H2020projects in the PREPAREcluster

Abstract citation ID: ckac129.449

Organised by: PHIRI, Sciensano (Belgium), EUPHA-PHMR
Chair persons: Svetla Tsolova (Sweden), Petronille Bogaert (EUPHA-PHMR)
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In recent years, there have been increasing instances of cross-border crises, including climate change, terrorism, international trade disputes and global health threats. These emergency situations require large-scale planning for preparedness and response in order for countries to be able to cope with unforeseen challenges. Especially the COVID-19 crisis had a huge impact on European countries and the daily lives of its citizens. The pandemic has proven to be more than a health crisis; it is a human, economic and social crisis, impacting people, societies and economies at their core. The European Commission has recently funded many projects (in the Horizon 2020 program, H2020) to work on different aspects of crisis management, many with a focus on managing pandemics. While each project has distinct aims and challenges, they all work towards a common goal. It is for this reason that thirteen EU-funded H2020 projects, with a combined funding of €72 million, have united to form the PREparedness and resPonse for emergency situAtions in euRopE (PREPARE) cluster. Each of the thirteen projects is tackling challenges specifically looking at the preparedness and response phases of crisis management and working together they aim to achieve stronger results and greater impact for their cause. Together CO-VERSATILE, COVID-X, COVINFORM, EUR3KA, LINKS, NO FEAR, PANDEM-2, PathoCERT, PERISCOPE, PHIRI, RISKPACC, STAMINA and STRATEGY will explore synergies, research opportunities and deliver joint activities to maximise impact. Through mutual support, the cluster will strengthen the response to the ongoing crisis and the aim to be better prepared for future health crises. In a round table discussion, a selection of these H2020 will briefly present their contribution to crisis preparedness and resilience of European countries (25 min). These brief presentations will be followed by a round table discussion (35 min), touching upon topics such as common findings (building trust, health inequalities, training and capacity building, addressing stakeholder diversity); and the dissemination and exploitation of the results to the general public, to researchers, to (public) health professionals and policy makers, Finally, as many of these projects end in 2022/2023, what are the next steps or threats, what should be the highest priority for future Horizon Europe projects? The audience will be able to provide their view on the different topics through an interactive voting poll during the session. Throughout the session, the exchange of knowledge, experiences and opinions with the audience will be facilitated by the chairs.

Key messages:

- The actionable outcomes of the major Horizon 2020 projects provide key-input for political decision-making in preparedness and response scenarios.
- The PREPARE cluster builds a sustainable structure for large-scale planning for preparedness and response for countries to be able to cope with unforeseen challenges.

Speakers/Panellists:

Claudia Habl
Gesundheit Österreich GmbH, Austrian National Public Health Institute, Vienna, Austria

Brigita Kairiene
National Public Health Centre, Ministry of Health, Vilnius, Lithuania

Claudia Houareau
Robert Koch Institute, Berlin, Germany

Jil Molenaar
University of Antwerp, Antwerp, Belgium

Claim Rafalowski
Magen David Adom, Or Yehuda, Israel

7.N. Workshop: Mental health promotion is key to making a change for children and adolescents

Abstract citation ID: ckac129.450

Organised by: EUPHA-CAPH
Chair persons: Julia Dratva (EUPHA-CAPH), Jutta Lindert (EUPHA-PMH)
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The Covid-19 pandemic highlighted the already high burden in children and adolescents and has caused an increasing mental health burden in this age group. While provision of treatment is highly relevant, this alone is unlikely to make a significant difference in reducing the burden of poor mental health and mental illness. It is elemental to promote and strengthen mental health, also knowing this will not be the last crisis to tackle. Alongside of low threshold support and prevention, health promotion can strengthen individuals' resilience or coping mechanisms. Next to individual and target group interventions, health promotion interventions also follow a setting approach, according to which people are understood as part of the social systems in which they live and spend their time. This workshop is about mental health promotion in youth. We wish to point to the importance of health promotion in the overall aim to improve mental health. The first presentation will provide an overview of mental health promotion concepts and mechanisms, providing evidence-based arguments and examples. The second presentation focusses on the ABC-framework to develop and implement MHP initiatives developed by the WHO. The last two presentations address the setting-approach, school and family and their potential in mental health promotion. In the concluding discussion with workshop participants, we will address questions, experiences, and best practices in mental health. The aim of this workshop is three-fold:
1. Provide the back-drop and a theoretical & practical basis on mental health promotion.
2. Present both individual and setting-specific examples of mental health promotion.
3. Provide room for discussion on experience and best practice in mental health promotion in youth.

Key messages:
- Mental health promotion is an important element in reducing mental health burden in children and adolescents.
- Health promotion can effectively be implemented on an individual and structural level.

Abstract citation ID: ckac129.451
Central concepts in mental health promotion programs for children and adolescents: Evidence and examples from Switzerland

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Universal mental health promotion programs draw on a wide range of concepts to promote children's and adolescents' mental health. This presentation aims to provide an overview of the central concepts from health, developmental and social psychology, psychiatry, and public health/health promotion and to illustrate their application using examples from Swiss mental health promotion programs for children and adolescents. Concepts on internal, biological, psychological and psychosocial factors such as the ten life skills that are recommended by the WHO, self-efficacy, (mental) health literacy, and the resilience literature are looked at as well as concepts on external risk and protective factors such as social support (quality of attachment and relationships, positive family climate and peer relations) and the quality of educational institutions. Evidence on their effectiveness is reported and conceptual similarities and differences as well as the underlying mechanisms of action are explored from a health behavior change perspective using the behavior change wheel. Finally, implications for the design and implementation of mental health promotion programs are discussed

Abstract citation ID: ckac129.452
Implementing Mental Health Promotion Initiatives - Process Evaluation of the ABCs of Mental Health in Denmark

Lourdes Cantarero Arevalo

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Treatment and prevention alone are unlikely to make a significant difference in reducing the burden of poor mental health and mental illness. Therefore, mental health promotion (MHP) initiatives are advocated. In 2014, the ABCs of mental health (ABCs) partnership was established in Denmark; in the partnership, partner organisations, e.g., municipalities and NGOs, use a research-based framework for MHP, the ABC-framework, to develop and implement MHP initiatives. This presentation has two aims: (1) to outline the overall characteristics of these MHP initiatives; and (2) to explore local coordinator and stakeholder perceptions of the implementation processes and the impact of the MHP initiatives. Questionnaire surveys, individual interviews and group interviews were conducted during 2017-2020. The MHP initiatives were grouped according to three strategies: building MHP capacity, campaign activities to promote mental health awareness and knowledge and establishing and promoting opportunities to engage in mentally healthy activities. The ABC-framework was positively received and viewed as providing relevant knowledge for working with MHP as well as fostering intersectoral and interprofessional collaborations. However, using a bottom-up approach to develop and implement MHP initiatives can be time-consuming and resource demanding, and it requires a deliberate balancing of local adaptability and concrete guidance when engaging stakeholders and implementers. Overall, using the ABC-framework to develop and implement MHP initiatives holds great promise for advancing and promoting MHP practice.

Abstract citation ID: ckac129.453

Challenges in school-to-work transition for marginalized groups - the need to strengthen structures for vulnerable youth (post pandemics) Findings from the German project ''Co*Gesund''

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Objective:

The transition from school to work is a challenge for young people which is closely correlated with health and well- being. Promoting resilience factors contributes to adolescents' mental health and social and educational success. The aim of this study is to examine how especially vulnerable youth cope with the transition during the pandemic to identify which structural measures are helpful and which are a hindrance and to develop recommendations for action.

Methods:

First, a rapid review on the subject of young people's mental health during the pandemic was conducted. Based on this 30 interviews with professionals from schools and vocational education and two focus groups with young people from participating institutions follow in spring and summer 2022. Finally, recommendations for action will be developed together with both groups.

Results:

The results of the literature research illustrate the strong influence of the pandemic on the mental health of adolescents and, in particular, the increase in health inequalities along the social gradient. In relation to school and education, it is clear that young people lacked contact persons during this time. It is expected that the interviews and focus groups give insight, which resources of the young people can be strengthened in a low- threshold way and will provide further concrete indications on what structural development is needed to strengthen the resilience of young people.

Conclusions:

For the promotion of mental health it is necessary to rely not only on the resources of young people themselves, but especially on the resources available in their environment. Only in this way transition processes can be managed successfully by the young people and they can be strengthened for the future. To this end, solutions should be developed jointly and support systems should be improved

Abstract citation ID: ckac129.454

Family factors contribute to mental health conditions – a systematic review

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Background:

Family functioning can have positive and negative mental health consequences. Positive relationships can boost mental health, the opposite is true for negative relationships. 1 in 4 individuals are affected by at least one mental health condition in their life. Family-based interventions can help prevent the onset of mental health conditions and mitigate its consequences.

Methods:

Following databases were systematically searched: Medline; PsychInfo, Web of Sciences and Cochrane, resulting in 3719 hits. After removing 12 duplicates, 3707 studies were screened. After exclusion of irrelevant studies, 362 studies were assessed for eligibility and 40 studies were included. Inclusion criteria were original studies with $\geq$100 participants, $\geq$18 years, general population, and family members. Exposure had to be family social cohesion or conflict, or social capital. The outcome had to be a mental health condition.

Results:

Most studies (n = 37) used a cross-sectional design. 37 studies included a measure of family functioning and 3 studies used one of family structure. Most used was the Family Adaptability and Cohesion Evaluation Scale (n = 17), followed by the Family Functioning Scale (n = 5). Family relationship quality was related to depression, anxiety, and substance use. All aspects family cohesion were related to mental health outcomes. Family conflicts are associated with an increase in mental health conditions.

Conclusions:

Family cohesion shows an association with positive mental health while conflict is associated with negative mental health. This is an indication, that interventions at the family level are useful to help prevent/mitigate mental health conditions over the life course. Main message: As mental health conditions are a big public health issue affecting at least 1 in 4 individuals, family-based interventions for mental health condition prevention could not only help individuals but the whole family to strengthen and maintain positive mental health.

7.O. Oral presentations: Migrant health

Abstract citation ID: ckac129.455

Universal screening for postpartum depression? Inequalities and barriers among immigrant mothers

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Background:

Postpartum depression (PPD) is a serious public health concern affecting 12% of women globally. Early detection is necessary to provide timely support. In Scandinavian countries, universal screening is recommended. However, migrant women, who are at increased risk of PPD, seem to be screened less often. Still, there is limited knowledge about 1) how acculturation relates to screening, and 2) how healthcare providers navigate PDD screening with migrant women.

Aims and methods:

We used a mixed-methods approach to explore whether and why inequalities in PPD screening using the Edinburgh postpartum depression scale (EPDS) may exist in the context of universal PPD screening within the free home-visiting program in Denmark. Data from 77,694 infants and their mothers participating in the Danish home-visiting program

(2015-2018) was used to examine the prevalence of participation in PPD screening and its association with migrant status and acculturation factors. We interviewed 16 health visitors to examine qualitatively challenges and strategies used when assessing PPD among immigrant mothers.

Results:

Immigrant women were 80% more likely to lack screening (adj. RR 1.81-1.90). All factors indicating lower acculturation, such as shorter length of residence, older age at migration, and having studied abroad were independently associated with increased risk of lack of screening. Thematic analysis of qualitative data showed how cultural and linguistic differences and organizational constraints limit health visitors' ability to assess immigrant women's mental health needs. Although health visitors often used EPDS as an opener to talk about mental health, they did not use it as an 'assessment'.

Conclusions:

This study shows inequalities in PPD screening than may result in reduced use of mental health services among immigrant women. The experiences of health visitors shed light on how to improve the identification of PPD among immigrant mothers.

Key messages:

- Migrant women in Denmark, even those who have migrated as children, are at risk of being left out of PPD screening programs.
- Limited organizational support and cultural competences makes PPD screening among immigrant women not feasible for maternal health visitors.

Abstract citation ID: ckac129.456

The protective effect of reserves on mental health: a cohort study among undocumented migrants

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Background:

Resources are essential for mental health. In temporary stressful situations throughout life, people need to use a particular type of resources, their ''reserves'', to handle the stress. We do not know whether ''reserves'' (economic, cognitive, and relational) are more protective of mental health than ''conventional'' resources. Using a cohort of undocumented migrants experiencing a stressful transition in their life course (in the process of regularisation with local authorities), we will determine which resources, or reserves, and which types, better protect their mental health.

Methods:

A two-wave cohort study followed 362 undocumented migrants from 2017 to 2020, half of whom (48%) were involved in a regularisation process with the local authorities. Depressive symptoms were measured with the Patient Health Questionnaire, anxiety with the Generalized Anxiety Disorder. Economic reserves were measured at baseline and follow-up, cognitive and relational reserves at baseline only. Conventional economic and relational resources were assessed at both time points. The association between reserves and resources and mental health were examined using generalised estimated equations adjusted for age, sex and working hours per week, as well as the interactions between reserves/resources and regularisation status.

Results:

The indicators of economic and relational reserves were consistently and strongly associated with lower levels of anxiety and depressive symptoms. On the other hand, we found that mental health outcomes were marginally associated with conventional economic resources but independent of the relational resources indicators. We did not find strong evidence of interactions between reserves/resources and regularisation status.

Conclusions:

In a vulnerable population experiencing a stressful transition, reserves are more protective than resources. More research is needed in other vulnerable groups experiencing other stressful events.

Key messages:

- Undocumented migrants' economic and relational reserves protect their mental health.
- More research on the protective effect of reserves is needed in other vulnerable groups experiencing other stressful events.

Abstract citation ID: ckac129.457

Health empowerment and access to health coverage among immigrants in France: the Makasi intervention

Marwân-al-Qays Bousmah

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Background:

The Makasi community-based research project offered an innovative health-related empowerment intervention to immigrants from sub-Saharan Africa living in precarious situations in the greater Paris area, to reduce their social vulnerability and their exposure to HIV. Our objective is to evaluate the impact of the intervention on access to health coverage in this population.

Methods:

Participants were recruited based on precariousness criteria in public places in Ile-de-France (squares, railway stations, markets, etc.) by mobile teams of social workers and health mediators. Following a stepped-wedge design, participants were randomised into two groups receiving the intervention sequentially (immediately in one group and 3 months later in the other). We evaluated the impact of the Makasi intervention on access to health coverage among 821 individuals observed at 0, 3, and 6 months, between 2018 and 2021. We implemented random-effects panel models - allowing for unobserved heterogeneity - using a Heckman selection approach to correct for attrition. Finally, we used seemingly unrelated regressions (SUR) to examine the extent to which the effect of the intervention was mediated by health-related empowerment.

Results:

Participants - 77% of which were men - had been living in France for 4 years on average. 44% of them had no health coverage at the time of inclusion. Our results provided evidence for a significant impact of the Makasi intervention on participants' access to health coverage, with an 18 percentage-point increase in the probability of accessing health coverage 6 months after having received the intervention ($p < 0.01$). The mediation analysis revealed that this effect operated partly through an empowerment process in terms of knowledge of social and health resources.

Conclusions:

We showed that a health empowerment intervention provided by social workers and health mediators largely favours access to health rights for immigrants in precarious situations.

Key messages:

- A health empowerment intervention improved access to health coverage among immigrants from sub-Saharan Africa living in precarious situations in France.
- Improvement in access to health coverage was found to be partly mediated by reinforcement of participants' health literacy in terms of social and health resources.

Abstract citation ID: ckac129.458

The income-mortality paradox among first- and second-generation immigrants in Sweden

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Background:
This study investigates mortality differences by income among first- and second-generation immigrants and the native ancestral population in Sweden. Despite immigrants' various vulnerabilities and the exhaustive evidence for a persistent inverse relationship between income and mortality in general Western populations, previous studies from outside Sweden demonstrated surprisingly weak income gradients in mortality among first-generation immigrants. Examining these associations among second-generation immigrants may help to understand this paradox.

Methods:
Swedish register data from 2002 to 2016 were used to study the association between individual income rank positions and all-cause mortality. The study population was restricted to ages 25-64 years. Based on 'relative indices of inequality' (RII) derived from Poisson regressions, we measured mortality differentials between the least and most deprived income rank positions stratified by nativity group and sex. Correspondingly, we assessed absolute differences in mortality between the most and least deprived by using 'slope indices of inequality' (SII).

Results:
Largest inequalities in mortality by relative income rank positions (based on RII) were found for the Swedish native ancestral population that showed on average a nearly doubled mortality risk for least compared to most deprived rank position. Immigrants disclosed weak or even nullified associations between relative income rank and all-cause mortality. Mortality inequalities by income among second-generation immigrants were substantially higher relative to first-generation immigrants but somewhat lower compared to the native ancestral population. These patterns were consistent between males and females, and confirmed by the use of SII.

Conclusions:
Distinct exposures to inequality structures but also first-generation immigrants' 'mortality advantage' likely contribute to the considerable mortality differences by income between the studied nativity groups.

Key messages:

- Despite their social and economic vulnerabilities, first-generation immigrants in Sweden disclose weak associations between relative income rank and all-cause mortality.
- Second-generation immigrants in Sweden show notably higher magnitudes in income-related mortality compared with first-generation immigrants.

7.P. Pitch presentations: Evidence for health policies

Abstract citation ID: ckac129.459

National taxation on sugar-sweetened beverages: a scoping review and time series analysis

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Background:
The intake of Sugar-Sweetened Beverages (SSBs) has increased around the world, leading to a growing burden of disease due to these beverages, such as obesity, diabetes, and heart disease. Taxation is a major action for comprehensive programmes aimed at reducing consumption of sugars. For these reasons, the aims of our study were to systematically summarize national tax legislation on SSBs and to assess the impact of these laws on the prevalence of overweight, obesity, and diabetes.

Methods:
We conducted a scoping review to summarize the landscape of national tax laws on SSBs implemented worldwide. We included any document reporting both currently into force and past national tax laws addressing SSBs. As to the time series analysis, data regarding the national prevalence of obesity, overweight, and diabetes were retrieved from WHO Global Health Observatory data repository.

Results:
As of July 2020, 34 countries worldwide implemented SSB taxation (amount-specific and ad valorem tax design), of which 17 (50.0%) in high-income countries, 12 (35.3%) in upper-middle income countries, and 5 (14.7%) in low-income countries. As for overweight, Hungary was the only country showing a slower rate of change after the taxation. Regarding obesity, France, Guatemala, Hungary and Panama showed a deceleration of the rates of change after the intervention. Eventually, Hungary and Tonga exhibited a one-time decrease of diabetes prevalence at the intervention point. Decelerating rates of change in the post-intervention period was also found for Guatemala and Fiji.

Conclusions:
Laws targeting SSBs showed, at least in part, to be an effective measure to reduce the prevalence of overweight, obesity, and diabetes. Less than one fifth of worldwide countries have implemented national taxation policies. Finally, while taxation might be effective to reduce SSB consumption, other types of Public Health interventions, such as educational initiatives, should not be neglected.

Key messages:

- Sugar-Sweetened Beverages (SSBs) are associated with obesity, diabetes, and heart disease. Taxation can be an important tool to reduce the consumption of SSBs.
- Prevalence of obesity, overweight and diabetes decreased in countries that adopted taxation. However, other strategies

such as educational programs should be implemented to reduce the intake of SSBs.

Abstract citation ID: ckac129.460
Citizens' perspective on 'the right care in the right place'

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Background:
Healthcare systems around the globe are facing challenges, from increasing demand and costs to a diminishing health workforce. Without change, healthcare will become unsustainable. In the Netherlands, the government aims to organize sustainable healthcare by among others the policy 'the right care in the right place'. An important part of this policy is relocating healthcare, for instance, from the hospital to the general practitioner (GP) or from the GP to other healthcare providers or to citizens themselves. Relocation of care is expected to reduce costs and manpower shortages. There is, however, little known about how citizens think about this topic, although they are an important stakeholder. This research aims to investigate citizens' perspectives on the right place for care.
Methods:
A questionnaire was sent in December 2021 to 1.500 members of Nivel's Dutch Healthcare Consumer Panel, including 4 questions about the right care in the right place. The response was N = 796 (53%). In addition, two citizen platforms were organized in March 2022, to discuss the right care in the right place. A total of 23 citizens participated.
Results:
First results indicate that most citizens related expertise and accessibility to the right care in the right place. Participants said that non-complex care could be relocated from the hospital to the GP if the GP has the right expertise. Expertise was mentioned as the most important aspect of care delivery. According to participants, care could be shifted from the GP to other primary care professionals, to social services or to self-sustainability, given that citizens know who to visit or what to do with health problems/worries. More results will be available by November.
Conclusions:
Relocating care could be a possible solution to keep healthcare sustainable in the future in terms of costs and manpower. Among citizens, there seems to be support when certain conditions are met.
Key messages:
- Citizens support the substitution of non-complex care from hospitals.
- Citizens are willing to improve self-sustainability when they have the tools.

Abstract citation ID: ckac129.461
COVID-19 restrictions and NUTS-3 deprivation: multilevel approach in Italy during the second wave

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Background:
To face the second COVID-19 wave, Italy implemented a tiered restriction system with different risk levels (yellow = low; orange = medium, red = high). It is unknown whether the effect of the tiers was equal among provinces with varying levels of socioeconomic deprivation (SED). At each restriction level, we analyzed the impact of the province's SED on the SARS-CoV-2 daily reproduction number (Rt).
Methods:
We considered the Rt (Nov 2020-May 2021) as the dependent variable and the SED as the independent variable. The Rt was estimated using daily incidence data from the Civil Protection Department as the instantaneous Rt. The province SED was measured using the percentage of individuals whose yearly income was less than 10,000€ (2019 data from the Ministry of Economy and Finance). We used multilevel linear regression models with random intercepts stratified by restriction level to estimate the effect of the SED on Rt (β) and its Standard Error (SE). Our analyses adjusted the estimates for the number of days into the tier first and then for other covariates.
Results:
We found different levels and trends of Rt by SED in every restriction. Days-adjusted models found a containing effect for the red and the orange tier, while the Rt had an increasing trend in yellow. Higher SED was associated with higher Rt: β was positive and significant in red ($\beta = 0.004$ SE = 0.001) and orange ($\beta = 0.002$ SE = 0.001) but not in the lowest tier ($\beta = 0.001$ SE = 0.001). We found a significant interaction between the number of days into the restriction and the SED in the complete models. Compared to less deprived, more deprived provinces had slower Rt reduction in the highest tier. However, they had steeper Rt reductions in orange and slower increasing trends in yellow.
Conclusions:
The highest restriction had milder effects in more deprived provinces, while lower tiers were more effective. These results underline the importance of accounting for SED when implementing public health measures.
Key messages:
- Area-level deprivation can modify the effects of public health measures.
- Socioeconomic characteristics of the areas should be considered when implementing policies aimed to prevent the spread of epidemics.

Abstract citation ID: ckac129.462
The role of public health scientists within the German political discourse on the COVID-19 pandemic

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Background:
During the COVID-19 pandemic politics was in search of scientific evidence to underpin decision making like never before. It is remarkable that voices from public health were less noticeable than those of virologists or immunologists. The aim of our ongoing study is to explore how public health scientists perceive their role in the relationship of their discipline and politics.
Methods:
We conducted 10 reflexive interviews with epidemiologists and public health scientists from Germany and collected documents (official statements and policy briefs of scientific societies). Data from both sources were analysed using situational analysis (Clarke, 2018), an approach used to map and analyse discourses in complex situations. To ensure data quality we used respondent validation.
Results:
According to participants, (1) improving population health was the top priority. Politicians tended to focus on short-term goals rather than long-term consequences. (2) Recognition of public health was increased by the pandemic in Germany. (3)

However, politicians favoured virology, biomedical and clinical perspectives. (4) The strong motivation of public health scientists to support politics at the beginning of the pandemic turned into disillusionment. (5) The composition of advisory boards was described as non-transparent. (6) Initiatives by the public health community were not sufficiently impactful. (7) Expectations of policymakers regarding future cooperation were not clear to participants.

Conclusions:

The results present different facets of a delicate relationship between public health sciences and politics. The pandemic increased the visibility and impact of public health in Germany on the one hand but also demonstrated that the realms of public health (science) and politics were not well connected. Involving scientific expertise in politics requires more transparency and the normative assumptions underlying the logics of science and politics need to be made more explicit.

Key messages:

- The potential of public health to address the covid-19 pandemic has not been sufficiently acknowledged by policymakers, and the involvement of its experts requires greater transparency.
- Reflecting on the normative assumptions underlying the different logics of public health sciences and politics can support their cooperation in the future.

Abstract citation ID: ckac129.463

Italian survey on the use of a multidisciplinary approach for age assessment of UAM

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Issue:

Many methods are used to assess the age of unaccompanied foreign minors (UAM). In Italy, in the frame of a new legislative asset, a multidisciplinary protocol has been adopted in July 2020 with the aim of ensuring that all UAMs are assessed uniformly throughout the country when their age is in doubt. The assessment is based on a multidisciplinary - social, psychological and physical - evaluation performed by a team of specialists. The local health authorities (ASL) carry out the assessment when requested by the Juvenile Court.

Description:

One year after the establishment of the protocol, INMP launched a national survey, through an online questionnaire, to investigate the formal adoption of the protocol by the ASL and their adherence in practice. The survey started on 10 January 2022 and closed on 8 March 2022.

Results:

Out of 118 ASL that were asked to participate, 102 (85%) answered. 37 declared to have a multidisciplinary team for age assessment. Of them, 18 use the formal protocol, 11 use an approach "in line" with the protocol and 8 have a forensic team, out of the rules of the protocol. Of the 65 that did not set up the team, 22 declared that they were ready to do so. 846 age assessment requests were reported and 687 were carried out. 398 migrants were recognized as minors, 222 migrants were not recognized as minors, and the age of 67 migrants remained uncertain.

Lessons:

The pandemic period prevented the effective adoption of the protocol by the ASL, that were strongly engaged in the COVID 19 response. There is still great variability in the way the age assessment of UAMs is conducted and in order to counteract the use of inadequate/outdated practices, it is necessary to actively promote and support the adoption of the protocol. In addition, a continuous comparison/dialogue between the multidisciplinary teams, the Juvenile Court, and the Police Headquarters is also needed, so that the procedure is requested only when necessary and carried out properly.

Key messages:

- In case of doubt, the age of all UAM has to be assessed in a uniform manner throughout the country.
- The adoption of the multidisciplinary protocol has to be actively promoted and supported to counter the use of inadequate or outdated assessment practices.

Abstract citation ID: ckac129.464

Action recommendations to support people living in precarious conditions during a pandemic

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Background:

The COVID-19 pandemic has deepened pre-existing health inequalities. As members of an EU-funded research consortium (SoNAR-Global) tasked with assessing vulnerabilities in five European countries, we explored the impacts of the pandemic on vulnerable populations and identified concrete actions that strengthen resilience. Here, we present our action recommendation development process for populations living in precarious conditions such as refugees, migrants and those living below the poverty line in Munich, Germany.

Methods:

The process began by interviewing 82 people who were likely to face vulnerability mechanisms, followed by interviews with 19 community representatives. Based on this qualitative research data, we defined challenges and resilience factors, and matched these with a list of action recommendations. This list, named "Provision of social support to people living in precarious conditions in times of a pandemic", was considered by a panel with ten experts on migration, health, poverty, social support, and inclusion.

Results:

Through discussion, we eliminated one recommendation and re-defined three others and achieved consensus on six recommendations. They are: 1) work towards eliminating opportunity inequity in education, 2) streamline bureaucratic processes to improve access to care, 3) establish structures that allow for continuing social support even during a pandemic, 4) refrain from isolating socially vulnerable groups through blanket pandemic mitigation measures, 5) Hybrid (online and live) solutions for inclusion, 6) improving healthcare empowerment.

Conclusions:

Through an inclusive process that involved citizens, vulnerable populations, and health- and government experts we identified a set of actions that should be taken now to ensure an equitable and just approach to pandemic preparedness. Our panel identified feasible and achievable goals within those recommended actions.

Key messages:

- Vulnerability mechanisms are multi-layered. Therefore, policies that need to be developed should be based on comprehensive approaches, not selective interventions.
- Actions to mitigate vulnerabilities in pandemics must be ambitious in order to prevent further exacerbation of existing issues with potentially catastrophic long-term consequences.

Abstract citation ID: ckac129.465
Association between institutional affiliations of academic editors and authors in medical journals

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Background:

Most of the literature on conflict of interest (COI) has not focused on the role of academic editors and their possible COIs, although academic editors often hold senior faculty positions at universities, which might be considered a COI if this influences towards a more favourable processing to articles submitted by institutional colleagues. The current study aims to assess whether academic editor affiliation, a potential COI, can influence academic institution ranking as top contributor in the biomedical field.

Methods:

We conducted a cross-sectional analysis extracting publicly available data from the 2019 Clarivate InCites Journal Citation Reports for journals in the ''Medicine, General & Internal'' category and from each journal website. We constructed the following study outcomes: i) being a top 5 academic contributor for the peer-review journal of interest (yes/no), ii) being a top 10 academic contributor for the peer-review journal of interest (yes/no), and iii) ranking position as top 50 academic contributor for the peer-review journal of interest. Mixed-effect linear and logistic regression models were employed, as appropriate.

Results:

We included 114 journals in our analysis, 49% were open-access only. Sharing same affiliation of any of the editorial board members was associated with a 6.7 and 5.6 greater likelihood of being top 5 and top 10 contributors, respectively (95%CI 5.07-8.73 and 4.34-7.22). Similarly, sharing same affiliation was associated with being 12.1 places higher as top contributor (95%CI 10.35-13.81). When considering the editor in chief affiliation solely, association was even stronger.

Conclusions:

We found that academic editors sharing the same institutional affiliation with authors was strongly associated with the likelihood of that institution of being a top contributor. Shared institutional affiliations between editors and authors should be clearly stated as part of an open and transparent peer-review process.

Key messages:

- Editors sharing same affiliation with authors was strongly associated with the likelihood for the institution the editor was affiliated with of being top contributor for academic medical journals.
- Shared institutional affiliations between editors and authors should be clearly stated as part of an open and transparent peer-review process.

7.Q. Workshop: What population health researchers' need and how PHIRI federated research infrastructure can help

Abstract citation ID: ckac129.466

Organised by: PHIRI, EUPHA-PHMR
Chair persons: Enrique Bernal-Delgado (Spain), Martin Thißen (Germany)
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What population health researchers' need? The population health research community has a vast experience in the reuse of data for health monitoring and surveillance or healthcare performance assessment. However, there is a gap in the extensive reuse of individual sensitive data, particularly when mobilising these data requires the linkage of multiple data sources curated in different sites. The gap is greater when it comes to using sensitive data in cross-national research. The usual arguments to explain the scarce extensive and continuous mobilisation of sensitive data are data privacy and safety issues, the difficulty to discover data sources of value, complex accessing rules, uneven data quality (particularly, non-harmonized data), and limited capacity (personnel and dedicated resources). In InfAct Joint Action, Information for Action, we demonstrated at a very small scale that mobilising individual sensitive data is possible, it is compliant with the legal and ethical requirements, and it yields the expected outputs. The instrument used for such an achievement was the design, implementation and deployment of a very small-scale federated infrastructure, where we could pilot all the legal, organisational, data quality and technological issues related to the mobilisation of individual sensitive data. (https://doi.org/10.1186/s13690-021-00731-z). Building on those achievements In PHIRI (see here https://www.phiri.eu/wp7) we are paving the way for a large-scale research infrastructure where multiple population health researchers with multiple research questions will need the mobilisation of multiple data sources from multiple sites across Europe. The PHIRI enhanced infrastructure will have to be prepared to provide a variety of services for data discovery, data access, data analysis and research outputs FAIR publication, while improving the capacity of population health researchers community in the use of advanced computing tools. In this workshop we will start describing the PHIRI federated research infrastructure achievements, the governance step-wise approach and the technological solutions provided. The workshop will discuss how an enhanced PHIRI could improve its services for the community of population health researchers; in particular improving the analytical capacity and the associated technological solutions. Finally, the workshop will touch ground on the future developments, in particular, the interaction of the PHIRI infrastructure with existen European-wide services providers, as EGI, and research infrastructures.

Key messages:

- In the domain of population health sciences, the reuse of individual sensitive data for research purposes is very limited.

- The PHIRI federated research infrastructure is paving the way for population health researchers to enhance their research when reusing individual sensitive data.

Abstract citation ID: ckac129.467
What the PHIRI federated research infrastructure has achieved so far?

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PHIRI infrastructure follows a federated approach that is governed following the European Interoperability Framework. The vision of PHIRI is to create an infrastructure for individual level data processing following the privacy-by-design principle in a data-centric approach. As a basis to legal interoperability and compliance with the GDPR, the queries or algorithms are moved to the data instead of moving the data. So far, the PHIRI technological developments have focused on a client-server architecture. In this architecture a Coordinator Hub, the server, is in charge of orchestrating the deployment of the data-centric analysis solutions, in the form of R and Python scripts, that will be later executed in the partner nodes (data hubs), the clients. To perform the orchestration the Coordinator Hub encapsulates the scripts in software containers, using Docker images; all the outputs are published in Zenodo. The software containers are then deployed manually from Zenodo in the partner nodes and executed by its IT specialists using their own individual level data - the software containers have represented the technical interoperability layer. The data used on each partner has been previously adapted to a common data model (CDM) and the quality of the dataset has been assessed against the data model by each partner -this has represented the semantic interoperability layer. Finally, the outputs of the analysis's execution are aggregated data that are sent back to the Coordinator Hub to perform a comparative analysis. This stepwise approach has been tested in various research questions promoted by a leading researcher and agreed by the partner nodes who act as data hubs. A help-desk services and a developer's forum and a help-desk service have been set up to ease the implementation and deployment of the research queries - these both have represented the organisational interoperability layer

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Abstract citation ID: ckac129.468
An enhanced version of the PHIRI infrastructure: improving the analytical services

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The PHIRI federated approach has consisted of the development of four research queries (use cases) mobilising individual data from a number of data hubs (nodes in the federation). Methodologically speaking, use cases have required the creation of specific cohorts of patients, population subgroups or populations, and the identification of events of interest - over-time differences in health status and care healthcare utilisation before and during the pandemic. Technologically speaking, PHIRI infrastructure consists of a distributed end-to-end analytical pipeline containing the statistical analysis workflow, including data quality assessment at origin and the mathematical algorithms. Once datasets are prepared in each data hub, partners run the analyses and produce a research output (dashboards containing the research results and tables with aggregated data) that is shared for results compilation and comparative analysis. An enhanced version of the PHIRI infrastructure should allow more complex data distribution. The research questions covered so far are aiming inference on populations or providers, which implies a very simple distribution methodology, as described. However, when the research questions requires inference on the individuals (eg, quasi-experimental study on the effectiveness of a real-life intervention), when the inference requires a hierarchical approach (ie, part of the variance is at individual level and part at cluster level) or when, several rounds of training are needed (eg, validation of an artificial intelligence) the approach would require sharing coefficients, distances in n-dimensional spaces or models, and, some times various rounds of distribution. Finally, an enhanced version of the PHIRI infrastructure should generalise the current FAIR approach limited to the publication of the analytical pipeline in ZENODO, setting up the services and tools required for an improved version of the PHIRI open-science strategy.

Abstract citation ID: ckac129.469
An enhanced version of the PHIRI infrastructure: improving the technological solutions

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The proof of concept tested by PHIRI consisted of the development of several research questions in multiple data hubs using a federated approach. It was possible to embed the use cases' analytical pipelines in a portable standalone (i.e. docker image) and distribute it in different health data hubs and technological environments sources for execution. The tested solution has the advantage of not moving sensitive data out of the silos and thus protecting privacy - the code meets data and not the opposite. Some precious lessons provide guidance on how to further develop the PHIRI infrastructure. 1) A deep knowledge on what data is available in the different data hubs of a federation is key since the basis for the development of a research query is the construction of a data model that is common to all the nodes in the federation. In an eventual enhanced PHIRI infrastructure, a solution will be implementing a semantic information system that allows the exchange of metadata using federated and interoperable metadata catalogues based on Semantic RDF graph databases, compliant with the W3C DCAT metadata standard and exposing the end-points of the SPARQL querying language of the Web of linked-data. 2) Making available training samples mimicking real-world data within the docker image has been of high added-value for the development of the use cases' analytical pipelines. In an eventual enhanced PHIRI infrastructure, a generalisation could consist of setting up a "knowledge hub" where synthetic data, twinning the population, data would allow any expert users to search and find data through federated queries and prepare and train their analytical pipelines; the "knowledge hub" would provide a computational environment (e.g. Jupyter as a service playground), the necessary tools (i.e. cookbooks and capacity building services) and training samples to answer research questions, with the advantage of using data that is anonymous by nature and open access.

Abstract citation ID: ckac129.470
Improving PHIRI performance and scalability: working within EGI-ACE

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EGI-ACE is a 30-month H2020 project (Jan 2021 - June 2023) with a mission to empower researchers from all disciplines to collaborate in data- and compute-intensive Open Science, enabled by free-at-point-of-use services that are delivered through the European Open Science Cloud (EOSC). EGI-ACE delivers the EOSC Compute Platform (ECP), a federated system of compute and storage infrastructure extended with platform services to support diverse types of data processing and data analytics cases. The ECP currently includes High Throughput Compute (HTC) and Cloud Compute facilities, and will broaden its scope with High Performance Compute services later in 2022. The platform layer of the ECP provides assistance for single sign-on, transfer and federation of distributed data, interactive computing, management of large numbers of jobs, orchestration of compute clusters, AI and machine learning tasks. There are over 25 thematic services in EOSC that build on the ECP, and deliver scalable data analysis for different domains, from astrophysics, through life sciences, environmental sciences, to humanities. PHIRI participates in EGI-ACE as one of the 'Early Adopters' of the ECP. Under the EGI-ACE workplan PHIRI will explore reproducible population health workflows with the use of cloud computing, single-sign-on, Jupyter Notebooks and Binder services of the ECP. The tests will enable PHIRI to scale out existing data analysis notebooks to big capacity machines, to reproduce simulations and models across users, and to overall validate the technological and sustainability approaches of EGI-ACE. PHIRI will also advise the project on best ways to introduce secure processing capabilities within the ECP services.

8.A. Pitch presentations: Strengthening health systems

Abstract citation ID: ckac129.471

Meeting the governance challenges of integrated health and social care

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Background:

Many countries are experimenting with novel ways of organising and delivering more integrated health and social care. Governance is relatively neglected as a focus of attention in this context but addressing governance challenges is key for successful collaboration.

Methods:

Cross-country case analysis involving document review and semi-structured interviews with 27 local, regional and national level stakeholders in Italy, the Netherlands and Scotland. We used the Transparency, Accountability, Participation, Integrity and Capability (TAPIC) framework to structure our analytical enquiry to explore factors that influence the governance arrangements in each system.

Results:

Governance arrangements ranged from informal agreements in the Netherlands to mandated integration in Scotland. Novel service models were generally participative involving a wide range of stakeholders, including the public, although integration was seen to be driven, largely, from a health perspective. In Italy and Scotland some reversion to 'command & control' was reported in response to the imperatives of the Covid-19 pandemic. Policies, budgets, auditing and reporting systems that are clearly aligned at all levels were seen to help with implementing innovations in service organisation. Where alignment was lacking, cooperation and integration was suboptimal, regardless of whether governance arrangements were statutory or not. There was wide recognition of the importance of buy-in. Enablers of greater engagement included visible leadership, time and long-standing working relationships. Lack of suitable indicators and openness to data sharing to measure integration hindered working relationships and thus the successful delivery of integrated services.

Conclusions:

Our study provides important insights into how to more effectively and efficiently govern service delivery structures within care systems. We will discuss approaches to governance that help support more resilient integrated care systems.

Key messages:

- Different governance arrangements face common challenges to greater integration of care. Enablers include strong leadership, inclusivity and openness to work across traditional boundaries.
- Meeting the governance challenges of integrated health and social care requires clear lines of accountability, aligned policies, budgets and reporting systems.

Abstract citation ID: ckac129.472

COVID-19 containment measures impact utilization and provision of healthcare in Europe

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Background:

The COVID-19 containment measures, implemented to curb the pandemic, impacted health of children and adolescents by numerous pathways. We present the impact on health care utilization and provision.

Methods:

A systematic review on secondary health impact is ongoing (PubMed, PsychInfo, Embase). Literature is screened (title, abstract, full-text) by 2 researchers, and data of interest extracted systematically.. Inclusion criteria are age (0 - 25 yrs.), exposure: containment measures, outcome: secondary health outcome, and European data origin.

Results:

Jan. 2020 - Aug. 2021 10112 studies were identified, 337 were included. n = 60 were on health care utilization and provision. Utilization studies relied on objective hospital or registry data, care provision studies more often on survey data (professionals, parents). Data yields a large but varying decrease in emergency department visits during the lockdown: Italy ~75%, Spain ~65%, France ~60%, and Germany ~64%, and a substantial change in case mix and severity compared to comparable pre-COVID. Specialized and primary pediatric practices report that elective interventions were postponed, state of the art diagnostics withheld, and rehabilitation services disrupted. Vaccinations in infants, children, and adolescents dropped during the lockdown inversely proportional to children's age. Studies repeatedly suggest patients' health services avoidance out of fear of infection and stay-at-home rules.Results on catch-up utilization and provision to follow (ongoing study).

Conclusions:

COVID-19 measures exerted a measurable impact on health utilization and provision in children and adolescents. The utilization was comparatively lower and service provision disrupted across Europe. So far little can be said about a potential recovery in terms of catch-up of visits, diagnostics, or treatments. Analyses of the long-term health impact of the observed effects is recommended and can serve to improve future pandemic preparedness.

Key messages:

- COVID-19 confinement measures had measurable secondary health impact on children and adolescents.
- Data on catch-up healthcare is important to establish long term impact and learnings.

Abstract citation ID: ckac129.473
Evaluation of opt-in HIV testing in the construction workplace using the socioecological framework

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Background:

Late diagnosis of HIV remains a challenge and the construction workforce has several risk factors for HIV. In the Test@Work programme, we delivered HIV tests embedded within a general health check to construction workers, with high uptake and acceptability. Here, we report the experiences of construction managers and health professionals involved in Test@Work and explore the suitability of construction worksites as a venue for opt-in HIV testing.

Methods:

Qualitative interviews (n = 24) were conducted with construction managers who facilitated events (n = 13), and HIV/health check delivery partners (n = 11) at 21 Test@Work events held on construction sites. Interviews explored experiences of events and views towards workplace HIV testing. Event exit questionnaires (n = 107) completed by delivery partners provided qualitative data identifying facilitators and barriers to effective delivery. Thematic analysis identified themes that were mapped against a socioecological framework (individual, interpersonal, organisational, industry, public health).

Results:

Delivery partners reported high engagement of construction workers with workplace HIV testing, peer-to-peer encouragement for uptake, and value for accessibility of onsite testing. HIV professionals valued the opportunity to reach an untested population, many of whom had a poor understanding of their exposure to HIV risk. Managers valued the opportunity to offer workplace health checks to employees but some identified challenges with event planning, or provision of private facilities.

Conclusions:

The construction sector is complex with a largely male workforce. Providing worksite HIV testing and education to an untested population who have poor knowledge about HIV risk helped to normalise testing, increase uptake, and reduce HIV stigma. However, there are practical barriers to testing in the construction environment. This has global implications for delivery of HIV testing in construction workplace settings.

Key messages:

- Delivering workplace HIV testing as part of a general health check helps to normalise HIV testing and reduce HIV-related stigma.
- Workplace testing is convenient, accessible and reaches populations at risk for HIV, but there are some barriers to implementation of rapid tests on construction sites.

Abstract citation ID: ckac129.474
The Health and Quality of Life Development Plan as a policy advisory tool for municipalities

Rita Sequeira

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Issue:

In 2019, the Portuguese government established the autonomy of local authorities and the decentralisation of public administration. Consequently, a process that includes the transfer of health competencies from the central government to the municipalities began. The newly acquired competencies enable local governments to play a crucial role in defining health policies and strategic partnerships with special focus on disease prevention, promotion of healthy lifestyles and active ageing. That said, several municipalities established a collaboration protocol with the National School of Public Health (NSPH) for the development of the Health and Quality of Life Development Plan (HQLDP) as a contribution to their strategic planning.

Results:

NSPH has developed a solidified methodology for municipalities to substantiate their health planning and priorities, based on a deep health diagnosis, from existing demographic, economical, health and environmental data in a given timeline. HQLDP is a medium-term reference that will support strategic action in the area of health and social determinants. The general objective of the HQLDP is to contribute to the improvement of the health status, in the different stages of the life cycle, based on the evaluation of the health profile and social determinants and to define a set of strategic objectives that promote the reduction of inequalities, the promotion and protection of health and the prevention of disease. The developed plan also includes public and stakeholders' scrutiny, to define key areas of action in the health sector.

Lessons:

The HQLDP takes into account the vocation of local authorities to act on determinants through policies that intervene in the environmental, socio-economic, educational, urban planning and mobility contexts; assuming an active, influential and local role in health policies. Municipal intervention requires a strong and concerted local action and the definition of territorialized development strategies.

Key messages:

- HQLDP has a crucial role on the situational diagnosis and set of priorities of the quality of life and health indicators to assess the priorities at council level.

- HQLDP provides the knowledge for the development of public policies and interventions that comply with the population characteristics by reducing health inequalities and inequities.

Abstract citation ID: ckac129.475
Barriers and Facilitators to Healthcare Service Access among Persons with Spinal Cord Injury (SCI)

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Background:

Despite having a high healthcare need, persons with complex conditions are less likely to receive comprehensive care. Individuals with SCI experience difficulties accessing services 2-4 times more than the general population. There is little agreement concerning the factors that influence these access restrictions. Few studies focus on health system impact on characteristics on access.

Objective:

To outline barriers and facilitators to service access among persons with SCI across 22 countries in terms of health system characteristics

Methods:

InSCI(2017): 1st community survey on experience of persons with SCI, 12591 participants, 22 countries (Australia, Brazil, China, France, Germany, Greece, Indonesia, Italy, Japan, Lithuania, Malaysia, Morocco, the Netherlands, Norway, Poland, Romania, South Africa, South Korea, Spain, Switzerland, Thailand, USA).

Data analysis:

1. Hierarchical cluster analysis based on Gower distance (to group systems by access restrictions: Acceptability, Approachability, Availability, Affordability, Appropriateness).
2. Generalized linear mixed-effects decision tree (to explore the association of system characteristics and access, including WHO and OECD system indicators (e.g. UHC index, expenditure, human resources). Missing values were imputed with missforest.

Results:

12% of persons with SCI reported having an access restriction, most of them (7%) with Availability. By country, the highest unmet needs were reported in Poland (25%), Germany, Lithuania, and Romania (13).

1. Cluster analysis: 7 health systems clusters (groups) were identified.
2. By June 2022, we will have the results of the second analysis: the association of system characteristics with access and how it is modified by socio-demographic and medical factors.

Expected conclusions:

The study identifies factors a country could modify in order to improve access and strengthen the system for persons with SCI/disability, that might be relevant to general population as well.

Key messages:

- Persons with SCI often experience similar access restrictions across countries, incl. those with high-performing health systems. System strengthening in this area is further required in all countries.
- Health systems are fragmented, e.g. healthcare quality and access inside a country differs by region, urban/rural setting etc., hence, the systems are challenging to classify.

Abstract citation ID: ckac129.476
How to involve 'hard to reach' population groups in research projects

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Issue:

Addressing and reducing health inequalities is a major challenge in public health. Actively involving the most vulnerable populations groups in research projects in order to assess and address their needs is an important step towards reducing health inequalities. However, the most vulnerable groups are often perceived as the most difficult to reach for researchers.

Description:

We conducted a research project to assess and address the health effects of the COVID-19 pandemic in vulnerable population groups. In three neighbourhoods, we identified the 2-3 most vulnerable population groups. We aimed to interview at least 20 participants per neighbourhood, evenly distributed among the groups, using creative and adaptive recruitment methods.

Results:

Successful strategies differed per group. Strategies that proved successful were: rewriting information and consent letters together with the target population to help make them more accessible and attractive; using simple language in texts and while interviewing; asking the target population what type of compensation for the interview they would find most attractive; identifying persons who function as social hubs in the neighbourhood, asking them to help recruit participants, and providing them with financial compensation for their time; asking professionals in care and welfare organisations to help recruit among their clients; interviewing people in the places they would normally go to; snowball sampling. We met our recruitment goals.

Lessons:

When working with 'hard to reach' populations, it takes researchers time, flexibility and creativity to find the right strategy to recruit participants while still respecting the boundaries set by GDPR and ethics committees. We recommend researchers to think about various possible recruitment strategies before starting a project, and to be prepared to change strategies during a project if necessary.

Key messages:

- 'Hard to reach' populations are not really hard to reach, they just require a different mindset and skillset from the researcher.
- We encourage researchers to be creative and flexible in finding the right recruitment strategies in their project, and to think about various possible strategies before starting a project.

Abstract citation ID: ckac129.477

Addressing the relational determinants of health

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Problem:

The persistence of systemic discrimination and inappropriate responses to unmet need by institutions in response to current challenges (COVID-19, austerity, war) requires a fresh look at the gaps in our response to inequities. We found evidence of avoidable inequity and harm associated with the relationships between individuals, communities, organizations, and governance structures. These have been described as the Relational Determinants of Health.

Results:

We undertook a scoping review to find research and policy interventions to address this problem. The relationships between individuals, communities and institutions that underpin how health is experienced and lives are lived were rarely considered explicitly in the design and implementation of interventions to address inequalities other than at local level or in response to individual trauma. We found academic work co-created with indigenous peoples did address trauma experienced due to historical structural violence and discrimination. It recognised the importance of land, culture, ceremony, and language in the organization of inter-personal, community and institutional relationships, codified the relational determinants of health and tested interventions that changed them. By applying assemblage theory, relationships with individuals and communities that had been previously excluded and harmed were being redesigned. These promising findings, replicated in different settings, indicate that relationships between communities and authorities that appear structural, are not fixed but can be primed to be changed for the better.

Conclusions:

To reduce the scale of future inequalities, it is essential that we chronicle and quantify the impact of the Relational Determinants of Health. We present a model that will enable methods for gathering evidence for change to be established, and to support interventions that will improve our research, advocacy, and policy responses to this challenge.

Key messages:

- Discrimination and unmet health need are associated with the quality of relationships between individuals, communities and institutions.
- Attention to the Relational Determinants of Health can help institutions reduce exclusion and harm by working with communities to redesign relationships.

8.B. Workshop: The Dutch GOR-Covid-19 health monitor: a five-year research program to inform public health policy

Abstract citation ID: ckac129.478

Organised by: National Institute for Public Health and the Environment, GGD GHOR Netherlands, NIVEL, ARQ National Psychotrauma Centre (Netherlands)
Chair persons: Michel Dückers (Netherlands), Elske Marra (Netherlands)
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Societies can be confronted with disasters and major incidents that form a serious threat to population well-being, safety and health. The Covid-19 pandemic challenged governments at different levels in many countries across the world for over two years to address a variety of public health risks. This also applies to the Netherlands, a densely populated high income country in Europe with approximately 17 million citizens. Experience with previous crises - such as the Bijlmermeer Airplane Disaster in Amsterdam (1992), the Q fever outbreak (2007-2011), the MH17 airplane disaster in Ukraine (2014) and gas-mining induced earthquake problems in the north of the Netherlands (ongoing) - shaped the current Dutch public health response structure and knowledge base, designed to assist local and national authorities to anticipate disaster-related population health risks. During the Covid-19 pandemic this structure was used as a starting point to develop and implement a five-year monitoring program: the integrated GOR-Covid-19 health monitor; GOR stands for "Gezondheidsonderzoek bij rampen" (disaster health research). The main objective of the GOR-Covid-19 monitor is to collect and promote the uptake of reliable and timely monitoring information for the benefit of regional and national public health decision-making in the Netherlands, focusing on the public health impact of the Covid-19 crisis (virus infections and mitigation measures) among children and adolescents, adults and public mental health care, a potentially vulnerable group including homeless and former drug addicts. The monitor is carried out under coordination of the "Network GOR", comprised of the National Institute for Public Health and the Environment, GGD GHOR Netherlands (on behalf of the 25 municipal health regions), Nivel, and ARQ National Psychotrauma Centre. The current workshop consists of five presentations by members of Network GOR. The first contribution gives an overview of the research objectives and the outline of the study protocol of the monitoring program. The other contributions focus on particular study components, that are shaped and aligned during the timeline of the monitor. One presenter will share the findings from the first series of systematic literature reviews. Two contributions are based on a combination of surveys in representative samples and an analysis of primary care registry data: one with an emphasis on quarterly results (short-cycle monitoring), the other on (bi-)annual reports, which zoom in on long-term developments and differences between subgroups based on vulnerability factors and geography (long-cycle monitoring). The fifth contribution details the participatory stakeholder-engagement process designed and implemented to promote that monitor findings are used for local and national public health sense-making and decision-making.

Key messages:

- The workshop describes the background and design of a national longitudinal monitoring program to track the public health impact of the Covid-19 pandemic in the Netherlands.
- An overview is given of the first findings on the health impact of the pandemic for different populations and related vulnerability factors as well as the stakeholder engagement process.

Abstract citation ID: ckac129.479
The integrated GOR-COVID-19 health monitor: protocol for a comprehensive approach

Anouk van Duinkerken

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Introduction:
The global COVID-19-pandemic influences people's health, both directly through infection and indirectly through the protective measures taken by governments. Previous experience with health research after disasters/crises are generally limited to short-lasting, local disasters with direct consequences for those affected. The COVID-19-pandemic has a different nature: influencing everyone and lasting a longer time. A longitudinal, wide-reaching research-approach is needed to study the health effects of COVID-19. Therefore, the Network GOR-COVID-19, a research group consisting of different organizations, started a monitor on the health effects of COVID-19.
Methods:
The monitor consists of three main elements: yearly monitoring, quarterly monitoring and literature reviews. Where possible, existing data structures are used. For the quarterly monitoring, two data sources are used: general practitioners' [GP] registry data and data gathered from panels. The GP data is used for weekly surveillance, giving insight into the prevalence of health symptoms presented to the GP. The panel data is used to gain insight into current self-reported health and wellbeing of people. For the yearly monitoring, two data sources are used. The first is GP data which gives information about the prevalence, incidence and development of symptoms, complaints and diagnoses. It allows for comparison over time and among different population groups. The second is the corona health monitor questionnaire, an existing questionnaire on health and well-being. Finally, literature reviews are conducted annually to create an overview of international and national research about the effects of the COVID-19-pandemic on health.
Discussion:
Since most of our knowledge about the potential impact of the pandemic stems from research on short-term disasters, limited to specific places, this study is expected to provide valuable new insights.

Abstract citation ID: ckac129.480
The consequences of the COVID-19 pandemic on the health and wellbeing of the youth: a systematic review

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Introduction:
The coronavirus outbreak and resulting restrictive measures have a major impact on population health. Research results suggest that the impact on the youth is especially great. In this review of international literature we investigated the impact of the COVID pandemic on the health and wellbeing of the youth, with a special emphasis on identifying vulnerable groups.
Methods:
This review looked at the impact on five domains; physical health, (health)care needs, mental health, social effects and other effects. We also identified protective and risk factors. We searched the databases of Pubmed, PsychInfo and Embase for longitudinal empirical studies in May 2021.
Results:
For all topics together, 145 papers were included. Results show that the corona crisis had a negative impact on the physical and mental health of the youth. Many young people exercised less, ate less healthy and suffered more from depression, anxiety and loneliness. Young people who already had mental or physical health problems were more vulnerable and experienced more negative results of the corona crisis. The crisis worsened existing problems. Other factors that exacerbate problems are poverty and poor family functioning. The impact is the largest for youths with multiple problems. At the same time, young people seem resilient. Many had no or few health problems during the studied period (roughly the first year of the pandemic), or their health problems decreased when restrictions were lifted.
Discussion:
More attention is needed for preventive interventions that prevent health problems, promote health and that support the youth to maintain and build their resilience. Special attention should be paid to vulnerable groups when targeting these interventions.

Abstract citation ID: ckac129.481
The integrated GOR-COVID-19 health monitor: quarterly reporting ("short-cycle monitoring")

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Introduction/objective:
Given the capricious nature of COVID-19, infections and accompanying restrictive measures to reduce spread of the virus are known to strongly vary over time. The impact of the corona crisis on the mental and physical health of the general population may fluctuate accordingly. The quarterly monitoring research line is aimed to monitor the health impact of the corona crisis over time on a high frequency basis.
Methods:
This is achieved through a multi-method approach, combining: a) survey data on perceived impact of corona measures and several health outcomes from two representative panels (~ 5.000 adolescents/young adults aged 12 and 25 years; ~ 5.000 adults aged 26+ years), and b) surveillance data of acute health problems from the Nivel Primary Care Database (~1,6 million patients from 380 general practitioners). Data collection started in September 2021 and continues during the five-year monitoring program. Panel data is collected every quarter; Nivel surveillance data is collected weekly. Our contribution to the EUPHA conference will include data up and until September 2022 (i.e. five rounds of survey and surveillance data).
Results:
Preliminary results from September 2021 through March 2022 indicate that adolescents/young adults reported worse mental and physical health outcomes compared to adults. Moreover, they experienced a more negative impact of corona measures. Accordingly, their mental health related problems, including suicide ideation, spiked between December 2021 and February

2022, a period characterized by highly restrictive COVID-19-measures.

Discussion:

The quarterly monitoring research line showcase the relevance and feasibility of integrating multiple data sources in understanding the short- and long-term effect of the corona crisis. The results increase our understanding in the potential adverse effects of corona-related restrictive measures on population health, potentially aiding policy making and health promotion.

Abstract citation ID: ckac129.482
The integrated GOR-COVID-19 health monitor: annual reporting (''long-cycle monitoring'')

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Introduction:

Because of foreseeable COVID-19- related mental and physical health risks for the general population, a longitudinal health monitor was launched in the Netherlands. The monitoring program includes multiple methods. The current contribution places an emphasis on the so-called ''long-cycle'' monitoring activities at the national and regional level. The aim is to produce (bi-)annual reports on developments in health status of the general population and several potentially vulnerable subgroups (e.g. psychological and somatic comorbidities, lower socio-economic status).

Methods:

Primary care registrations and questionnaire data were used. Both depend on existing methods of data collection, cover a broad spectrum of health aspects and offer the possibility of pre-COVID-19-comparison. Primary care data were obtained from electronic health records of general practices in the Nivel Primary Care Database. Large-scale survey research with questionnaires was conducted in all the 25 health regions of the Netherlands among 2nd and 4th graders in high schools, adults, elderly and young adults (16-25 years old). Where possible, data were combined with data on socio-economic status and additional health aspects from Statistics Netherlands (CBS).

Results:

The first results from both data sources show that the COVID-19 pandemic undeniably had an effect on the mental health of youth. Compared to 2019, there was a general decrease in overall health and happiness in 2020 and a perceivable increase in social problems as well as health symptoms such as lack of smell and taste. Furthermore, a smaller groups of people experienced more psychological symptoms, serious problems like suicidal thoughts and PTSD symptomatology.

Discussion:

Adverse effects of the pandemic on youth are already visible in the first year after the outbreak. It is crucial to closely monitor the course of this health impact in the years to come, based on the combination of large, representative databases.

Abstract citation ID: ckac129.483
The integrated GOR-COVID-19 health monitor: research-informed policy-making through dialogue

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Introduction:

Like in many other countries, the COVID-19 pandemic and the government restrictions introduced to contain the spread of the virus had major consequences for the health and wellbeing of the population in the Netherlands. To monitor the short and long-term public health impact, a nationally coordinated research program was initiated with the intention to guide decision-making by local and national public health authorities. This contribution presents the process to establish a continuous dialogue with end-users of information to add focus to the monitor, make sense of the findings and formulate policy recommendation and practical guidance, both at the national and regional level.

Methods:

To facilitate the translation and dissemination of research results among policy makers, practitioners and scientists, an ongoing series of dialogue sessions is organized during the monitoring program. Apart from the objective of evidence-informed public health decision-making, the dialectic process seeks to ensure multi-sectoral learning and co-creation and contribute to a broad sense of ownership among stakeholders. National and regional health participants serve as hub coordinators. New stakeholders are invited and will be actively approached wherever considered relevant.

Results:

At the EUPHA conference experiences with organizing the dialogue in app. the first two years of the program will be presented together with preliminary results and a reflection on factors that helped or hindered the implementation and uptake of findings.

Discussion:

Monitoring data collected using robust methods and analyzed in such a way that vulnerability factors are carefully considered, is invaluable for decision-making. However, in order to effectively serve as guidance to public health policy, whether in the context of the COVID-19 pandemic or in non-crisis situations, a constructive, ongoing exchange between end-users of the information needs to be facilitated.

8.C. Workshop: Networking for life: How European regions develop/strengthen cross-border health

Abstract citation ID: ckac129.484

Organised by: Healthacross Initiative, Health Agency of Lower Austria (Austria)
Chair persons: Julia Winkler (Austria), Bettina Menne (Denmark)
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The WHO European Programme of Work (2020-2025) emphasizes the importance of ''supporting local living environments that enable health and well-being''. Through engaging with regulatory arrangements that support an environment that responds to citizens' concerns for safer, healthier and better living, the EPW intertwines with the aims of the EPH Conference to promote population health and to strengthen health systems. The Covid-19 pandemic shows that health threats do not stop at national borders. Different responses amongst cross-border regions, based on national policies in terms of Public Health and Social Measures (PHSM), may even weaken their effectiveness. The importance of cooperation across border is not only relevant in the framework of pandemic preparedness and responses, but in many other fields: healthcare cooperation, emergency medical care, medico-social cooperation and health promotion. All have shown to be beneficial to population health when developed at the subnational level across border regions. Consequently, cross-border health (care) gained importance in recent years and there are various border regions who showcase successful cross-border cooperation in the field of health. Projects are being implemented along neighbouring European regions, translating into improved access to healthcare for the border populations, promoting prevention and health education as well as increasing healthcare availability and equity. Via various health networks, border regions can learn to engage with neighbours and build up tailor-made health services for their citizens. More so, through active participation in various well-established public health networks, the exchange of ideas, knowledge and solutions to strengthen cross-border health becomes part of region's daily work. Through strong networks and partnerships, joint solutions for a strengthened citizens' health in rural areas could be found. Creating synergies between the healthcare capacities of the two sides of the border, collaboration between border area medical teams, access to equipment located one or other side of the border can make a positive impact on the users of health services and facilities. In this round table workshop, the role and impact of health networks on a sub-national level (regional) will be further examined. Based on selected well-established health networks, their work and value will be outlined.

The Keynote speech will be given by the Coordinator of the WHO Europe Regions for Health Network, Dr. Bettina Menne. Subsequently, 3-4 well-established health networks will take the floor with a short presentation (5 min) in order to present their 'business case' and value. The presentations will be followed by a short round table discussion in order to highlight the role and strengths European health networks can bring to regions in order to improve cross-border healthcare (WHO RHN, Healthacross /Lower Austria, euPrevent, AEBR, EUREGHA).

Key messages:

- Role and impact of health networking for cross-border health on a sub-national level.
- Outlining the benefits and challenges for border regions to participate in health networks in order to strengthen cross-border health (also during Covid-19).

Abstract citation ID: ckac129.485
WHO RHN Network

Bettina Menne

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The WHO European Office for Investment for Health and Development (Venice Office) works in the thematic areas of health equity, social and economic determinants of health, and investment for health in the context of the 2030 Agenda for Sustainable Development and the European Programme of Work. Within the WHO Venice Office, the the Regions for Health Network (RHN) works to place health and well-being high on the key political agendas, and advocates the needs of local and subnational authorities at the regional and international levels. RHN has been launched in 1993 to help regions to accelerate the delivery of improved population health, and currently has 34 members. It has developed over the decades into a forum that creates synergies between regions and stakeholders in the field of health (mutual learning); strengthens cooperation/collaboration between regional and local actors and international health institutions; increases understanding of the functioning of regional and local health systems; promotes the exchange of experience, and mutual learning. RHN positions itself at the forefront of innovative approaches and aims at becoming a cutting-edge network ready to capture and disseminate effective approaches, policies and strategies that improve population health at the regional level of governance. In past years, RHN has spearheaded collaborative efforts amongst cross-border regions, on different topics, and with technical guidance from WHO. These efforts have led to joint initiatives, publications, study trips, project collaboration and periodic and structured exchanges of experiences.

Abstract citation ID: ckac129.486
Healthacross initiative of Lower Austria

Julia Winkler

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Lower Austria is by size the biggest province of Austria and located in the heart of Europe with a 414 km long border to the Czech Republic and Slovakia, and in close proximity to Hungary. Not only through its geographic location but also through its understanding to be a connected region as part of a strong European Union, cross-border health care plays an important issue at the provincial level. Led by the European spirit, all international and cross-border health activities are bundled under the umbrella of the 'Healthacross initiative''. The initiative is part of the Health Agency of Lower Austria (NÖ Landesgesundheitsagentur), which operates and manages all 27 public hospitals and around 50 care/nursing homes in the region. Via the ''Healthacross initiative'', Lower Austria is participating in four transnational networks and since 2008, conducted eight EU co-funded projects in cross-border healthcare, four of them currently running. Healthacross is the coordinator of this session, with support of WHO RHN network. Active networking in various European and international networks is part of the regional strategy of Lower Austria in order to gain excellence to improve the health and quality of life for citizens living in border regions. The premise is to enable equal access to health care services for citizens, regardless of their place of residence. The current epidemiological situation with the COVID-19 pandemic has not only impact on cross-border healthcare, but also on the life, health and well-being of citizens. With the closure of national borders, the exchange of healthcare services came to an interim halt; solely dialog remained - which was incredibly valuable for both commuters and citizens living in the border regions. Lower Austria will take care of the moderation of the session and will be represented by Julia Winkler.

Abstract citation ID: ckac129.487
euPrevent

Brigitte Van Der Zanden

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euPrevent is a non-profit organisation and a Euroregional network that wants to promote the quality of life of citizens in the border regions of the Netherlands, Germany and Belgium. Policy in the field of care and well-being is mainly organised at national level. This has a major impact on citizens in the border region who regularly cross the border for work or family reasons. We therefore focus on the establishment of sustainable, cross-border network connections between health organisations in the border region. Our cross-border cooperation is based on the following three frameworks, within we work: (1) Positive Health, (2) Health in All Policies (HiAP), and (3) Sustainable Development Goals. The network will be represented by Brigitte van der Zanden, the Director of euPrevent and a long standing expert in cross-border health issues.

Abstract citation ID: ckac129.488
Association of European Border Regions (AEBR)

Martin Guillermo Ramirez

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AEBR is one of the oldest regional associations in Europe (founded in 1971), with a hundred members (border and cross-border regions) in more than thirty European countries. AEBR works for the interest of border regions towards EU and national authorities, developing capacities, increasing awareness, organizing events and implementing projects. AEBR currently implements IVY (Interreg Volunteer Youth) on behalf of the European Commission's DG Regio, within the framework of the European Solidarity Corps, which has deployed more than 700 young Europeans in Interreg programmes and projects during the last four years. It also manages b-solutions to tackle cross-border legal and administrative obstacles and test possible solutions, and takes part in other projects in Europe and other continents. It has recently finished a study for DG SANTE on cross-border patients' flows in various EU cross-border areas. The association will be presented by it's Secretary General, Martin Guillermo-Ramírez.

Abstract citation ID: ckac129.489
European Regional and Local Health Authorities (EUREGHA)

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EUREGHA's vision is to ensure that the local and regional perspective is represented in EU health policy because local and regional authorities are the natural interface between citizens and European institutions, being the bridging bodies between policies and practices and the closest organizations to the concept of communities. We are the only European network prioritizing the representation of local and regional health authorities at EU level, as they fulfil a key role in improving efficiency, quality, and accessibility of healthcare systems and services. EUREGHA understands their specific needs and works tirelessly to represent regional and local health authorities in EU health policy, to amplify their voices as a means to improve European public health and healthcare. Through advocacy, policy monitoring, profile promotion, partnerships, and project development, EUREGHA facilitates and promotes collaboration between its members, EU institutions, pan-European health networks and other healthcare stakeholders. Network activities and projects are implemented upon a strategic background of "ways to make things happen" such as value based healthcare, smart specialization strategies and skills for innovation and digital transformation - on one side - and along thematic and field objectives such as cross-border healthcare, cancer, obesity, mental health and ageing - on the other side. Lower Austria is a long-standing member and Vice-Chair of EUREGHA.

8.D. Oral presentations: Diabetes and nutrition

Abstract citation ID: ckac129.490
Nitrites and nitrates dietary exposure from natural sources and additives and type-2 diabetes risk

Bernard Srour

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Nitrates and nitrites occur naturally in water and soil and are commonly ingested from drinking water and dietary sources. They are also used as food additives. The epidemiological evidence linking exposure to nitrites/nitrates with type-2 diabetes (T2D) risk is scarce. We aimed to study these associations in a large population based prospective cohort study. Overall, 104,168 adults from the French NutriNet-Santé cohort study (median follow-up time 6.7 years) were included. Associations between intakes of nitrites and nitrates (evaluated using repeated 24h dietary records, linked to a comprehensive food composition database and accounting for details of commercial names/brands of industrial products) and risk of T2D were assessed using cause-specific multivariable Cox proportional hazard models adjusted for known risk factors (sociodemographic, anthropometric, lifestyle, medical history, and nutritional factors). During follow-up, 969 incident T2D cases were ascertained. Total nitrites and nitrites from natural sources were both positively associated with higher T2D risk (HRtertile 3 vs.1 = 1.29 (95% CI 1.06-1.56), Ptrend = 0.004, and 1.27 (95% CI 1.05-1.54), Ptrend = 0.01, respectively). Participants with higher exposure to nitrites from food additives (i.e. above the sex-specific median), and specifically those having higher exposure to sodium nitrite (e250) had a higher T2D risk compared with those who were not exposed to food additive nitrites (HRtertile 3 vs.1 = 1.58 (95% CI 1.28-1.94), Ptrend<0.001, and 1.59 (95% CI 1.30-1.96), Ptrend<0.001), respectively). There was no evidence for an association between nitrates of any source and T2D risk (all Ptrend>0.4). In this large prospective cohort, a higher dietary exposure to nitrites (from both natural sources and food additives) was associated with higher T2D risk. These results provide additional evidence in the context of current discussions about updating regulations on the use of nitrites as food additives.

Key messages:

- A high exposure to dietary nitrites (from both natural and food additive sources) is associated with an increased risk of type-2 diabetes.
- These findings support further regulations concerning the use of nitrites as food additives in processed meats.

Abstract citation ID: ckac129.491
Nitrites and nitrates from additives and natural sources and risk of cardiovascular outcomes

Bernard Srour

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Nitrates and nitrites are used as food additives in processed meats. They are also commonly ingested from water and several foods. Evidence suggests a beneficial role of dietary nitrites and nitrates in lowering blood pressure. However, associations between exposure to nitrites and nitrates from natural sources and food additives, separately, and risks of hypertension and cardiovascular disease (CVD) have not been investigated. We aimed to study these associations in the French population based prospective cohort NutriNet-Santé. Overall, 104,817 adults were included. Associations between exposure to nitrites and nitrates (evaluated using repeated dietary records, linked to a food composition database accounting for commercial brands of industrial products) and risks of hypertension and cardiovascular disease were assessed using multivariable Cox proportional hazard models. During follow-up, 3810 incident cases of hypertension were ascertained, and 2075 cases of CVD, 1004 of cerebrovascular diseases and 1079 or coronary heart diseases were diagnosed. Participants with higher exposure to nitrites from food additives and specifically those highly exposed to sodium nitrite (e250) had a higher hypertension risk compared with those who are not exposed to nitrites from food additives (HR = 1.19 (95% CI 1.08-1.31), P = 0.002, and 1.19 (95% CI 1.07-1.31), P = 0.002, P < 0.001), respectively). There was no evidence for an association between total nitrites or nitrites from natural sources, or dietary nitrates with hypertension risk (all P-values>0.3). There was no evidence for associations between dietary nitrites, or nitrates with risks of cardiovascular, cerebrovascular or coronary heart diseases (all P-values>0.2). In conclusion, we found that higher exposure to nitrites from food additives was associated with higher risk of hypertension. Our results do not support a potential protective association between dietary nitrites or nitrates and cardiovascular outcomes.

Key messages:

- These results provide additional evidence in the context of current discussions about updating regulations on the use of nitrites as food additives.
- Our findings do not support any protective impact of nitrites and nitrates on cardiovascular health.

Abstract citation ID: ckac129.492
Circadian nutritional behaviours and risk of type 2 diabetes in NutriNet-Santé

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Skipping breakfast and late-night-eating have been associated with risk factors for type 2 diabetes (T2D). However, less is known about the link between daily timing and frequency of food intake and risk of developing T2D. The objective of the present study is to investigate the associations between circadian nutritional behaviours, defined by meal timings and frequency, and risk of T2D. 103,312 adults (79% females, mean age at baseline = 42.7) from the French NutriNet-Santé cohort were included. Participants' circadian nutritional behaviours were assessed using repeated 24 h dietary records. Associations of time of first and last meal of the day, meal frequency and of nighttime fasting duration with risk of T2D were assessed by multivariable Cox proportional hazard models adjusted for known risk factors. During a median follow-up of 7.3 years, 963 new cases of T2D were ascertained. Compared with subjects reporting on average a first meal before 8AM, those having a first meal after 9AM had a higher risk of developing T2D, HR = 1.59 (1.30 to 1.94). A late time of last meal (after 9PM) was associated with a higher risk of T2D, HR = 1.28 (1.06 to 1.54), but this association was no longer significant after adjusting for time of first meal. Each additional eating episode was associated with a reduction of the risk of T2D, HR = 0.95 (0.90 to 0.99), p-value = 0.01. Overall, nighttime fasting duration was not associated with risk of T2D, except in participants having breakfast before 8AM after a nighttime fasting duration of more than 13 hours (HR = 0.47, 0.27 to 0.82). In this large prospective study, circadian nutritional behaviours were associated with risk of T2D. Daytime nutritional behaviours and specifically an early first meal was associated with a lower risk of type 2 diabetes. If confirmed in other largescale studies, an early breakfast should be considered in preventive strategies for type 2 diabetes.

Key messages:

- If confirmed in other largescale studies, an early breakfast could be considered in preventive strategies for type 2 diabetes.
- Beyond nutritional quality of meals, meal timing could also be a risk factor for type-2 diabetes.

Abstract citation ID: ckac129.493
Cardiometabolic dysregulation and cognitive decline: potential role of depressive symptoms

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Background:

Previous studies have examined associations of cardiometabolic factors with depression and cognition separately.

Aims:

To determine if depressive symptoms mediate the association between cardiometabolic factors and cognitive decline in two community studies.

Methods:

Data for the analyses were drawn from the Rotterdam Study, the Netherlands (n = 2940), the Whitehall II study, UK (n = 4469) and the Canadian Longitudinal Study on Aging, Canada (n = 13,720).

Results:

Mediation analyses suggested a direct association between cardiometabolic factors and cognitive decline and an indirect association through depression: poorer cardiometabolic status at time 1 was associated with a higher level of depressive symptoms at time 2 (standardised regression coefficient 0.07 and 0.06, respectively), which, in turn, was associated with greater cognitive decline between time 2 and time 3 (standardised regression coefficient of -0.15 and -0.41, respectively).

Conclusions:

Evidence from three independent cohort studies suggest an association between cardiometabolic dysregulation and cognitive decline and that depressive symptoms tend to precede this decline.

Key messages:

- Cardiometabolic dysregulation and depression might increase cognitive decline.
- The association between cardiometabolic dysregulation and cognitive decline might be mediated by depression.

Abstract citation ID: ckac129.494
Modelling the impact of salt reduction policies on hypertension in Portugal

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Salt reduction policies are identified as effective; however, the assessment of their impact in European countries has been underexplored. The aim of this study is to assess the impact of salt reduction policies on hypertension in Portugal, to ultimately guide future policies. Based on national data, the top five foods contributing to salt intake, their salt content, and daily consumption were determined. Food reformulation included current policies and proposed targets for future agreements. Food availability trend from the main contributors was estimated from national food balance sheets. For this study, we considered five counterfactual scenarios (CF) to estimate salt intake variation: (1) reduction of salt content of foods targeted by current policies, while assuming stable consumption of the primary contributors; (2) proposal to extend CF 1 to other food categories; (3) change in the principal contributor's consumption based on the trend, assuming stable salt content; (4) combination of CF 2 and 3; (5) CF 4 and assuming a reduction of "1 pinch of salt". Relative risk was estimated from regression coefficients to then calculate the potential impact fraction (PIF) and ultimately provide the hypertension cases prevented per year for each CF. The change in salt intake expected by each CF is -11.16%, -13.57%, +0.12%, -13.40% and 23,99%, respectively. For each CF, PIF and hypertension cases avoided per year was, as follows (mean (95%CI)): 9.46% and 46401 (44201;48925) for the first; 14.05% and 68921 (66149;72025) for the second; -1.24% and -6099 (-7636;-4763) for the third; 13.2% and 65125 (62286;67892) for the fourth; and, 15.58% and 76397 (73208;80021) for the last. This study suggests that if the salt content of main contributors was not reduced, its increasing food trend consumption might result in higher incidence of hypertension in Portugal. However, by combining current policies with targets on additional foods, more than 60,000 cases could be avoided annually.

Key messages:

- Salt content reduction policies are necessary if we want to reduce the incidence of hypertension among the Portuguese population.
- Assessment of the impact of salt reduction policies is crucial if we want to choose those that have a stronger impact on the health of our population.

8.E. Workshop: Climate crisis and public health: public health practitioners are key to successful litigation

Abstract citation ID: ckac129.495

Organised by: EUPHA-LAW, EUPHA-ENV, Faculty of Public Health (UK), Groningen Centre for Health Law (Netherlands)
Chair persons: Amandine Garde (EUPHA-LAW), Vlatka Matkovic (Belgium)
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Encouraged by wins on asbestos and against Big Tobacco, the public health community and environmental advocates are turning to litigation to sue governments and private sector interests for public health harms from environmental pollution and climate change. Legal systems are as varied as health systems, yet there are principles common to all jurisdictions. In particular, the choice of legal forum is key: which court is best placed to hear a given case? Questions also arise regarding legal 'standing' - who can initiate legal proceedings? What is the most suitable legal basis for the claim? - it could be under a national constitutional protection of the right to life, a human rights treaty, or environmental or tort law. And, what evidence is required and what evidential standard should be met? Since 2020, four cases have been filed with the European Court of Human Rights in Strasbourg on States' responsibilities for the physical or psychological impacts of climate change on human health. Moreover, in May 2021, the Dutch District Court in The Hague ordered Shell to reduce CO2 emissions by 45% by 2030, globally. To reflect on these developments, in October 2021 EUPHA co-hosted a webinar on public health, climate change and strategic litigation which highlighted how strategic partnerships between public health practitioners, environmental advocates, legal experts and affected communities can win cases, raise public awareness and push governments to act. In March 2022 EUPHA-LAW co-hosted a webinar on climate change litigation at the European Court of Human Rights. Sound scientific evidence is as critical to successful litigation as to effective public health policies. Increasingly, public health practitioners are asked to testify in court about the known health impacts of environmental harms. Collecting this evidence requires foresight, meticulous record-keeping, peer-support, and the courage to withstand questioning of professional capacity. In response to this need the Faculty of Public Health (UK), EUPHA-LAW, the Groningen Centre for Health Law in collaboration with Lancet Countdown, will publish a training package and toolkit for public health practitioners on public interest litigation to address climate change and environmental pollution. The workshop will review the role of litigation in advancing public health, and the outline and proposed uses for the toolkit, building on collaboration with environmental and legal organizations such as Greenpeace International and ClientEarth. Opportunities to engage with public health practitioners in regions outside Europe will also be explored.

Key messages:

- Strategic alliances between public health practitioners, environmental advocates, legal experts and affected communities can use litigation and legal process to address common goals.

- Public health practitioners are increasingly asked to testify in court about the known health impacts of environmental harms. Relevant knowledge and skills must be strengthened.

Speakers/Panellists:
David Patterson
University of Groningen, Groningen, Netherlands

Farhang Tahzib
Faculty of Public Health, Haywards Heath, UK

Anniek de Ruijter
University of Amsterdam, Amsterdam, Netherlands

Scott Burris
Center for Public Health Law Research, Temple University Beasley School of Law, Philadelphia, USA

8.F. Round table: Digital Innovations in Health Financing: Experiences from sub-Saharan Africa

Abstract citation ID: ckac129.496
Organised by: DigitalUHC Consortium
Chair persons: Wilm Quentin (Germany), Catherine Kyobuutungi (Kenya)
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Background:
Universal Health Coverage (UHC) is key for reaching Sustainable Development Goal 3. Digital technologies for health financing (DTHF) may help countries in sub-Saharan Africa (SSA) make progress towards achieving UHC. DTHF are increasingly used to strengthen health financing systems across their three key functions, (1) raising revenues, (2) pooling resources, and (3) purchasing services.

Objectives:
To provide an overview of the potential role of DTHF, discuss country case-studies of DTHF, explore possible risks and challenges, and outline a future research agenda. Together with the participants, we intend to discuss policy options to enable maximising the benefits, while mitigating the risks and challenges.

Added value: The workshop will (1) identify potential benefits as well as risks and challenges of DTHF; (2) highlight the importance of politics and policies for reaping the benefits and minimizing their risks; and (3) establish the building blocks of a future research agenda on digital health financing technologies.

Coherence of workshop: Following a brief presentation of benefits and risks of DTHF from the perspective of the World Health Organisation (WHO), the workshop will present four case studies: (1) Rwanda, where a near universal coverage systems is supported by the digital Mutuelle Membership Management System (3MS) facilitating revenue collection through mobile money; (2) Ghana, where the National Health Insurance Scheme (NHIS) is using a Mobile Renewal system to increase coverage rates, and where an electronic claims management system has been recently introduced; (3) Kenya, where a wide range of digital innovations for revenue raising and purchasing were introduced in the private sector, which are now (partially) integrating the public coverage system; and (4) Madagascar, where experiences with private sector initiatives could support the development of national health insurance. Finally, we will outline the research agenda of the DigitalUHC consortium and collect input on salient topics for policy-makers and researchers.

Format:
The workshop is organised as a round-table panel discussion with panel members giving brief (5 min) introductory presentations before engaging in discussions with other panel members and the audience about cross-cutting issues, including (1) potential benefits of DTHF as well as risks and challenges; (2) the importance of politics and policies for reaping the benefits and minimizing the risks; and (3) the future research agenda. Several polling rounds will engage the audience and collect input on these topics, e.g. by asking participants about (a) examples of digital technologies that they know of, (b) their assessment of potential benefits, risks, and challenges, (c) necessary regulations in different countries, and (d) topics for future research.

Funding:
German Alliance for Global Health Research (GLOHRA) with funds from the Federal Ministry of Education and Research (BMBF).

Key messages:
- Digital technologies for health financing may help countries to achieve universal health coverage.
- Politics and policies are important to reap the benefits and minimize potential risks.

Speakers/Panellists:
Inke Mathauer
WHO, Geneva, Switzerland

Regis Hitimana
Rwanda Social Security Board, Kigali, Rwanda

Daniel Opoku
KNUST, Kumasi, Ghana

Diana Ratsiambakaina
Ministry of Health, Antanarivo, Madagascar

Abdhalan Ziraba
APHRC, Nairobi, Kenya

8.G. Workshop: European Health Data Space: Dialogue on TEHDAS JA data quality & semantic interoperability proposals

Abstract citation ID: ckac129.497

Organised by: TEHDAS JA WP6
Chair persons: Enrique Bernal-Delgado (Spain), Persephone Doupi (Finland)
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The EU Data Strategy foresees the development of shared European data infrastructures, enabling cross-border exchange and availability of comparable and high-quality data. The European Health Data Space (EHDS) is the first of these infrastructures to be launched, making use of the potential of health and social data for the purpose of advancing public health, research and innovation. Quality of digital health data has been the focus of research and debate for a long time and several proposals for improvement have been put forward. While these efforts are ongoing, secondary use or re-use of health data, combined with recent developments in data analytics, AI and real-world data (RWD), have raised new requirements on our understanding of data quality and the means for its assurance. Both the European Commission and Member States have underlined the need to support EU and national authorities, as well as the scientific community to agree on interoperability guidelines addressing data quality and semantic interoperability. The TEHDAS Joint Action has responded to these expectations through work undertaken in the context of WP6 - Excellence in data quality. With expected delivery deadline early 2023, the EUPHA conference offers an excellent platform to present the draft forthcoming proposals to the public health community and engage in meaningful dialogue with participants. Key members of the WP6 team will present the process through which the TEHDAS JA recommendations on data quality and semantic interoperability have been developed, the results achieved thus far and the remaining open questions. The workshop discussion section will allow the JA team to collect direct input and feedback for utilization in the production of the final version of the deliverables.

Key messages:

- Increased awareness and understanding of background and rational of forthcoming proposals on data quality and semantic interoperability in the European Health Data Space.
- Opportunity to raise concerns and proposals for improvement and thus have a direct impact on the final TEHDAS JA output on data quality.

Abstract citation ID: ckac129.498
A Data Quality Framework for the European Health Data Space for secondary use

Enrique Bernal-Delgado

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A cornerstone in the development of the European Health Data Space for secondary use of data (EHDS2) is the design, implementation and assessment of a Data Quality Framework (DQF). Consistently, the Joint Action TEHDAS has a dedicated work program where, learning from others' experiences across Europe and abroad, the work package is building the concepts and methods for such a DQF. The scope of this work program is to provide recommendation to the Member States and the European Commission on the concept of DQF to foster, where (institutions) the DQF should be implemented, when in data life cycle, how should be implemented and by whom. In terms of the concept, the DQF raises the importance of quality assurance procedures at data processor level and the level of quality of the data collections in terms of reliability, relevance, timeliness, coherence, coverage and completeness. When it comes to when along the data life cycle, DQF is expected operate when data needs harmonization at data processor level (ie, the effective application of interoperability standards), in the publication of the data sources (ie providing users knowledge on the provenance of data and the content of data source); or, when data sources have to be integrated and sensitive data pseudonymized (ie, the quality of the linkage and losses after pseudonymisation). Finally, when it comes to the methodology, TEHDAS suggests a three-fold approach - some quality measures in the DQF could be translated into legislation (eg, the requirement of regular auditing for a data processor to be a trusted party in the EDHS2); some could be kept as good-practices (eg, recommendation of archival procedures when a research project finalizes); and, under the assumption of continuous data quality improvement, an assessment, benchmarking and promotion methodology (eg, a grading system at data processor level).

Abstract citation ID: ckac129.499
Review of data quality assessment frameworks experiences around Europe

Nina Sahlertz Kristiansen

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In the first phase of its work, WP6 has explored and synthesized existing knowledge and experiences on data quality assurance frameworks (DQAFs) in the context of cross-border sharing of federated secondary use health data. Our aim was to identify good practices within this area and develop a first set of corresponding recommendations. The recommendations reflect the synthesis of results from three parallel lines of work, each utilizing a different methodology: a) thematic workshops and partner meetings, b) analysis of existing data-sharing initiatives, and c) a scoping literature review. Our analysis of literature and existing health data initiatives suggest that currently deployed DQAFs cannot as such serve as platforms or models for an EHDS-wide data quality solution. There is an agreement in principle, that reliability, relevance, timeliness, coherence, coverage and completeness should be incorporated in a DQAF as measurable dimensions of data quality. We aim towards a working definition of data quality, which will be able to reflect the reality of the data, as well as its fitness for purpose from the perspective of potential users.

- We recommend focusing efforts on transparency at the level of data holder institutions across Member States in relation to adoption of regular audits, a well-developed DQAF and clear procedures with regard to processing the data.
- In the medium to longer-term EHDS nodes could promote and support the development of a benchmarking process, which will assist data managers and data holder institutions with alignment against a Europe-wide approach to measuring data quality within and across Member States.

Abstract citation ID: ckac129.500
Review of interoperability standards as data quality supporting elements

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WP6 has approached the target of supporting trustworthy secondary use of health and health care data through two operational objectives: developing the EHDS data quality assurance framework for real-world health data and developing the EHDS secondary use Semantic Interoperability Framework. For the latter objective, several interoperability standards were identified in accordance with the EHDS2 data life cycle and user's journey approach, hence focusing on data discoverability (at data source and variable levels), communication support across nodes and on development of common data models. Selection was based on active participation of WP6 leaders in various pertinent workshops and interactive activities, both in the framework of TEHDAS (Stakeholder and Project Forum meetings) as well as other relevant initiatives (e.g. the PHIRI project). Input was also sought from Commission representatives and EU-level regulatory authorities. In a first step, standards were catalogued based of features such as typology of interest, utility and application domains. In the next phase we organised virtual semi-structured interviews with key representatives of over 20 standards (incl. HL7, SNOMED, CDISC, DCAT, OMOP etc.). The focus of the interviews targeted experiences in standards' actual use, challenges in their implementation, issues of maintenance and sustainability, as well as undergoing collaborations and developments. Sessions were recorded and subsequently the transcripts of discussion extracted automatically. The process of analysing interview materials is presently ongoing, using an adapted version of the Common Assessment Method for Standards and Specifications (CAMSS) v.4.0.0. toolkit. Interim results will be discussed within the Joint Action meeting activities in June 2022, to produce a version for wider stakeholder dialogue later in the fall. Results and recommendations generated through this process will also be presented for discussion with the workshop audience.

8.H. Workshop: Health equity and Chronic diseases: Public health and Primary care roles

Abstract citation ID: ckac129.501

Organised by: Western University (Canada)
Chair persons: Saverio Stranges (EUPHA-CHR), Tatjana Makovski (France)
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Publicly funded health systems are based on the principle of universal access to care. However, significant gaps still exist between services needed and services received (i.e. unmet need for healthcare), especially in chronic disease management and prevention, particularly affecting marginalized groups in the society. Public Health and Primary Care should be working in integrated systems, as they are crucial in addressing health needs in the community and population at large. Several international organizations and leading scholars in the field have been advocating for the integration or primary care and public health to improve population health as well as to tackle complex issues such as multimorbidity. However, these two sectors are still working in silos across several countries, with a significant negative impact in terms of efficiency of the services provided and health care costs. The aim of this workshop will be to provide a global perspective on the issue of health equity in chronic disease management and prevention, with focus on marginalized population subgroups, such as elderly, immigrants and people from low socioeconomic status. We will discuss as well the determinants of unmet health needs for access to primary care in middle-aged and older adults, and examine the reasons for unmet need. We will further discuss about the need and strategies for enhanced integration between public health and primary care in chronic disease management and prevention.

Key messages:

- Public health systems are based on the principle of universal access to care. However, significant gaps still exist between services needed and services received (i.e. unmet need for healthcare).
- Public Health and Primary Care should be working in integrated systems to tackle complex issues such as multimorbidity.

Abstract citation ID: ckac129.502
How life course socioeconomic conditions shape multimorbidity in old age – a scoping review

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Multimorbidity is the co-existence of two or more chronic conditions in the same individual and is highly prevalent in ageing populations. Inequity in multimorbidity in old age could have socioeconomic roots that can be traced across the life course. It is, however, unclear if adverse socioeconomic conditions (SEC) at different periods of the life course predict the occurrence of multimorbidity in later life. We reviewed, therefore, studies assessing the association between life course SEC, measured at min. two time points, and later-life multimorbidity. We identified four studies (25,209 participants) with the first measure of SEC in childhood. In these four studies, childhood SEC was associated with multimorbidity in old age, and the associations were partially or fully attenuated upon adjustment for later-life SEC. We identified five studies (91,236 participants) with the first measure of SEC in young adulthood, and the associations with multimorbidity in old age as well as the effects of adjustment for later-life SEC differed from one study to the other. In conclusion, SEC in early life could have an effect on multimorbidity, attenuated at least partly by SEC in adulthood. Our results suggest that interventions and health promotion aiming to reduce the risk of multimorbidity in old age should target early-life socioeconomic conditions.

Abstract citation ID: ckac129.503
Multimorbidity, low income and unmet need for healthcare: a national study of 41,135 older adults

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The aims of this study were: (1) to identify the determinants of unmet need for access to primary care in middle-aged and older adults; and (2) to examine the reasons for unmet need. We used data from the Canadian Longitudinal Study on Aging (CLSA), a nationally representative survey of adults aged 45 to 85 years. Respondents were asked if they 'needed health care during the last 12 months but did not receive it'. For those who replied 'Yes', the survey asked for the reason(s) for not receiving the needed care. Out of 41,135 respondents, 3,468 had unmet need for healthcare in the last 12 months. Among respondents with 0, 1, 2 and $\geq$3 morbidities, the proportion reporting unmet need was 2.5%, 5.3%, 5.1% and 9.1% respectively. After adjusting for covariates, the odds ratios (ORs) for unmet need for 1, 2 and $\geq$3 morbidities (compared to no morbidity) were 1.25 (95% CI: 0.87 to 1.78; $p = 0.23$), 1.57 (95% CI: 1.13 to 2.17; $p < 0.05$) and 2.03 (95% CI: 1.51 to 2.73; $p < 0.05$), respectively. For income groups, the ORs for unmet need (compared to >$150,000/year) were 0.94 (95% CI: 0.79 to 1.12) for $100,000-$150,000, 1.02 (95% CI: 0.87 to 1.20;) for $50,000-$100,000, 1.30 (95% CI: 1.09 to 1.55) for $20,000-$50,000, and 1.39 (95% CI: 1.08 to 1.78) for < $20,000. Other statistically significant determinants of unmet need included age (older adults were less likely to have unmet need), sex (females were more likely), having a family physician (less likely) and perceived physical and mental health (poor health more likely to be associated with unmet need). The most common reasons for unmet need were: 'long wait time' (52.1%) and 'doctor did not think it was necessary' (16.7%). Multimorbidity and low-income are associated with higher odds of unmet need among older adults. This disparity is partly due to not having a regular family physician and long wait time to see a doctor. Reducing these barriers are critical to reducing inequalities in health outcomes.

Abstract citation ID: ckac129.504
Intergenerational education and premature mortality: a registry population-based study

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Inequalities in premature mortality due to individual's attained education are well documented. Intergenerational educational trajectories, whereby both parental and individual education may affect mortality, have received less attention. Our aim was to assess the effect of intergenerational educational trajectories on sex- and cause-specific risks of chronic disease-related premature mortality in Switzerland. Data were from 695,972 individuals born between 1971 and 1980, who were followed from adolescence (10-19y) to mid-life (38-47y) in the Swiss National Cohort, a registry population-based study. Educational trajectories were categorized into four levels: High-High, High-Low, Low-High, Low-Low, which corresponded to the sequence of parental-individual attained education (exposure). Cause of death categories were cardiovascular disease (CVD), cancer, substance use and all other chronic diseases (outcome). We implemented a counterfactual-based framework to quantify inequalities and ran negative outcome controls to triangulate findings. Overall, inequalities were negligible for women and substantial for men, particularly in CVD and substance use deaths. Specifically, inequalities in CVD were negligible by age 30, while by age 45 inequalities due to a High-Low or Low-Low trajectory corresponded to 229 (95% confidence interval (CI): 99, 381) additional CVD deaths per 100,000 persons compared to a High-High trajectory. Inequalities in substance use deaths due to a High-Low trajectory corresponded to 106 (95% CI: 47, 208) additional deaths per 100,000 persons compared to a High-High trajectory by age 30, and increased afterwards. We identified sex- and cause-specific groups at high-risk of premature mortality, and life periods when inequalities due to both parental and individual education arise. Prioritization of prevention strategies in those life periods and groups may help reduce educational inequalities in chronic disease-related premature mortality.

Abstract citation ID: ckac129.505
Do Immigrants Use Less Health Care than Non-immigrants? A Population-based Study among People living with Multimorbidity in Canada

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Background:

Immigrants face unique health care barriers, which can negatively impact their health service use and overall health. Those with multimorbidity may face a particular challenge given its association with increased need for health care. The purpose of this study was to compare health care utilization, as measured by the number of visits to family physicians and specialists, between immigrants and Canadian-born individuals living with multimorbidity.

Methods:

A cross-sectional analysis was carried out using data from the 2015-2016 cycles of Canadian Community Health Survey (CCHS) on 9,014 study participants living with multimorbidity. The study utilized Andersen and Newman's behavioral model as a conceptual framework to identify quantifiable predictors associated with health service utilization. For the entire sample as well as for male and female subsamples, statistical models were fitted using negative binomial regressions to account for the count nature of the outcome variables.

Results:

After adjusting for relevant confounders, no statistically significant differences were observed between immigrants and Canadian-born respondents in the number of visits to family physicians or specialists. However, subgroup analysis revealed that female immigrants with multimorbidity had considerably fewer visits to family physicians than Canadian-born females (Incident Rate Ratio [IRR] = 0.86, 95% CI: 0.76-0.98), while for males these differences were not significant (IRR = 1.03, 95% CI: 0.87-1.21).

Conclusions:
Future research should focus on longitudinal studies to track the health status of immigrants over time, particularly those living with multimorbidity. Moreover, public health policies should be implemented to reduce cultural and social barriers to health care, with a special focus on female immigrants.

8.J. Workshop: Transfer and adoption of digitally enabled integrated care good practices: the JADECARE Joint Action

Abstract citation ID: ckac129.506

Organised by: Kronikgune Institute for Health Services Research (Spain)
Chair persons: Jon Txarramendieta (Spain)
Contact: jtxarramendieta@kronikgune.org

The ageing population and the burden of chronic conditions is increasing the demand for more comprehensive, efficient and smarter healthcare. The EU funded Joint Action JADECARE (Joint Action on implementation of Digitally Enabled integrated person-centred CARE) intends to reinforce the capacity of health authorities to successfully address the health system transition to digitally enabled integrated person-centred care. JADECARE involves 45 organisations from 16 different EU countries covering different funding systems (both Bismarck, Beveridge and mixed) holding different levels of penetration, adoption and maturity of integrated care. It focuses on the transfer and adoption of four original Good Practices (oGPs) to the contexts of 21 Next Adopters (NA). The project started on October 1 2020 and ends on September 30 2023. The oGPs that are being transferred in JADECARE concern integrated care, chronic conditions, self-care, prevention and population health. They are: The Basque Health strategy in ageing and chronicity: integrated care (Spain), the Catalan open innovation hub on ICT-supported integrated care services for chronic patients (Spain), the OptiMedis Model-Population-based integrated care (Germany) and the Digital roadmap towards an integrated health care sector (Denmark). Due to the heterogeneity of the NA, the transfer strategy of JADECARE enables them to customize the parts of the oGPs that will be transferred and adapted to its local context, considering its needs, local strategies and implementation goals. The JADECARE three-step implementation strategy has been designed to be appropriate from the scientific point of view, applicable considering data availability and feasible according to project's timeline and resources:

- Pre-implementation: definition of Local interventions and action plans.
- Implementation: roll-out and operation, based on two Plan-Do-Study-Act cycles.
- Post-implementation: result analysis, impact assessment and reporting on learnings.

By the end of 2022, the implementation phase will be completed, and all NA will start analyzing their results and reporting on learnings. Currently, NAs have defined their interventions and action plans for implementation and are finalizing the first of the two PDSA cycles that they will be performing within JADECARE. 3 of the NAs are implementing interventions at national level, 14 at regional level and 4 at local level. Most of the NAs implement interventions related to digitally enabled integrated care (36), 11 are related to risk stratification and 9 to patient empowerment. This workshop explores the key elements and challenges to be addressed when transferring Good Practices (GP) to heterogeneous health systems with different needs, aims and scopes. It will also highlight the experience of two NA: Marche region, in Italy and Olomouc, in Czech Republic and promote the discussion among speakers and attendees to highlight the challenges and key elements to enable the transfer of GPs.

Key messages:

- JADECARE will impact on EU health systems by implementing innovative solutions and helping to change the model of care provision. It will also settle the basis to implement them at large scale.
- The long-term effect of JADECARE is supported by involving stakeholders at regional and national levels to provide political support and commitment to sustained integrated care.

Abstract citation ID: ckac129.507
Challenges in transferring GP to heterogeneous contexts: the JADECARE Joint Action

Jon Txarramendieta

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In this first presentation of the workshop, Jon Txarramendieta, the Project Manager at the Coordination team of JADECARE will present the Joint Action and the challenges in transferring the good practices to the heterogeneous context of the Next Adopters. It will give context to the workshop and introduce good practices that are transferred into action.

Abstract citation ID: ckac129.508
Core Features of the GP to be transferred during JADECARE and transfer challenges

Jon Txarramendieta

J Txarramendieta[1], *J Roca*[2], *M Zahorka*[3], *K Strand Kudajewski*[4]
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[4]Health Innovation Centre of Southern Denmark, Odense, Denmark
Contact: jtxarramendieta@kronikgune.org

In this second presentation, the representatives of each of the four JADECARE oGPs, Jon Txarramendieta (Kronikgune, Basque Country, Spain), Josep Roca (August Pi i Sunyer Biomedical Research Institute, Catalonia, Spain), Manfred Zahorka (Optimedis AG, Germany) and Kuno Strand Kudajewski (Health Innovation Centre, Southern Denmark) will describe the main traits of the Core Features of their practices and the Next adopters that will transfer and adapt them highlighting the transfer challenges.

Abstract citation ID: ckac129.509
Development of Local interventions within JADECARE – Key learnings from two Next Adopters

Roberta Papa

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In this third presentation, the NA representatives Roberta Papa (Regional Health Agency Marche Region, Italy) and Zdislav Dolecek (University Hospital Olomouc, Czech Republic), will present the Local interventions and action plans they developed during the pre-implementation phase, pre-final results of their implementation phase and preliminary lessons learned from the implementation.

Abstract citation ID: ckac129.510
Group discussion: Challenges and key elements to be addressed when transferring GP

Jon Txarramendieta

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In this group discussion, all speakers will participate in a group discussion. The moderator will launch questions to speakers, and attendees will be encouraged to make contributions to the group discussion.

8.K. Workshop: Pillars of health promotion and the role of Health literacy in the life course approach

Abstract citation ID: ckac129.511

Organised by: EUPHA-HP, University of Education (Germany), Polytechnic Institute of Coimbra (Portugal), CrAdLiSa
Chair persons: Luís Saboga-Nunes (EUPHA-HP), João Lima (Portugal)
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Three pillars are considered today for the development of Health Promotion: Good Governance, Healthy Cities and Health Literacy (HL) (The Shanghai Declaration, WHO 2016). Good Governance and policies to make healthy choices accessible and affordable to all, will ensure that all have the right to health. Sustainable environments are critical to make whole of society collaboration real and it is relevant that Cities become healthier settings. For this, increasing knowledge and social skills to help people make healthiest choices and decisions, i.e. Health Literacy (HL), emerges as the third pillar of the health promotion agenda today. The 10th WHO World conference in 2021 emphasized the role of HL in Health Governance (Stewarding for a flourishing future) that ''... builds on co-design and makes full use of the digital transformation to achieve equitable benefits across populations, ensuring access and meaningful participation. This includes a high priority assigned to health literacy along the life course' (WHO 2021). This workshop discusses how this third pillar (i.e. HL) may be translated into the everyday practice of Health Promotion ''ensuring that people can cope with the challenges they face, through health literacy, ... to lead lives ... in harmony with Nature'' (WHO 2021). From the public health perspective the aim of this workshop is to share with the audience an opportunity to immerse in four different social contexts and explore their HL practices as tracer approaches. The first context is set in Brazil and the emphasis is on HL role in increasing health knowledge. The authors share the results of a large research and an ethnographic analysis of the role of HL in the development of health decisions in the context of public libraries. The second presentation will unveil one of the topics that is influencing health and well-being today: the struggle to counter misleading information. Therefore, a study case from Portugal will focus on HL impact of nutritional marketing on the preferences, attitudes and consumption of children from 6 to 10 years old. A third presentation will consider food sustainability & health, and how HL may be expanded using simple and integrative pedagogical strategies in usual kindergarten dynamics to promote legumeś consumption. Understand how children construct their HL and how influenced they are in this process is the aim of the 4th presentation, where an analysis will be proposed in the quest of exploring HL on those in the first years of schooling. This workshop offers a forum for researchers, practitioners and policy-makers interested in health promotion pillars (e.g. like health literacy). By dialogue and two-way communication lively interaction and vivid discussions will be facilitated. This will allow discussing results regarding their benefit for improving policy research, practice, and policy-making, support further synergies, facilitate networking and collaboration, and support international capacity building.

Key messages:

- Refinement of concepts and practices (e.g. on health literacy) from south-north cultural contexts is needed for wider health promotion implementation strategies.
- The third pillar of Health Promotion (i.e. health literacy) demands a wider reflection of theoretical integrative approaches of health paradigms like salutogenesis.

Abstract citation ID: ckac129.512
Access to health literacy best practices and the role of health libraries (BiblioSUS Network BVS) in Brazil

Luís Saboga-Nunes

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Introduction:

Health Literacy (HL) has received recognition of its role and is proposed as a key element of incrementing wellbeing in public health. In the south, this discussion is engaged but a dialogue north-south needs to be incremented to allow further comprehension and implementation of HL best practices. The BiblioSUS Network in Brazil engaged in this discussion while it aims to expand and democratize access to health promotion & HL best practices, disseminated through the virtual health libraries (BVS). As a distribution model of content production by the Ministry of Health in Brazil it reaches a large audience in the country.

Methods:

The target of this research includes BiblioSUS workers, representing the most diverse areas of knowledge and the community served by the Network. Data collection included an online survey on HL using the HLS-EU-BR instrument.

Results:

The study involved 717 members of the Network and community users of cooperating libraries. Inadequate (12%) and problematic (36%) HL levels revealed that 48% had low levels of HL. The analysis of the 12 variables to assess community's health information needs, showed that 83% of participants do not use the network for health promotion needs, 70.4% do not use for quality of life purposes, but that 41.4% use it for related diseases issues.

Discussion:

This research is the first of its kind and emphasize the need to promote health promotion and HL by several means (e.g. like BiblioSUS Network libraries). Communities need to be reached out to help them make decisions favorable to health in everyday life and settings (e.g. home, community, work). While health promotion and disease prevention are targeted, the Brazilian population need to have easier access to reliable health promotion information, in order to contribute to citizens' empowerment in health.

Abstract citation ID: ckac129.513
The influence of nutritional marketing on the preferences, attitudes and consumption of children from 6 to 10 years old

João Lima

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Introduction:

Childhood obesity is a natural response to the modern food environment. A daily consumption of sugar that exceeds the WHO recommendation by 40.7% of Portuguese children influence this condition. It is recognized that children spend more time watching television and youtube, absorbing commercials about food, being susceptible to these messages and negative health literacy. Nutrition marketing is involved in these ads and most of them promote foods high in fat, sugar and salt through persuasive techniques.

Purpose:

Assess implications of exposure to nutritional marketing through television and YouTube on preferences, attitudes and consumption of children from 6 to 10 years old and contribute to the increment of health literacy.

Materials and methods:

Data collection through two online questionnaires about television and youtube habits and children's food preferences, developed by the research team. Statistical analysis was performed using IBM SPSS Statistics software.

Results:

Forty-two students who were attending a private school, aged between 6 and 10 were evaluated. Access to youtube has led to less healthy choices for breakfast in 95% of students ($p = 0.038$). It was found that most children do not have TV in their room and have a more balanced breakfast (81%). Cereals, soft drinks and biscuits are foods groups that children see the most in the tv commercials ($p = 0.001$).

Conclusions:

Exposure to nutritional marketing influences children's preferences, consumption and preferences. An active strategy should be encourage to increment health literacy levels at the family level influencing therefore children's healthier choices.

Abstract citation ID: ckac129.514
Consumption of legumes in children from 3 to 6 years – evaluation of an intervention program

Ana Paula Amaral

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Introduction:

Eating habits are a key aspect of a healthy lifestyle. This study focuses on the importance of consuming legumes - rich and accessible source of protein, and a healthy and sustainable option, in environmental terms - contributing to increment health literacy levels at the population level.

Objectives:

To design, implement and evaluate a program to promote the consumption of legumes - Beans4Life. Specifically, to assess its impact on the knowledge and frequency of consumption of the eight legumes (beans, grain, peas, beans, beans, lentils, chickpeas and lupins).

Methods:

Pre-test post-test analytical study, with three evaluation moments: 1) before the intervention; 2) after the intervention with the children and 3) after the intervention with the guardians (end of the intervention). Participants: 90 children from 3 to 6 years old (54.4% male) and their guardians. Instruments: questionnaire to assess knowledge and food preferences, questionnaire on eating habits and a questionnaire to evaluate sessions. The intervention had two components, the first with the children (4 food education sessions) and the second with the families (activities that facilitate the inclusion of recipes with legumes in the family's daily life).

Results:

Before the intervention, the results obtained show low levels of knowledge and frequency of consumption of legumes, influencing low health literacy. Peas and beans are the best known legumes (81.1% and 55.6%) and also preferred (77.8% and 73.3%). The results obtained in the second and third assessments show that there was a significant increase ($p < 0.05$) in the knowledge and frequency of consumption of most legumes.

Conclusions:

The objectives initially proposed were achieved and it will be pertinent to continue the present study, with larger samples, in order to increase health literacy awareness and the consumption of this food group in childhood, and provide more robust results that help to clarify the relationships found.

Abstract citation ID: ckac129.515
The salutogenesis perspective of Health Literacy

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Introduction:

Health Literacy (HL) is the third pillar of Health Promotion and contributes to the sustainability agenda set earlier in Rio de Janeiro and latter in Shangai (e.g. WHO Shanghai Declaration, 2016). Nevertheless HL per se lacks consistency and structural modus faciendi implementation and practice.

Therefore it is proposed that a discussion be developed based in the salutogenesis embodiment of health literacy from the perspective of children's Sense of Coherence.

Methods:

A population cross-sectional study included (n = 725) children enrolled in the school year 2018/2019 of four schools in Santarem and Lisbon, Portugal. Indicators of anthropometric data, Health literacy (HL), water intake (WI) and nutrition status (NS) and their Sense of Coherence (SoC) levels (using the HLS-EU-PT questionnaire) were collected with the CrAdLiSa online self-administered questionnaire.

Results:

Preliminary results show that the instrument to measure HL (HLS-EU-PT) show satisfactory internal consistency (Cronbach's alpha coefficient 0,94) and association with SoC (Cronbach's alpha coefficient 0,89). The higher is HL levels the higher results are found in the Comprehensibility component of the SoC. The older the age, the amount of WI perception is adequate (p = 0.03); male children (p = 0,02) and children that attend schools in urban area (p = 0,01) drink more water; and have a higher SoC. Also the older the age, the lower the levels of HL (p = 0.000); children with higher levels of HL have greater WI (p = 0.01) as they have a broader perception of the adequate amount of water needed to be healthy.

Conclusions:

These results of CrAdLiSa study explore further on the theoretical perspectives influencing HL. They also showed the usability of the SoC and the HLS-EU-PT questionnaires adapted for children to assess their SoC and HL levels.

8.L. Round table: Breaking the barriers: gender equality and women empowerment in public health practice

Abstract citation ID: ckac129.516

Organised by: EUPHAnxt, EUPHA-PHPP, EUPHA SDG5WG
Chair persons: Sofia Ribeiro (EUPHA-PHPP), Jinane Ghattas (EUPHAnxt)
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Gender equality is an issue in the public health arena. Though women make 70% of the healthcare workforce, there is an average 28% pay gap. (WHO, 2019). Other barriers have been identified in the literature. (Lancet, 2019) Work-life balance, gender discrimination, sexual harassment or assault in the workplace are pointed out in research studies. Consequences of poor work-life balance include insufficient time with families, difficulties in handling work and all household responsibilities, affecting childbearing decisions. Women also decline leadership opportunities, such as promotions and committee chair positions, because of family obligations. Gender discrimination included feeling inferior and discouragement from promotions or leadership positions on the basis of gender. Another identified barrier was the lack of a safe and unbiased system for seeking help following harassment or assault. Issues related to work-life balance became even more apparent during the COVID-19 pandemic, which placed a disproportionate burden in female public health workers. In the recovery phase, we have an opportunity to rethink public health delivery in order to make it a more equal, less biased, and safe place for women. This should be a concerted effort, involving men and vulnerable populations such as trans women and underrepresented ethnic groups, to ensure that no one is left behind. As one of the leading public health organizations in Europe, the European Public Health Association is committed to join efforts to address this issue in the multiple public health arenas: public health practice, policy and research. This panel discussion is a collaboration between the EUPHA Working Group on gender equality and women's and girl's empowerment, the Policy and Practice section and EUPHAnxt, and is for any conference participant that is committed to reducing the gender gap in public health. The aim of this panel discussion is two-fold. First, we aim at discussing the barriers that female healthcare workers face on an everyday basis, and their impact on their careers. Secondly, we aim at discussing how institutions and individuals can address these barriers and contribute to enhanced gender equality in the public health arena. Following panelists' interventions (additional speakers have been invited and will be confirmed at a later stage), the audience will be invited to participate in a discussion on gender barriers they have experienced and how those could be addressed.

Key messages:

- Public health practice still faces several barriers to gender equality.
- Identifying barriers to gender equality and discussing strategies to overcome them is a step towards achieving gender equality in the workforce.

Speakers/Panellists:
Marie Guichardon
EUPHA

Marleen Bekker
EUPHA-PHPP

8.M. Round table: Health literacy and vaccine literacy as determinants of vaccine acceptance: a critical discussion

Abstract citation ID: ckac129.517

Organised by: EUPHA Working Group Health Literacy, EUPHA-HP, Technical University Munich, Public Health Austria, Careum Switzerland, Global Health Literacy Academy
Chair persons: Orkan Okan (EUPHA-HP), Kristine Sørensen (Denmark)
Contact: orkan.okan@tum.de

In 2019, Sars-Cov-2 caused the greatest pandemic the modern world has ever faced. The pandemic was unprecedented regarding its effects on all aspects of society. Since the outbreak, debates on vaccines have been elevated in public health. The pandemic also emerged into a game changer regarding health communication and information delivery. With digital communication technologies, the Internet and Social Media being the most important tools to discuss health matters, exchange health knowledge and get advice from peers, every human has been part of a global communication network discussing the pandemic, related policies and vaccines. The digital realm allowed everybody to contribute to the state of Covid-19 related health information and absorb them. Altogether, this led to an overabundance of accurate and false information circulating the digital world, which culminated into the information epidemic (infodemic). Early on in the pandemic, it became obvious that people need competencies enabling them to navigate digital information environments, manage (digital) health information and to use digital health services that were accelerated through Covid-19. While health literacy and vaccine literacy were undervalued at the time, policy makers and practitioners soon highlighted their critical role in mitigating the spread of coronavirus, for protection against infection and increasing adherence to public health emergency measures. In context of the Covid-19 pandemic, health literacy enables people to find, understand and critically appraise relevant information and use it for prevention behaviour. Since it empowers individuals to mitigate the effects of the pandemic, health literacy is seen as a social vaccines. Vaccine literacy is a sub-dimension about health literacy, which especially became important when global roll-out of Covid-19 vaccines began in 2021. Vaccine literacy helps people to understand what a vaccine is, why it is relevant to get vaccinated and how it protects oneself and others. In addition, vaccine literacy empowers people to find vaccine-related information and judge about vaccine claims. The purpose of this roundtable is to discuss research findings on health literacy and vaccine literacy in relation to Covid-19, the determinants of vaccine acceptance, vaccine hesitancy and vaccine attitudes, generated in different European studies: (1) the international trend study HLS-Covid-19 conducted in Germany, Austria and Switzerland, (ii) HLCA-Kids-NRW on coronavirus-specific health literacy in primary schoolchildren (Germany) and (iii) the HLS19 European Health Literacy Survey. While the roundtable aims at introducing empirical findings, each panelist will provide a statement related to the roundtable theme based on the findings of their study. Together with the audiences, we will discuss about lessons learned from the pandemic and how to utilize health and vaccine literacy to increase vaccine acceptance.

Key messages:

- Health literacy is a social vaccine and empowers people to manage health information and increase vaccine acceptance.
- Vaccine literacy is a sub-dimension of health literacy and in particular is useful when addressed as part of public health emergency strategies.

Speakers/Panellists:
Orkan Okan
Technical University Munich, Munich, Germany

Kristine Sørensen
Global Health Literacy Academy, Risskov, Denmark

Robert Griebler
Austrian National Public Health Institute, Vienna, Austria

Saskia De Gani
Careum Center for Health Literacy, Zürich, Switzerland

Torsten Michael Bollweg
Technical University Munich, Munich, Germany

8.N. Pitch presentations: School-environment and health behaviour

Abstract citation ID: ckac129.518

The effect of active breaks on cognitive performance and classroom behaviour: the I-move study

Matteo Ricci

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Background:
Active Breaks (ABs) intervention involves short bouts of moderate to vigorous physical activity (MVPA) conducted during or between curricular lessons by the appropriately trained teachers. The aim of the Imola Active Breaks Study (I-MOVE study) was to evaluate the effect of an ABs intervention on cognitive function and classroom behaviour in primary school children.

Methods:
The study was quasi-experimental, and it involved two groups attending a primary school in Imola (Bologna, Italy). The Active Breaks group (ABsG) performed the I-MOVE protocol consisting in 10 minutes of ABs divided in warm up, tone-up with high intensity interval training and cool-down. This is

repeated three times a day for one year and half. The control group (CG) continued with regular lessons. The baseline assessment was conducted in October 2019 and the follow-up in May 2021. Cognitive performance was assessed using working memory test and classroom behaviour was monitored using an "ad hoc questionnaire".

Results:

Working memory performance increased significantly more in the ABsG (change: 1.30±1.17) than in CG (0.96±1.20), $p < 0.05$. Almost the entire sample of the children wanted to continue with this intervention in the next following year. Children reported improvements in their school-life quality, including feeling better in class (75.40%) and in school (82.50%) when using ABs. Improvements were also reported in children time-on-task behaviours: 52.90% said they work easily in class, 52.90% that they could listen more clearly, 58.80% reported they can stay seated easily, and 59.60% that they learned better and were more focused after ABs.

Conclusions:

In conclusion the program has proven to be very effective on the children's cognitive improvement and classroom behaviour. Since the ABs intervention demonstrates these positive effects, its implementation in schools can have a beneficial, sustainable and long-term impact on childhood health.

Key messages:

- ABs intervention represents a cost-effective strategy to be implemented in the school settings regardless of the age and sex differences, to make the school a more dynamic environment.
- Despite the pandemic difficulties, the ABs intervention proved to be sustainable, and to have a positive effect on classroom behaviour by improving children's concentration and attention in class.

Abstract citation ID: ckac129.519

Adolescent Binge Drinking in the West of Ireland: Associated Risk and Protective Factors

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This study aimed to examine potential risk and protective factors for binge drinking among a cohort of 15-16-year-old adolescents in the West of Ireland. This study was a cross-sectional secondary analysis of 4,473 15-16-year-olds who participated in the 2020 Planet Youth survey. Binge drinking was defined as ever consumption of five or more drinks in a two-hour period or less. Data were analysed using SPSS version 27. Multivariable logistic regression was used to examine independent associations between potential risk and protective factors and binge drinking. A p-value of < 0.05 was deemed statistically significant. The prevalence of binge drinking among participants was 34.1%. Female gender (aOR 0.55, 95% CI 0.46-0.67, $p < 0.001$) and non-White ethnicity (aOR 0.49, 95% CI 0.31-0.77, $p = 0.002$) were associated with reduced odds of ever binge drinking. Self-rated 'bad/very bad' mental health (aOR 1.61, 95% CI 1.26-2.06, $p < 0.001$), current cigarette use (aOR 4.06, 95% CI 3.01-5.47, $p < 0.001$) and current cannabis use (aOR 2.79, 95% CI 1.80-4.31, $p < 0.001$) were associated with increased odds of ever binge drinking. Parental supervision (aOR 0.80, 95% CI 0.73-0.88, $p < 0.001$) and negative parental reaction to adolescent drunkenness (aOR 0.51, 95% CI 0.42-0.61, $p < 0.001$) reduced the odds of ever binge drinking among participants. Getting alcohol from parents was associated with increased odds of ever binge drinking (aOR 1.79, 95% CI 1.42-2.25, $p < 0.001$). Adolescents with friends who drink alcohol had almost 5 times higher odds of ever binge drinking (aOR 4.59, 95% CI 2.65-7.94, $p < 0.001$). Participating in team sports was also associated with increased odds of ever binge drinking (aOR 1.30, 95% CI 1.07-1.57, $p = 0.008$ for 1-4 times/week, aOR 1.52, 95% CI 1.07-2.16, $p = 0.020$ for ≥5 times/week). This study highlights key influences of adolescents' social environment on their binge drinking, and a need for renewed public health efforts to protect adolescents from alcohol-related harm.

Key messages:

- This study identified a high prevalence of ever binge drinking among adolescents in the West of Ireland - this is highly concerning as adolescents are vulnerable to alcohol-related harm.
- This study identified factors in the social environment of adolescents associated with binge drinking. This can inform public health action to protect adolescents from alcohol-related harm.

Abstract citation ID: ckac129.520

Video game addiction among Tunisian adolescents in Sousse: A cross-sectional study in high schools

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Background:

Addiction to video games is a theme regularly mentioned and associated with the risks that concern adolescents. This study aimed to determine the prevalence of video game addiction (VGA) among adolescents and identify its associated factors.

Methods:

We conducted a cross-sectional study within public high schools, in Sousse, Tunisia in 2019. The target population was high school students. A structured self-administered questionnaire was used to collect data about sociodemographic characteristics, lifestyle behaviors, and mental health disorders, and we used the 21-item Game Addiction Scale to objectify video game addiction. Statistical analysis was carried out using the program SPSS v.20.

Results:

A total of 1342 participants were recruited for the study,36.8% of whom were boys. The average age was 17.5 ±1.44 years. The analysis of mental health disorders showed that 67% were anxious, 66.8% were alexithymic, 65.4% were depressed and 39% had low self-esteem. The analysis of lifestyle behaviors showed that a lack of physical activity was reported by 57.6% of participants. Problematic use of the Internet (>2 hours per day) was reported among 72.4% of the students. The prevalence of video game addiction was 13%. Boys were more prone to be addicted than girls (66.2% versus 33.8%, $p < 0.001$). ≥17 years old students had a higher rate of VGA than those aged<17 years old (57.3% vs 42.7%, $p = 0.031$). VGA was higher among students who follow the non-scientific study section (69.4%, $p = 0.007$). Students who had moderate depression had the highest percentages of VGA (35.7%, $p = 0.005$). Students who had problematic use of the internet were more addicted to video games (80.3%) than those not having problematic use (19.7%), $p = 0.009$.

Conclusions:

This study allowed us to identify the students who are vulnerable to VGA. Also, a huge responsibility is accorded to school staff and parents to tackle this health problem by sensitizing their children and setting up some protective family rules.

Key messages:

- Several factors were significantly associated with video game addiction, especially problematic internet use.

- Further research is needed to understand the underlying mechanisms of video game addiction and to explore effective preventive or interventional strategies.

Abstract citation ID: ckac129.521
The school environment-related predictors of fights and bullying among School-Age Children in Serbia

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Background:
The health and development of school-age children is a contemporary topic of various health policies and programs, which has become even more of a focus in critical situations such as the COVID-19 pandemic. The study aims to assess the prevalence of school-age children's participation in fights and bullying in Serbia, and to examine the relevance of students' socio-demographic characteristics and perceptions of school and relations with other students and professors for participation in fights and bullying.

Methods:
A secondary analysis of the original data of the 2017 HBSC study is performed on 3267 students in a nationally representative sample of primary and high schools in Serbia. Predictors of taking part in fights and taking part in bullying were examined by using univariate and multivariate logistic regression.

Results:
The main results show that 50.8% of boys and 17.1% of girls have taken part in fights, while 17.7% boys and 10.4% of girls have taken part in bullying. Students who felt a large and very large burden of school obligations were 1.43 times more likely to participate in bullying at least once, while they were 1.38 and 2.12 times more likely to participate in multiple fights and 4.04, 1.24, and 2.78 times more likely to participate multiple times in bullying. Fights among school-age children are significantly positively associated with living with relatives/legal guardians and poor quality of life.

Conclusions:
The prevalence of participating in at least one fight/bullying is higher than in multiple fights/bullying. These associations suggest a necessity to enhance the monitoring and control of peer behavior among school-age children. The findings of the study imply key enablers of protection, such as building relationships based on team spirit and work, friendly behavior, empathy, and help, which should be included in the value system of school and family activities in programs to combat fights and bullying in school-age children.

Key messages:
- In Serbia, every second boy and every fifth girl participated in fights, while less than every fifth boy and every tenth girl participated in bullying.
- Study results can inform school and healthcare actors' efforts to improve school-age children's development and health capacity for life.

Abstract citation ID: ckac129.522
Early childcare type and child development at age 3.5 years, data from the French ELFE cohort

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Background:
Early childcare has been linked to child development in some countries. The aim of this study is to evaluate the impact of early childcare in the French context, where children can attend different types of childcare facilities prior to age 3 when they enter kindergarten, and development at age 3.5 years.

Methods:
10,683 children from the ELFE French national birth cohort were classified into 4 groups depending on their main type of childcare between birth and age three: childminder (n = 5,014), centre-based childcare (n = 2,583), informal childcare (n = 777) and parents only (n = 2,465). Children's development was measured with the short form of the Child Development Inventory (CDI) via parents-reports at age 3.5 years. The CDI score was transformed into a Development Quotient (DQ) taking into account the child's age, and global developmental delay was defined as DQ < 90. Missing data was imputed by Fully Conditional Multiple Imputation with 10 imputations. Multinomial analyses were carried out adjusted by Inverse Probability Weighting based on Propensity Scores calculated using main selection and confounding variables.

Results:
Compared to children who were cared for by parents only, children who were cared for by a childminder or in a centre-based childcare had a higher DQ (103.0 and 104.8 respectively) as well as a lower likelihood of global developmental delay (propensity-score weighted OR = 0.84, [95% CI 0.70-1.01] and propensity-score weighted OR = 0.54, [95% CI 0.44-0.66]) respectively.

Conclusions:
In the French context, early centre-based childcare attendance is significantly associated with a lower risk of global child delay. Policies should make centre-based childcare more accessible to a broader number of children.

Key messages:
- Early childcare type is linked to child development in France.
- Children in centre-based childhood had a lower likelihood of developmental delay compared to those looked after by parents only.

Abstract citation ID: ckac129.523
Implementation of resilience training programmes in children and adolescents: value and barriers

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Background:
Emotional distress increasingly represents a major burden in children and adolescents (C&A), especially in conflict zones where its prevalence is estimated to reach 70%. Resilience training programmes (RTPs) are interventions that seek to enhance resilience in individuals or groups pursuing mental distress prevention. Literature suggests RTPs be particularly effective in C&A; however, their effectiveness and value for public health are still unclear.

Methods:
A scoping review was performed in order to summarize evidence regarding the implementation and effectiveness of

RTPs in children and adolescents. A search string has been built according to the PICO model and launched on PubMed, PsycInfo, Academia databases. Additional references were identified by a hand-search in Google Scholar. Studies included were narratively summarized according to topics that emerged.

Results:

18 articles were finally included in the review. Main issues were 1) RTPs seem to be more effective in adolescents rather than in children; 2) COVID-19 pandemic has raised the attention towards RTPs in C&A; 3) beyond conflict zones their implementation is increasingly recognized in supporting C&A management of daily stressors and traumas also in C&A with disabilities; 4) school is identified as the key setting for RTPs; 5) the high heterogeneity in RTPs approaches, contexts and study samples limits a conclusive effectiveness assessment.

Conclusions:

Our findings highlighted how RTPs are increasingly recognized as a tool to improve C&A cognitive and behavioral functioning and resilience to external stressors, getting greater interest in the COVID-19 pandemic. Despite relevant theoretical support and promising study results, RTPs still lack strong evidence supporting their embracement by policymakers and effective implementation in public health policy. In order to not miss this chance, more efforts are needed in strengthening RTPs conceptualization and cost-effectiveness studies.

Key messages:

- RTPs are a promising tool to enhance the resilience of children and adolescents gaining increasing interest due to the COVID-19 pandemic.
- More studies are needed to provide a strong evidence base that supports their acknowledgment by policymakers and their implementation in public health policies.

Abstract citation ID: ckac129.524
Trust and emotional difficulties in adolescence: findings from a Swedish cohort study

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Background:

Trust is a key component of a socially sustainable society, and is typically divided into general trust (referring to trust in other people) and institutional trust (referring to trust in the public institutions of society). Trust tends to be developed and formed early in life. While a plethora of research has reported positive links between trust and health in adults, the aim of this study was to examine the associations between general and institutional trust and emotional difficulties in mid and late adolescence.

Methods:

Data were derived from the Swedish cohort study Futura01, using information collected amongst 3622 grade 9 students (~15-16 years, t1) who were followed-up two years later (~17-18 years, t2). General and institutional trust was measured by indices based on five items each at both t1 and at t2 (range 1-4). Emotional difficulties were measured by the Strengths and Difficulties Questionnaire (SDQ) subscale at both t1 and at t2 (range 0-10). Control variables included family type and cash margin at t1 and upper secondary school program (academic vs. vocational) at t2. Linear regressions were performed using the first difference (FD) approach, analysing the change in emotional difficulties (t2-t1) regressed on the change in general and in institutional trust (t2-t1), respectively.

Results:

Analyses simultaneously adjusting for change in both dimensions of trust showed inverse associations between the change in general trust and the change in emotional difficulties (b = -0.21, 95% CI -0.39, -0.04) and between the change in institutional trust and the change in emotional difficulties (b = -0.22, 95% CI -0.35, -0.09).

Conclusions:

Increases in general and in institutional trust between ages 15-16 and 17-18 years were associated with a corresponding decrease in emotional difficulties. The findings suggest that trust is a social determinant of emotional difficulties in adolescents. Endeavours to enhance trust in this age group are relevant.

Key messages:

- Changes in trust were inversely associated with changes in emotional difficulties in adolescents.
- The findings indicate that efforts to reinforce trust in adolescents are relevant.

Abstract citation ID: ckac129.525
Indoor metals pollution and metabolic outcomes among Italian children

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Background:

Through this study, we aimed to test the association between the exposure to metals measured in indoor dust and metabolic outcomes among children living in areas with environmental exposure to metals.

Methods:

The project ''Health impacts of environmental exposure to airborne pollutants in the sites of Brescia and Taranto, Italy: increase knowledge to address preventive intervention of local and global relevance'' (ISEIA) enrolled 130 children aged 6 to 13 years (51.5% females) resident from pregnancy in highly industrialized areas of the Brescia province, Northern Italy. Metabolic outcomes including BMI, fasting blood glucose and blood creatinine were measured. The concentration of a mixture of 10 metals in indoor dust was determined through an X-ray fluorescence portable analyzer (p-XRF). Linear regressions and Weighted Quantile Sum (WQS) regression were applied to test for the association between metal exposure and metabolic outcomes. All models were adjusted for age, gender, socio-economic status and area of residence.

Results:

A significant association was observed between Cd and blood creatinine ($\beta = 0.01$; 95%CI = 0.001, 0.02; p-value = 0.028) when considering each individual metal separately in the model. WQS regression showed a positive significant association between the mixture of metals and fasting glucose ($\beta = 0.87$; 95%CI 0.14, 1.61; p-value = 0.023) identifying Mn, Cr and Cu as the elements with the higher weights, while a marginally significant association was found between the metal mixture and blood creatinine ($\beta = 0.01$; 95%CI = -0.001, 0.02; p-value = 0.075) where Cd and Ti showed the highest weight.

Conclusions:

We assessed the potential association between exposure to metals in indoor household dust and blood glucose and creatinine. Our results contribute to clarifying the role of metal exposure in the burden of non-communicable diseases although further studies are needed to better understand the relationship between metal exposure and metabolism.

Key messages:

- The metal mixture in indoor household dust is associated with an increase in fasting glucose.
- Cd concentration in indoor household dust is associated with an increase in blood creatinine.

8.O. Workshop: New challenges for suicide prevention in the context of Covid-19

Abstract citation ID: ckac129.526

Organised by: EUPHA-PMH
Chair persons: Johan Bilsen (EUPHA-PMH), Jutta Lindert (EUPHA-PMH)
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The recent COVID-19 pandemic confronted many societies with profound public health challenges. Although primarily a 'somatic' health concern, it becomes clear that Covid-19 and its aftermath also proved to have a substantial impact on mental health and wellbeing of the population in general and on vulnerable subgroups, such as young people and the elderly, in particular. An important public mental health concern in this context is the possible adverse influence of this pandemic on suicidality. Recent studies show that during the outbreak of the coronavirus disease the suicide mortality did not rise, rather on the contrary. However, the impact of the increased number of people with mental distress related to Covid-19 on suicidal ideation as well as the long-term impact on suicide rates is unclear. Also the long-term impact of the Covid-19 restriction measures greatly hindering adequate mental healthcare services and suicide prevention initiatives is uncertain. This workshop will focus on suicidality trends since the pandemic onset in different countries, suicide figures, experiences in the field of suicide prevention and on attitudes towards seeking help. Ann John from UK will talk about suicide trends during Covid-19 pandemic and will present suicide data of 35 countries collected by the international Covid-19 Suicide Prevention Research Collaboration. Fabrice Jollant will present data about the impact of Covid-19 pandemic on suicide attempts in France, and will discuss in this context the new national suicide prevention strategy. John Cachia will show the importance of a broad mental public health approach to suicide prevention in Malta. And finally, Saska Roskar from Slovenia will show how prevention of suicidality in individuals working themselves in the field of mental health can be hindered by self-stigma.

Key messages:

- We must remain vigilant about the possible long-term mental health impact (including suicidal behavior) of the Covid-19 pandemic.
- Pandemics like Covid-19 highlight certain weaknesses in suicide prevention strategies.

Abstract citation ID: ckac129.527
Suicide Trends during the COVID-19 pandemic and the International COVID-19 Suicide Prevention Research Collaboration

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Introduction:

There was and still is much speculation about the COVID-19 pandemic impact on suicide rates. We aimed to assess the effect of the COVID-19 pandemic on suicide rates around the world.

Methods:

We sourced real-time suicide data from countries or countries areas through a systematic internet search (official websites of Ministries of health, police agencies, and government-run statistics agencies or equivalents), recourse to our networks (e.g. ICSPRC) and the published literature (a living systematic review). We used an interrupted time-series analysis to model the trend in monthly suicides before COVID-19 in each country or country area, comparing the expected number of suicides derived from the model with the observed number of suicides in the early months of the pandemic (from April 1 to July 31, 2020, in the primary analysis). We have now updated this work to cover the first 15 months of the pandemic and stratified analyses by age and sex and method. We will present findings from the new updated data (35 countries) at the conference.

Results:

Initially we sourced data from 21 countries (16 high-income and five upper-middle-income countries). Rate ratios (RRs) and 95% CIs based on the observed versus expected numbers of suicides showed no evidence of a significant increase in risk of suicide since the pandemic began in any country or area. There was statistical evidence of a decrease in suicide compared with the expected number in 12 countries or areas.

Conclusions:

This was the first study to examine suicides occurring in the context of the COVID-19 pandemic in multiple countries. Early on high-income and upper-middle-income countries, suicide numbers remained largely unchanged or declined compared with the expected levels based on the pre-pandemic period. We need to remain vigilant and be poised to respond as the longer-term mental health and economic effects of the pandemic unfold. We will present updated findings with more recent data.

Abstract citation ID: ckac129.528
Suicide prevention in France put to the test by COVID-19

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Introduction:

Each year, nearly 9,000 people die from suicide in France, and more than 150,000 attempt suicide. In spite of a decrease for the last 30 years, rates of suicide in France remain higher than the European mean. Since 2018, a national suicide prevention strategy of the Ministry of Health has been in place. In 2020, this new strategy has been exposed to the COVID-19 pandemic.

Methods:

First, the different actions of the national suicide prevention strategy will be presented, followed by the results of the available data regarding the impact of COVID-19 on suicidal gestures. These data are 1) hospitalizations for self-harm (ICD-10 codes X60 to X-84) from the national health database; 2) calls to poison control centers and 3) visits to the emergency room for a suicide attempt. The latest figures available will be presented.

Results:

The analysis of these data compared to 2019 highlights two main periods. Between March and December 2020, a significant decrease in suicide attempts was observed (8.5%), with a rapid drop during the first week of the first confinement in mid-March 2020, in women and men, and in all age groups except old-aged people. Since January 2021, a significant increase in suicide attempts has been observed among teenage girls, including high-lethality acts. Moreover, among the young and the elderly, the figures are now similar to 2019. Only numbers for middle-aged adults continue to decline.

Conclusions:

The impact of the COVID-19 pandemic on suicide attempts appears to be variable over time, according to age and gender. The old-aged people and young people, especially adolescent girls seem to have suffered the most from this situation. It is still too early to know whether the new national suicide strategy has had any positive impact. However, the pandemic has highlighted certain weaknesses in the French system, in particular the lack of recent data on mortality by suicide, and the heavy dependence on a fragile mental health medical system.

Abstract citation ID: ckac129.529
Suicide Patterns in Malta: pathways for prevention

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Background:

Suicidal behaviour is the result of several risk factors, such as acute stress, severe depression, violence, sexual abuse, etc. A mental public health approach to suicide prevention needs to look beyond the demographic characteristics of deaths by suicide and to take into account specific country determinants. Available clinical information can help identify and quantify risk, analyse patterns of behaviour, explore links between risk and behaviour and generate possible suicide prevention pathways.

Methods:

162 deaths by suicide for the period January 2015 - June 2021 in Malta are analysed against available clinical information. Major sources of detailed clinical information include obligatory notifications to the Commissioner for Mental Health of all cases of persons involuntarily admitted to acute psychiatric services and other medical records held within the Maltese public mental health system.

Results:

81% of 162 deaths by suicide for the period under study were males, two-thirds of them between 25 and 54 years. The preliminary findings have confirmed that less than 50% of these deaths had previous contact with the public health system. The two main diagnostic criteria among deaths with recent psychiatric admission/s were acute stress reaction to personal life events and very severe mood disturbances, particularly depression. There seems to be increased risk among migrants and foreign workers residing and working in Malta. The frequency of prior admissions, age-related issues, the time-event relationships, and relevance of elicited clinical findings are still being evaluated and will be presented in more detail in the workshop.

Conclusions:

Exploring risk factors within the history of cases of suicide through available clinical information can contribute to the development of suicide prevention pathways, relevant to the specific context of local communities.

Abstract citation ID: ckac129.530
Self-stigma in suicide prevention of mental health professionals

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Introduction:

Stigma is one of the main factors hindering help-seeking, which can have debilitating effects on mental health and even lead to suicidality. Stigma can affect the general public but also mental health professionals. In this study we examined mental-illness and help-seeking self-stigma as well as public stigma of suicidal behavior among suicidologists.

Methods:

Invitation to participate in the study was sent to 518 member of the Internat.l Assoc. for Suicide Prevention. 89 participants (55 female, 34 male; 17% response rate) completed the survey. We gathered sociodemographic data, data on personal history of mental illness and suicidal behavior and on different types of stigma. We hypothesized that help-seeking self-stigma is predicted by sociodemographic attributes and personal history of mental illness and that self-stigma related to mental illness and suicide act as mediators.

Results:

Personal experience with mental illness predicted mental illness self-stigma. There was no significant predictive value of other variables (age, gender, years working in suicidology) for self-stigma of mental illness and suicide behavior. Both types of self-stigma (mental illness and suicide behavior) were correlated. Mental-illness self-stigma was shown to be a stronger predictor of help-seeking self-stigma than self-stigma of suicide behavior, though the effect did not reach statistical significance. Self-stigma of suicide behavior showed no independent contribution to help-seeking self-stigma.

Conclusions:

Mental healthcare professionals represent a particularly vulnerable group for developing mental health issues and suicidality. However, due to fear of being perceived less competent by colleagues and the public, they often disguise their mental struggles and are reluctant to seek help. These pilot findings warrant further research to better understand self-stigma and its impact on help-seeking behavior in order to prevent suicidality in this population.

8.P. Skills building seminar: Design thinking: adopting a human-centred approach to tackling complex problems

Abstract citation ID: ckac129.531
Organised by: University College Dublin
Chair persons: Kate Frazer (Ireland), Thilo Kroll (Ireland)
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The concept of wicked problems is recognised since the 1970s, and social determinants of health (SDOH) account for various difficulties. Fixing or solving wicked problems is challenging due to the complexity. The diverse nature of problems can mean that a solution for one group may result in unintended consequences for others. Healthcare itself is a complex adaptive system. An intersectionality lens may assist in navigating 'the messiness,' to reduce inequity and enable voices of those experiencing problems to be involved. COVID-19 amplified difficulties of marginalised populations including 'othering'. Homelessness is a complex global public health challenge, with limited reliable prevalence data and no universally agreed definition. Being homeless is associated with negative impacts on health and wellbeing, and an absence of belonging. Considering solutions requires a problem-solving focus. Design thinking is a human-centric problem-solving approach focusing on empathy, brainstorming ideas, and prototyping iterative solutions. Equity focused design thinking is a framework to develop people-centred solutions and reflect on the influence of own biases and beliefs on systems. Acknowledging the theme of the conference 'Strengthening health systems: improving population health and being prepared for the unexpected' we propose a 60-minute skills-building workshop. We will use a live design sprint format to facilitate collaborative learning for attendees, as an alternative to oral presentations, to explore the intersectionality of design thinking and equity using the Stanford D model. The value of this workshop is knowledge generation and dissemination using an equity lens to adopt creative methods for engagement to produce end-user solutions.

Objectives:

– To introduce design thinking approaches to consider solutions for homelessness.

– To facilitate an experiential approach to support learning and collaboration.

– To explore the application of design thinking using an equity focus as a tool to challenge mindsets and create problem-solving in public health.

Format:

Working in groups use Stanford D model equity-centred framework (Notice, Empathize, Define, Ideate, Prototype, Test, Reflect).

Introduction (10 min)
– Homelessness 'a wicked problem'
– Design thinking and equity focus explanation and plan for session
Phases of Design thinking (30-40 min)
– Noticing: awareness of own values, biases, assumptions
– Empathizing: Understanding homelessness from the perspective of the user
– Defining: The specific user challenge
– Ideate: Brainstorm solutions
– Prototype and test: Propose and pitch low fidelity solutions
Final reflection & summary (10 min)
– Insights and learning, networking, and collaboration.

Key messages:

- Equity focused design thinking methods provide approaches to increase awareness of the impact of biases and beliefs.
- Human-centred design is an agile approach to creating service and systems developments for marginalised populations.

8.Q. Workshop: WHO's activities to strengthen the evidence of public health and social measures

Abstract citation ID: ckac129.532
Organised by: WHO
Chair persons: Ramona Ludolph (Switzerland), Ryoko Takahashi (Switzerland)
Contact: ludolphr@who.int

Public health and social measures (PHSM) are key to reducing the spread of infectious diseases like COVID-19, especially in the early stages of an outbreak. PHSM include non-pharmaceutical actions that individuals, communities, and governments take to reduce person-to-person contact and/or make them safer. PHSM reduce the pressure on the health care system to allow for the continuation of essential services and buy time for the development and dissemination of treatments and vaccines. While a combination of PHSM has proven to be effective in reducing transmission during the COVID-19 pandemic, the evidence on the relative effectiveness and broader health, social and economic impact of individual interventions is still scarce. However, PHSM packages such as lockdowns can have severe unintended consequences for individuals and societies including economic hardship, decreased mental health and wellbeing and exacerbated social and health inequity; therefore, precision in PHSM decisions and implementation is needed. This requires a strengthened evidence base as well as tools that support countries in making balanced decisions about PHSM with the best possible cost-benefit ratio. WHO works with multisectoral partners to achieve effective and context- specific PHSM implementation while maximizing the benefits of PHSM and keeping their health, social and economic burden to a minimum and justifiable. In the WHO Regional Office for Europe, PHSM are a key pillar in the COVID-19 response. The office provides, amongst others, a PHSM monitoring dashboard to track the severity of implementation across all 53 Member States as well as a calibration tool and related capacity building to guide countries in their implementation decisions as the pandemic situation evolves. The WHO has further launched a global initiative in 2021 to measure the effectiveness and impact of PHSM and improve precision in future PHSM decisions and policies. The initiative aims at providing robust data and research evidence on PHSM through a global conceptual model and research agenda, a central research monitoring system and harmonized data collection mechanisms during health emergencies. It further seeks to integrate PHSM into emergency preparedness and response assessments and yield a decision-making tool to facilitate evidence-informed and context-specific PHSM implementation. This workshop will provide an overview of WHO's activities in advancing PHSM research and implementation for better decision-making during future emergencies. Three presentations by the WHO Secretariat at the regional and global levels will focus on the strategic approach and the main deliverables of the respective initiatives so far. The presentation by the University of Munich will provide in-depth insights into the conceptual model on PHSM. The workshop will actively solicit feedback from participants on planned activities and results gathered to-date.

Key messages:

- The lack of evidence on PHSM effectiveness and impact hampered an evidence-driven implementation approach during the COVID-19 pandemic.
- WHO works to achieve effective and context- specific PHSM implementation to maximize the benefits of PHSM while keeping their health, social and economic burden to a minimum and justifiable.

Abstract citation ID: ckac129.533
The WHO initiative to measure the effectiveness and impact of PHSM – key activities in 2022

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The presentation will focus on two main outcomes of the WHO initiative: a global research agenda to steer future evidence generation on PHSM, and a central monitoring system for PHSM research. In September 2021, a global technical consultation with over 60 global experts was organized to review the existing evidence on PHSM and identify the initiative's priorities. The consultation provided an opportunity to have an initial discussion on potential research priorities. This became the basis for an iterative online consultation process. The draft research agenda includes seven main research themes including effectiveness, unintended consequences, methodological challenges and implementation considerations affecting the uptake of and adherence to PHSM. Workshop participants will be invited to comment on the suggested themes and propose additional priority questions for the research agenda. The central research monitoring system will consist of a global repository of primary studies and reviews investigating the effectiveness and broader multisectoral impact of PHSM. Indexed studies will be mapped against the key themes of the research agenda, facilitating real-time monitoring and evaluation of its progress. An AI-based mechanism for automated updating of systematic reviews will complement the database. This one-stop shop will allow researchers and decision-makers worldwide to access the latest evidence on PHSM and keep track of the synthesized effectiveness and impact of different interventions and combinations. The platform will further provide a protected working interface. This monitoring system for PHSM research enables timely access to and utilization of evidence indecision-making processes during health emergencies and fosters international collaboration on the analysis and interpretation of data. Workshop participants will be invited to review the alpha version of the platform.

Abstract citation ID: ckac129.534
Public health and social measures during health emergencies such as the COVID-19 pandemic: an initial logic model to conceptualise and classify measures

Eva Rehfuess

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Issue/problem:

In the context of the COVID-19 pandemic, public health and social measures (PHSM) are being implemented worldwide, but in very different ways. This is also due to a lacking common understanding of PHSM so far. As a result, there are limited insights regarding their components, implementation and effectiveness as well as impacts beyond health of PHSM.

Description of the problem:

The project contributes to the WHO PHSM initiative. A logic model is being developed that offers a shared language and understanding of how PHSM are intended to achieve transmission-related outcomes, but also that non-intended consequences need to be considered. The overall approach is informed by a system-based logic model template and a staged approach to logic modeling. The development process is making use of (i) existing COVID PHSM taxonomies and related literature, (ii) existing theoretical frameworks related to complex interventions in complex systems, (iii) consultations with WHO staff and the according PHSM steering group, and (v) iterative brainstorming within the working group.

Results:

The initial logic model is rooted in a complexity perspective which recognises that (i) all measures have both intended and unintended consequences for health and society and (ii) all elements within the logic model are interconnected and interact with each other. All PHSM operate through two basic mechanisms: reducing contacts and making contacts safer. Taken together, these two mechanisms work to reduce transmission-relevant contacts. Any specific PHSM is defined by a combination of the measure itself, the population and/or setting targeted and the mode of enactment. The central hub of the logic model connects and integrates all elements. The initial logic model was applied to school and travel measures as examples.

Main messages:

The PHSM logic model is a conceptual basis to facilitate research on PHSM, monitoring and evaluation of PHSM, and evidence-informed decision-making.

Abstract citation ID: ckac129.535
Implementing public health and social measures: an integral part of the health emergency management cycle

Tanja Schmidt

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Public health and social measures (PHSM) have been utilized as a tool to reduce the infection rates and disease burden throughout the COVID-19 pandemic and continue to play an important role even with vaccination campaigns well underway in preventing severe disease. In order to systematically track, analyze and report qualitative and quantitative data o PHSM implementation across the European Region and assist countries in the COVID-19 response, the COVID-19 Incident Management Support team at the WHO Regional Office for

Europe developed PHSM Severity Index and PHSM Dashboard. The PHSM Severity Index captures the types, severity and timing of PHSMs implemented by a country across six main indicators. By providing standardized data on PHSM implementation, the PHSM Severity Index can support and inform the development of policy at country and regional levels. PHSM data, severity methodology and policy tools developed throughout the COVID-19 pandemic should be adapted to provide a foundation for preparedness for future large-scale health emergencies. In addition, discerning the epidemiological impact of specific PHSM and their combinations currently is a priority for policy-makers and can guide countries' transition strategies. Analysing the impact of PHSM on COVID-19 transmission is of critical importance, especially as variants of concern bring new waves of COVID-19 cases and may challenge countries' vaccination and response strategies. Reference PHSM in Response to COVID-19 (who.int)

Abstract citation ID: ckac129.536

Supporting decision making on public health and social measures in response to COVID-19- The PHSM calibration tool

Dominic Cocciolone

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Public health and social measures (PHSM) are preventative measures taken by individuals, communities and government institutions at national and local levels to prevent and reduce transmission of an infectious disease - in this instance SARS-CoV-2. The decision to introduce, adapt or lift PHSM should be based primarily on a situational assessment of the intensity of transmission of SARS-CoV-2 and the capacity of the health system to respond to subsequent increases in hospital admissions, but must also consider the effects these measures may have on the general welfare of society and individuals. The WHO Regional Office for Europe developed an online public health and social measures (PHSM) calibration tool to assist Member States in decision-making relating to PHSM implementation during the COVID-19 pandemic. The tool, designed to be used primarily by policy-makers in national and local government authorities, provides guidance based on a situational-level assessment framework that is determined by the level of community transmission and the overall capacity of health systems and public health services within a country or region to respond. By using a combination of country-reported and user-input data, the tool automatically generates a situational assessment and corresponding PHSM guidance for users, summarized in a downloadable report.

Reference:

https://phsm.euro.who.int/calibrationTool

9.A. Pitch presentations: Strengthening primary and secondary care

Abstract citation ID: ckac129.537

Primary care management strategies and COVID-19 related hospitalization: a population-based study

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Background:

Due to SARS-CoV-2 rapid mutations, the ending of the pandemic is still proceeding at a slow pace and there is the need to strengthen and invest in health systems that avoid hospital overload and its consequences on patients' health. Most symptomatic infections have mild to moderate respiratory symptoms and patients are managed in the context of primary care. In Italy, literature on COVID-19 outpatients management by general practitioners (GPs) is scarce. This study explores the effect of GP active care and monitoring on COVID-19-related hospitalization in patients in the province of Modena (Italy) and investigates the possible determinants of GP's management.

Methods:

This is a retrospective cohort study of SARS-CoV-2 infected adult outpatients managed by their GPs from March 2020 to April 2021 in the province of Modena (Italy). Data on GPs' characteristics, management strategies (visits and remote monitoring), patients' socio-demographic characteristics, and hospitalization were extracted from the GP's electronic medical records and were analyzed using descriptive statistics and multiple logistic regression.

Results:

46 GPs agreed to participate, and 5340 patients were included in the analyses. 3014 (56%) patients received active daily remote monitoring and 840 (16%) were visited at home. Remote monitoring and home visits were both associated with a reduction of the probability of hospitalization rate of approximately 50% (respectively OR:0.52, 95%CI:0.33, 0.80 and OR:0.50, 95%CI;0.33, 0.78). Preliminary analysis of determinants showed that GPs' patient load, setting, age, and sex were significantly associated with management strategies.

Conclusions:

Active monitoring performed by GPs was effective in reducing the probability of hospitalization. Primary and hospital care integration can be effective for COVID-19 management. Studies on GPs' characteristics and patient load and their effect on their ability to care for patients are needed.

Key messages:

- Active remote monitoring and visits performed by Italian general practitioners effectively reduced hospitalization for COVID-19.
- Primary and hospital care integration can be effective for COVID-19 management.

Abstract citation ID: ckac129.538

The health system and health impacts of primary healthcare reform in China: A systematic review

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Background:
China has undergone a comprehensive primary healthcare(PHC) reform since 2009 aiming to deliver accessible, higher-quality, and equitable healthcare. However, there is limited understanding of the effectiveness of this reform. This systematic review synthesizes evidence on health system and health impacts of this reform.
Methods:
We searched 13 international databases and three Chinese databases for quantitative studies assessing the impacts of this reform published between January 2009 and March 2020. We searched for studies in English or Mandarin. Eligible study designs were RCTs, quasi-experimental studies and controlled before-after studies. We included studies that: assessed PHC policies since 2009; had geographical, temporal or population comparators; and assessed any outcome measures of health expenditures, health service utilisation, quality of care or health outcomes. Study quality was assessed using ROBINS-I, and results synthesized narratively. PROSPERO: CRD42021239991.
Results:
Of 35,480 titles, 37 studies were included (27 in English and ten in Mandarin). Eight were considered at low risk of bias. The 37 studies covered all major PHC policies since 2009, but mostly focused on the essential medicine (N = 15) and financing (N = 10). The quantity and quality of studies on service delivery policies(e.g., family physician and essential health services), were low(N = 3,with moderate or serious risk of bias). 17 studies found that the PHC reforms promoted primary care utilisation. Its impacts on quality and health improvement appear limited to people with chronic diseases(N = 11). Evidence on primary care costs and OOPs were not clear. Some evidence showed that the reforms were pro-equity with benefits accrued in disadvantaged regions and groups.
Conclusions:
Comprehensive PHC reforms can deliver some benefits related to utilisation and health for high-risk and vulnerable populations. Policymakers should continue to prioritize PHC to achieve Universal Health Coverage.
Key messages:
- The finding suggests that large-scale and comprehensive primary healthcare reforms can deliver benefits related to utilisation and health for high-risk and vulnerable populations.
- Future research should include more robust study designs and seek to better understand the impact of major PHC reforms on quality of care, health outcomes and equity.

Abstract citation ID: ckac129.539
A composite index of avoidable hospitalization to assess primary care quality: an Italian experience

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Background:
In Italy, primary care (PC) ensures universal health coverage while containing costs. However, the assessment of its quality still remains an issue. Evidence has shown that high-quality outpatient care, through timely interventions to prevent complications of "ambulatory care sensitive conditions", may avoid hospitalization. Aim of the study is to analyse the performance of PC in the Italian regions, using a composite and synthetic index of avoidable hospitalizations.
Methods:
Hospital discharge data from 119 Italian geopolitical areas were analysed for the 2017-2019 triennium and for 2020, separately. According to the "Italian National Outcomes Evaluation Programme" methodology, 9 avoidable hospitalization indicators covering 5 nosological fields (infectious, respiratory, metabolic, cardiovascular and mental diseases) were combined in a synthetic index, calculated as the weighted mean of their standardized scores (with equal weights for each field). Using "natural breaks" technique, the areas were grouped into 5 clusters: "high", "medium-high", "medium", "medium-low" and "low".
Results:
The analysis showed a marked heterogeneity at intra-regional level for the pre-pandemic triennium, with areas of homogeneity in regions with higher levels of hospitalization. The "medium" cluster, which is the widest, included 36 areas variously distributed across regions. The comparison with 2020 confirmed the geographical patterns observed for the previous triennium, despite a general reduction in hospitalizations due to the pandemic.
Conclusions:
As a proxy indicator of PC quality, this index can aid decision makers in prioritizing quality improvement actions. However, in order to obtain a comprehensive evaluation, a joint reading of this index with other healthcare indicators is recommended.
Key messages:
- High-quality PC is essential in maintaining appropriate hospitalization levels.
- The composite synthetic index proposed could aid PC quality assessment.

Abstract citation ID: ckac129.540
The impact of SARS-CoV-2 on emergency health care in a referral acute-care center in northern Italy

Allegra Ferrari

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To assess how SARS-CoV-2 has changed the demand for in-person health care, we retrospectively analyzed data on access to the emergency department (ED) of San Martino Hospital, the referral acute-care center in the Liguria region (Northwest Italy). 181,699 records of patients diagnosed with an ICD-9 code between 2019 and 2021 were considered. In comparison to pre-pandemic levels, following the introduction of social distancing measures, the median number of ED visits declined by 41.4% in 2020 and by 28.1% in 2021. The period of maximum drop in access (-58.6%) corresponded to the 2020 11-12th calendar weeks and coincided with the highest rates of COVID-like illness - defined as either ILI or LRTI cases - identified through an operator-dependent syndromic surveillance system (+340%; 19.5% of total ED attendances). In terms of relative impact, in 2020 and 2021 non-urgent ED codes decreased (by 6.7% and 7.3%) and both urgent and emergency ED codes increased (by 4.8% and 3.8% the former; 5.5% and 8.8% the latter), even so, the absolute number of ED access fell drastically for all codes. Urgent codes, in particular, experienced the most severe decrease, shifting from a pre-pandemic value of 25,009 to 18,826 in 2020 and 19,528 in 2021. With

regards to diagnosis, in 2020, respiratory infections saw the highest increase (+3.3%) while traumas and eye diseases saw the highest decrease (-1.1% and -3.8%, respectively). This trend reversed in 2021 during which respiratory infections decreased (-2.2%) and traumas increased (+2.2%). Despite the admissions of males and the elderly being routinely lower, these categories experienced the greatest increase in access for respiratory infections: +3.9% and +10.1% in 2020; +2.8% and +7.4% in 2021. While reduction of non-urgent ED visits indicates that the high pre-pandemic access levels may have been avoidable, the significant decline in non-COVID-19 urgent accesses potentially points to an increase in delayed and missed care.

Key messages:

- During the COVID-19 pandemic – possibly due to fear and underestimation of symptoms – there was an overall reduction in ED accesses that potentially points to an increase in delayed or missed care.
- The reduction in non-urgent attendances indicates that high pre-pandemic accesses may have been avoidable and that a reduction in unnecessary ED visits is an attainable goal for healthcare systems.

Abstract citation ID: ckac129.541
COVID-19 incidence on Emergency Departments accesses. Health need and fear of infection, what wins?

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Introduction:

The COVID-19 pandemic has changed the patterns of access to the Emergency Department (ED), but it is unclear whether this change was due to COVID-19 incidence or the lockdown imposed by law.

Aim:

To evaluate the association between trends of ED accesses and COVID-19 incidence in the period 1 January - 31 December 2020.

Material and methods:

The data of accesses to the ED per month and severity triage code of 14 hospitals in the Southeast Tuscany (Italy, Provinces of Siena, Arezzo, Grosseto) were obtained from hospitals data warehouses. Data on new cases of COVID-19 infection (obtained by the Ministry of Health) for the 3 provinces were used to calculate the incidence of infection. Hospitals were classified in 4 categories based on beds number, medical specialties offered, services provided. Differences in ED accesses by month, triage code and hospital type were investigated by a Kruskal-Wallis analysis of variance. Association between ED accesses and COVID-19 incidence was evaluated using a random effect panel data analysis adjusting for hospital type and triage code.

Results:

A total of 268,072 ED accesses have been studied. Their trends saw a strong decrease in correspondence of the first pandemic peak, subsequently they are increased and then decreased again until the minimum peak in November 2020. COVID-19 incidence appeared to overlap, but in the reverse direction, with ED admissions trends. Monthly differences of the ED accesses were significant ($p < 0.01$) except for most severity code. There is a statistically significant inverse association between ED accesses and COVID-19 incidence (Coef. = -0.074, $p < 0.001$) except for most severe cases (triage code 1: Coef. = -0.028, p = 0.154).

Conclusions:

ED admissions trends followed the COVID-19 incidence independently from the period of lockdown except for the most severe cases. The fear to contract the infection seemed to discourage patients to access ED for diseases that were perceived as not serious.

Key messages:

- The pandemic has changed the lifestyle of people worldwide, modifying even the perception that the patient has of own state of health and their access to Emergency Department.
- The decrease in accesses involved less severe cases. Reflect on both the adequacy of accesses in the pre-pandemic period and on what is the best setting to manage these cases in the pandemic period.

Abstract citation ID: ckac129.542
Characterizing post-covid conditions in a Turkish cohort: A prospective study

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Background:

Investigating the people who suffer from post-COVID health conditions is necessary to accommodate the demand for accessing healthcare. This study aims to describe post-COVID health conditions within six months after diagnosis.

Methods:

This study was conducted at Dokuz Eylul University Hospital, a tertiary care hospital in Ä°zmir-Turkey. Participants aged $\geq$18 years who were diagnosed as SARS-CoV-2 RNA positive in the hospital from November 1st, 2020 to May 31st were interviewed by phone at one, three and six months after diagnosis. Symptom frequencies were stratified by demographic and clinical characteristics. The dependent variable was having post-COVID condition according to World Health Organization's definition. We estimated logistic regression models to identify associated factors for post-COVID condition in the patients who had symptoms at baseline.

Results:

A total of 5083 people completed the third month's interview. The prevalence of post-COVID condition was 21.8% (n = 1108). Tiredness/fatigue (10.2%), muscle or body aches (7.3%) and dyspnea/difficulty breathing (4.8%) were the most common symptoms. Older age (65-74 aged groups versus 18-24 aged group, odds ratio-OR:1.57, 95% confidence interval: 1.10-2.25), female gender (OR: 1.97, 1.71-2.28), bad economic status (OR: 1.44, 1.13-1.84), having more health conditions ($\geq$3 conditions, OR: 1.82, 1.28-2.55), having more symptoms (>5 symptoms, OR: 2.59, 2.20-3.07) and hospitalization (intensive care unit, OR: 1.98, 1.13-3.37) were found to be associated with reporting of post-COVID condition.

Conclusions:

This study identifies the prevalence and risk factors for post-COVID conditions in a large cohort of patients. The results of the study would guide the healthcare organizations in the planning of post-COVID management strategies.

Key messages:

- The prevalence of post-COVID conditions was 21.8%. Older age, female gender, having more health conditions, disease severity in the acute phase and bad economic status were risk factors.

- Clinical management strategies and country-specific healthcare planning should be devised for the post-COVID condition burden.

Abstract citation ID: ckac129.543
WICID 2.0: Integrating evidence and ethics in decisionmaking and guideline development on SARS-CoV-2

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Evidence-informed decision-making (EIDM) requires the balancing of numerous and often conflicting factors. During the SARS-CoV-2 pandemic, sound and fair EIDM procedures were challenged by time constraints and limited evidence. Beneficial effects had to be weight against public health impacts beyond COVID-19, broad societal consequences, or individual liberties. Evidence-to-decision (EtD) frameworks are neither able nor intended to replace stakeholder participation, but can serve as a tool to ensure the relevance and completeness of criteria to be considered for EIDM in public health and guideline development. Employing 'best-fit' framework synthesis, we used the WHO-INTEGRATE framework as a starting point to develop the WHO-INTEGRATE COVID-19 framework version 1.0. WICID 1.0 is based on a content analysis of comprehensive strategy documents to guide policy makers in implementing new or decrease existing measures to protect against COVID-19 in Germany. WICID 1.0 was validated by coding the framework against an updated set of the key strategy documents, and key strategy documents addressing non-pharmacological measures in long-term care facilities. In total, 12 key strategy documents were analysed to develop WICID 1.0, and 18 + 23 documents were analyzed for its refinement towards WICID 2.0. The revised framework consists of 11 + 1 criteria and includes implications for the health of individuals and populations due to and beyond COVID-19, infringement on liberties and fundamental human rights, acceptability and equity considerations, societal, environmental and economic implications, as well as implementation, resource and feasibility considerations. Validation found high consistency with minor revisions between WICID 1.0 and 2.0. WICID can be a tool to support researchers, practitioners, and policy makers to systematically integrate evidence and ethics and to balance of health, societal and other considerations when reflecting on PH interventions targeting COVID-19.

Key messages:

- Due to the rapidly developing pandemic, decision-making process often did not include the views of all affected stakeholders and did not adequately include all criteria and considerations of relevance.
- The WICID Framework can serve as a tool to support decision-makers in accounting for relevant considerations and criteria, even when not all stakeholders could be included.

9.B. Pitch presentations: Lessons learned from COVID-19

Abstract citation ID: ckac129.544
Leadership in public health crisis: a review to summarize lessons learned from COVID-19 pandemic

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Background:

During the COVID-19 pandemic, several public health challenges were faced, requiring worldwide leaders able to direct, guide, and establish appropriate strategies. The aim of this review was to summarize evidence on public health leadership during the COVID-19 era.

Methods:

The systematic literature review was conducted according to the PRISMA 2020 checklist. A search of relevant articles was performed in the PubMed, Scopus, and Web of Science databases. Eligible articles were any type of publication, published between 2020 and 2022, that outlined one or more characteristics of effective public health leadership during the COVID-19 pandemic We excluded all articles that did not explicitly address the COVID-19 pandemic or had a different setting.

Results:

A total of 2499 records were screened, and 45 articles were included. We identified 93 characteristics, clustered in six groups, that were reported as fundamental to be an effective leader in public health crises worldwide. Emotional intelligence and human traits (reported by 46.67% of the articles) were considered essential to build trust in the population and ensure cooperation with working groups. Communication skills (47%) are considered necessary to enable people to understand and accept measures. A supportive, multidisciplinary team and accountability mechanisms (33,33%) were highlighted as central elements, especially in the international field, to ensure reliability and consistency in action. Management skills (35,56%), adaptability (44,44%), and evidence-based approach (33,33%) were reported as key capabilities to ensure a prompt and rapid response to the challenges created by the pandemic.

Conclusions:

The identification of the attributes of an effective public health leader conducted in this study is useful in choosing the key personalities who must lead public health today and in the training of tomorrow's European and worldwide leaders to be ready to face future threats.

Key messages:

- Effective public health leaders in crisis are empathetic and trustworthy people, who have developed management and communication skills, and are able to make timely and evidence-based decisions.
- In order to create leaders capable of facing future threats, more emphasis in the training of public health workforce on

soft skills and management competencies should be recommended.

Abstract citation ID: ckac129.545
Learning from COVID-19: The inclusion of vulnerable groups in COVID-19 responses across Europe

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Background:
More than two years into the pandemic, many European countries have begun to evaluate their COVID-19 public health responses and draw lessons for future preparedness. As the COVID-19 crisis has exacerbated intersectional social and health inequalities, it is pertinent to evaluate the extent to which COVID-19 responses have successfully responded to the diverse needs of various vulnerable groups. We present a comparative analysis of how evaluations of European COVID-19 responses have assessed efforts to adapt or tailor COVID-19 responses to vulnerable groups, focusing on public testing and tracing strategies and vaccination campaigns.

Methods:
We draw on data collected in the H2020 project COVINFORM. We combine insights from qualitative interviews conducted with public health policy- and decision makers in COVINFORM partner countries with a document review of available evaluations of COVID-19 responses published by both government and academic actors between March 2020 and June 2022.

Results:
Across countries, evaluations of COVID-19 responses show that efforts to adapt or target public health responses to specific vulnerable groups became more common as the pandemic stretched on. Differences across countries were observed in relation to which groups were considered particularly vulnerable; the types of responses considered successful; as well as the organisational/governmental level at which responses were coordinated. Analyses reveal that the heavy emphasis on medical vulnerability distracted from efforts to address broader, structural inequalities, complicating the development of tailor-made policies.

Conclusions:
The results inform ongoing policies that deal with the long-term consequences of the COVID-19 pandemic and aim to reduce disproportionate impacts faced by vulnerable groups. Our findings also add to a better understanding of how future preparedness structures should take into account how pandemic measures have unequal impacts.

Key messages:
- As the COVID-19 crisis has exacerbated intersectional social and health inequalities, it is important to learn from efforts to adapt or tailor COVID-19 responses to vulnerable groups.
- The findings demonstrate how across Europe, the combination of particular sets of country-specific COVID-19 responses, tailor-made or not, yield specific consequences for vulnerable groups.

Abstract citation ID: ckac129.546
Readiness of Community Health Agents for COVID19

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Brazil is one of the countries with the highest COVID19 mortality numbers. COVID19 deaths affected disproportionally different populations/communities, tending to be higher among more vulnerable ones. Brazil has a public-funded unified health system (SUS) built on the aegis of equity and social control. Its Primary Health Care (PHC) is organized by the Family Health Strategy (FHS) through Family Health Teams (FHT), which comprise a family doctor, a nurse, a dentist, nurse auxiliaries and Community Health Agents (CHAs). CHAs are individuals from the community trained to provide a range of services in the territories, including home visits, health promotion activities, and serve as liaisons between health units and communities. In this context, CHAs have the potential to play an important role in fighting the pandemic by working on contact tracing, collecting information on infected people, and providing guidance to them and the community in order to contain community transmission. However, not much is known about their readiness regarding the COVID19 pandemic in one of the Brazil's poorest regions. Thus, this study evaluated, though CHA perspective, aspects related to their preparedness for COVID19 in Brazil's northeast region. Questionnaires were applied to CHAs from 8 different municipalities - 4 capitals and 4 country-side municipalities. A total of 1935 CHAs were interviewed at their workplace in 2021. 77.8% said that they were acting in the COVID19 frontline, but only 16% referred to have received training for this function. Furthermore, only 13.7% mention to have had access to adequate individual protective equipment during their work, and 91.6% believe that they can get infected by SAR-COV-2 during their work duties. Additionally, 93.9% considered themselves a transmission vehicle due to work. Despite their potential in the fight against COVID19, CHAs did not received enough training, nor were equipped adequately during the COVID19 pandemic.

Key messages:
- CHAs did not received enough training, nor were equipped adequately during the COVID19 pandemic.
- Addequate trainning and work environment are essencial for proper work development.

Abstract citation ID: ckac129.547
The top three causes of prematuremortality in Belgrade 2020

Milena Šantrić Milićević

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Background:
Analysis of years of life lost (YLL) due to premature deaths during the COVID-19 pandemic can direct decision-makers towards specific public health recommendations in order to improve health and lives of people. Our study aimed to

examine the existence of age- and sex-specific patterns of the three most common causes of premature death in Belgrade during the first year of the COVID-19 epidemic.

Methods:

Mortality data disaggregated by age, sex and cause of death, as well as the estimated number of inhabitants and remaining life-expectancy by age-groups for Belgrade was provided by the Statistical Office of the Republic of Serbia. YLLs were calculated using the methods of the Global Burden of Disease Study, without garbage code redistribution. Mortality rates were standardized according to the European Standard Population. We acknowledge the support from the COST Action 18218 - European Burden of Disease Network.

Results:

In 2020 in Belgrade, according to the share in all-cause YLLs, cardiovascular diseases ranked first (36.2%), followed by neoplasms (25.7%) and COVID-19 (11.1%). However, on average, COVID-19 generated higher number of YLLs per death case (11.9) than cardiovascular diseases (9.2), but fewer than neoplasms (13.9). In total of 31,943 YLLs due to COVID-19, men had 1.7 times more YLLs than women. By age groups, the highest YLL share due to COVID-19 was among men aged 45-49 (16%) and 70-74 (16%) and among women aged 20-25 (33%) and 25-29. years (29%). In men, COVID-19 YLL rate was 2,488 per 100,000 and was higher after standardization (2,714). In women, COVID-19 YLL rate was 1346 per 100,000 and was lower after standardization (1,245).

Conclusions:

In Belgrade, COVID-19 was the third cause of premature mortality in 2020. The difference between COVID-19 YLL rates in men and women were even more prominent after standardization. Future research is needed to determine the synergistic impact of COVID-19 and other causes of premature death.

Key messages:

- In 2020, COVID-19 was among the top three causes of premature mortality among male and female contingents of the Belgrade population.
- Assessing the causes of premature mortality is important for determining community health priorities.

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Covid-19 Vaccination and the issue of insurance status

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Issue:

It is estimated, that 11000 - 14000 people that live in Zurich do not have health insurance. For the vaccination against Covid-19 in Switzerland one had to register oneself on a website (Vacme) with your address and a Swiss health insurance number was required. This systematically excluded any people without insurance or Sans Papiers.

Description:

To address this issue the city physician service Zurich organized a vaccination program for the uninsured from 14.06.2021 onward. To achieve this a code which could be used instead of the regular insurance number was organized and the staff recorded personal information of patients on site to remove language and technological barriers. Furthermore, the Police department was informed and agreed not to circulate the area of the vaccination service on vaccination days to minimize access-barriers for patients without legal residency.

Results:

Between 14.06.2021 and 19.02.2022, 880 people came for vaccination of which 603 were clearly identifiable as individuals from vulnerable populations with no insurance. After initial organization, other vaccination centers in Switzerland were able to use the substitute number to vaccinate people without health insurance as well..

Lessons:

There is a sizeable amount of people living without registration or/and health insurance. It is therefore critical not to forget these people when organizing public health measures, especially when addressing a pandemic or other infectious diseases (HIV, Hep C). Non-insurance is a known issue for universal access to care.

Acknowledgements: We would like to thank the hold crew of the ambulatorium kanonengasse at SAD

Key messages:

- When fighting a pandemic it is of utmost importance to reach as many people as possible.
- Acess must be possible also for vulnernable people.

9.C. Pitch presentations: Dietary patterns in Europe

Abstract citation ID: ckac129.549
Sharp Increase in Eating Disorders among University Students since the COVID-19 Pandemic

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Background:

The COVID-19 pandemic has caused stress, required lockdowns, curfews and social restriction and thus may have altered physical activity and eating habits among university students. The objectives were to determine the impact of the COVID-19 pandemic on Eating Disorders (ED) among university students.

Methods:

Between 2009 and 2021, five repeated on line cross-sectional studies were conducted among university students. ED were identified using the French version of the five-item “Sick, Control, One stone, Fat, Food” (SCOFF) questionnaire. The ExpaliTM-validated algorithmic tool, combining SCOFF and body mass index, was used to screen EDs into four diagnostic categories: bulimic, hyperphagic and restrictive ED.

Results:

With the five studies, 8981 university students were included in total, 67.3% female with a mean age of 20.7 years. The prevalence of ED was stable between 2009 and 2018 and significantly increased from 31.8% in 2018 to 51.8% in 2021 for women (p trend < 0.0001), and from 13.0% in 2009 to 31.3% in 2021 for men (p trend < 0.0001). Lower food security scores were associated with a higher risk for all ED categories. Depression and academic stress due to COVID-19 were associated with ED regardless of category. Regarding health behaviors, a high adherence to the National nutrition recommendation was a protective factor for the risk of bulimic ED, hyperphagic ED and restrictive ED. A lower frequency of moderate and vigorous physical activity was associated with a higher risk of hyperphagic ED.

Discussion:

Our study has shown a high screening of ED among the students of a French university fourteen months after the beginning of the COVID-19 pandemic. By disrupting academic learning, jobs and social life, the COVID-19 pandemic could have exacerbated existing ED or contributed to the onset of new ED. Initiatives to reinforce early screening of ED to implement targeted interventions in the student population are urgently needed.

Key messages:

- This finding underlines the need to extensively screen for ED in students population and identify vulnerable individuals at risk of ED.
- By disrupting academic learning, jobs and social life, the COVID-19 pandemic could have exacerbated existing ED or contributed to the onset of new ED.

Abstract citation ID: ckac129.550
Real-life effects of nudging and pricing strategies in the supermarket to promote healthy diets

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Background:

Unhealthy dietary patterns pose a major public health challenge. Individual-level efforts to promote heathy diets (e.g. nutrition education) have limited effect on the long term. Context-specific interventions focussing on point-of-purchase may create opportunities for sustainable dietary changes. We evaluated real-life effects of nudging and pricing strategies in supermarkets on dietary intake.

Methods:

In this parallel cluster-randomised controlled trial, we randomized 12 Dutch supermarkets in socially deprived neighbourhoods to a control group (n = 6), or intervention group (n = 6). Healthy food nudges were implemented in intervention stores across 13 food groups, combined with healthy product price decreases and unhealthy product price increases. Eligible participants were aged 30-80 years and regular shoppers at participating stores. The primary outcome was dietary guideline adherence measured via an index score (0-150), at baseline and after 3, 6 and 12 months. Secondary outcomes included parameters of cardiometabolic health (HbA1c, lipid profile, and waist circumference), the percentage of healthy food purchases in the supermarket, socio-cognitive factors, and supermarket customer satisfaction. Effects were analysed with linear mixed models.

Results:

This study included 173 participants from intervention clusters and 220 from control clusters. Preliminary evaluation of the 3-month follow-up data revealed no effectiveness of the nudging and pricing strategies compared to the control supermarkets in terms of dietary guideline adherence (β -0.8, 95%CI -4.2; 2.7). Results on all outcomes will be available at time of the conference.

Conclusions:

This novel supermarket trial is the first to evaluate real-life long-term effects of nudging and pricing strategies based on a comprehensive set of study outcomes and using a strong methodological design. Findings can direct future design of context-specific interventions focussing on the promotion of healthy diets.

Key messages:

- Context-specific interventions focussing on point-of-purchase may create opportunities for sustainable dietary changes.
- Findings from this supermarket trial testing real-life and long-term effects of nudging and pricing strategies can direct future design of context-specific interventions focussing on healthy diets.

Abstract citation ID: ckac129.551
Circadian nutritional behaviours and risk of cardiovascular disease in NutriNet-Santé

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Meal timings and daily night-time fasting periods can synchronise the circadian system, which regulates the cardiovascular system. The present study aims to evaluate the prospective associations between circadian nutritional behaviours, defined by meal timing and frequency, and the risk of cardiovascular diseases. We used data from 103,389 adults (79% females) in the French NutriNet-Santé study, 2009-2021. Circadian nutritional behaviours were assessed using repeated 24h food records during the first two years of follow-up. We examined the associations between circadian eating behaviours and risk of cardiovascular, coronary heart and cerebrovascular diseases by multivariable Cox proportional hazard models. During a median follow-up of 7.2 years, 2036 incident cardiovascular diseases were diagnosed. A later first meal of the day was associated with a higher risk of cardiovascular diseases (HR per hour increase = 1.06, 95% CI 1.01 - 1.12). A later last meal of the day was associated with a higher risk of cerebrovascular diseases (HR per hour increase = 1.08, 95% CI 1.01 - 1.15). Among women, a later last meal was also associated with a higher risk of cardiovascular disease (HR per hour increase = 1.08, 95% CI 1.01 - 1.15). We found no evidence for an association between night-time fasting duration nor meal frequency, with risk of cardiovascular diseases. This study suggests that the habit of eating a later first meal, and a later last meal (in women) could be associated with a higher risk of developing circulatory diseases. These results need to be confirmed in other largescale studies before they can be transferable to clinical practice.

Key messages:

- Beyond nutritional quality of meals, meal timing could also be a risk factor for cardiovascular disease.
- If confirmed in other largescale studies, early breakfast and dinner could be considered in preventive strategies of cardiovascular diseases.

Abstract citation ID: ckac129.552
The Southern European Atlantic Diet and depression incidence: a multicohort study

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Background:
The Southern European Atlantic Diet (SEAD) is the traditional diet of Northern Portugal and North-Western Spain, but it may resemble that of other European countries. Higher adherence to SEAD has been associated with lower risk for myocardial infarction and all-cause mortality, but its relationship with mental health is uncertain. We examined the association between SEAD and depression incidence in Southern, Central, and Eastern Europe.

Methods:
We used data from participants $\geq$45 years from the Seniors-ENRICA-2 and HAPIEE cohorts, who were followed for a median time of 3.6 years. SEAD comprised fresh fish, cod, red meat and pork products, dairy, legumes and vegetables, vegetable soup, potatoes, whole-grain bread, and wine. Depressive symptoms were assessed with the GDS 10 and the CES-D 10 (participants with scores $\geq$4 were considered depression cases). Statistical analyses were performed among the 14675 participants who were depression-free at baseline.

Results:
Higher adherence to SEAD was preliminarily associated with lower depression incidence in the pooled sample (fully adjusted odds ratio [95% confidence interval] per 1-SD increment in the SEAD = 0.93 [0.89,0.98]). Results were consistent in Spain (odds ratio [95% confidence interval] 0.86 [0.68,1.08]), Czechia (0.92 [0.82,1.04]), Poland (0.94 [0.88,1.01]), and Russia (0.93 [0.87,1.00]). The association of SEAD with depression in the pooled sample was similar to that found for the Alternate Healthy Eating Index (odds ratio [95% confidence interval] per 1-SD increment = 0.94 [0.89,0.99]) and the Mediterranean Dietary Score (0.94 [0.90,0.98]).

Conclusions:
Adherence to SEAD was preliminarily associated with lower depression incidence in Spain, Czechia, Poland, and Russia. These findings may support the development of mental health guidelines for Southern European Atlantic populations based on their traditional diet, and for Central and Eastern European countries based on the food components of SEAD.

Key messages:
- Adherence to the Southern European Atlantic Diet (traditional diet of Northern Portugal and North-Western Spain) was associated with lower depression incidence in Spain, Czechia, Poland, and Russia.
- Mental health guidelines for Southern European Atlantic populations may reference their traditional diet, while those for Central and Eastern Europe could benefit from including its food components.

Abstract citation ID: ckac129.553
Ultra-processed food intake is associated with worse mental health in Southern Italian individuals

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Background:
A growing body of literature suggests that inclusion of ultra-processed foods (UPFs) in the diet may be associated with various non-communicable diseases, including obesity, cardiometabolic diseases, and increased mortality. However, one of the most underrated research topics is represented by the potential role of diet for mental disorders. The aim of this study was to explore whether there was an association between UPF consumption and mental health outcomes in a cohort of southern Italian individuals.

Methods:
Demographic and dietary data from 1572 adults living in southern Italy was collected. Food items were categorized by the level of processing according to the NOVA classification. Multivariate logistic regressions were used to calculate odds ratios (ORs) and 95% confidence intervals (CIs) for the association between UPF intake and mental health outcomes, including sleep quality and depressive symptoms.

Results:
Individuals in the highest quintile of UPF intake were more likely to have low sleep quality compared to those with the least intake (OR = 1.54, 95% CI: 1.02-2.34). Among the main component of sleep quality, high UPF intake was associated with sleep latency and efficacy individually. No apparent associations were found between UPF intake and depressive symptoms. However, when considering different age groups, younger individuals (age <40 y) consuming more UPF were more likely to have depressive symptoms than low consumers (OR = 3.50, 95% CI: 1.53-7.99).

Conclusions:
These findings show a potential association between UPF consumption and mental health outcomes. Further studies are needed to understand whether the retrieved relation depends on alteration of the physiological feeding patterns leading to food-anticipatory and binge-type behaviors or on nutritional (i.e., high sugars and unhealthy fats) and non-nutritional factors (i.e., additives) triggering pro-inflammatory pathways.

Key messages:
- Ultra-processed food consumption is associated with worse sleep quality and depressive symptoms in Italian adults.
- The detrimental associations between ultra-processed food consumption and depressive symptoms seem stronger among younger individuals.

9.D. Pitch presentations: Risk factors for chronic diseases

Abstract citation ID: ckac129.554
Gambling disorder and chronic diseases in Finland: a nationwide register study

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Background:
Previous register-based studies on comorbidity have mainly focused on gambling disorder (GD) and psychiatric disorders. However, knowledge on somatic health of persons with GD is

also needed. This nationwide register-based study aims to examine the gender-specific prevalence rates of chronic diseases and conditions among the Finnish adults with GD.

Methods:

This study utilizes aggregated data of persons aged 18 and over with GD diagnosis (corresponding to pathological gambling, ICD-10; F63.0) in 2011-2020. The data were retrieved from the Finnish nationwide health registers: Register of Primary Health Care visits and Care Register for Health Care, including specialised outpatient and inpatient health care, and inpatient social care. All diagnostic groups were included. Corresponding figures for the total population with same age range were presented as reference numbers.

Results:

The preliminary results showed that 2,617 persons with the median age of 33.5-36.0 were diagnosed with GD (men n = 1,858; women n = 759). Despite the fact that the prevalence rates of the general population were not age-adjusted, many chronic diseases and conditions were more prevalent among persons with GD compared with the general population. The prevalence rates of psychiatric disorders (87.5% vs 29.2%) and nervous system diseases (23.9% vs 15.2%) were particularly high. Musculoskeletal diseases (61.6% vs 55.8%) and digestive diseases (30.2% vs 27.6%) were also slightly more prevalent. Memory disorders (1.1% vs 5.3%), cardiovascular diseases (25.3% vs 41.0%), and cancer (15.6% vs 24.4%) were less prevalent. Among persons with GD, all comorbid diseases were more prevalent among women than among men.

Conclusions:

Psychiatric disorders and nervous system diseases are exceptionally prevalent in persons with GD. These findings highlight the need for health and social care professionals to recognize that persons with GD may additionally have other disorders that need attention.

Key messages:

- Mental disorders are the most common comorbidity among persons with GD, however, many somatic chronic diseases are also common.
- Comorbidities are more common among women with GD than among men with GD.

Abstract citation ID: ckac129.555
Smoking cessation at diagnosis and cancer survival: systematic review and meta-analysis

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Stopping smoking can considerably cut one's risk of developing cancer compared to continued smoking (i.e. up to 50% after 5 years for esophageal cancer and after 10 years for lung cancer). Much less is known about whether quitting smoking may bring a survival advantage to people who are active smokers at the time of cancer diagnosis. We conducted a systematic review and meta-analysis of the studies that examined the prognostic effect of quitting smoking at or around diagnosis among cancer patients. We searched MEDLINE and EMBASE for articles published until 30th March 2022 that reported the impact of quitting smoking at or around diagnosis on cancer patients' survival (any type). Separately for each cancer site, study-specific data were pooled into summary relative risk (SRR) and corresponding 95% confidence intervals (CI) using random effect meta-analysis models, investigating sources of heterogeneity and bias. Forty-three articles were included, including 20 for lung cancer (LC), 16 for head and neck cancer (HNC), and less than 10 for bladder, breast, gastrointestinal tract, and other sites. Quitting smoking at or around diagnosis was associated with longer overall survival (SRR 0.71, 95% CI 0.64-0.80) in LC patients (consistently for non-small cell and small cell LC) as well as HNC patients (SRR 0.80, 95% CI 0.70-0.91). No significant publication bias was found. For the other body sites, the studies were limited in number, which prevented meta-analyses, but results were generally consistent with a beneficial effect of smoking cessation on survival. Quitting smoking at or around diagnosis is associated with a significantly improved overall survival of smokers diagnosed with LC and HNC and shows beneficial effects in patients with other cancers. Physicians should offer smoking cessation counselling to smokers who start diagnostic workup for suspected cancer, and smoking cessation strategies should arguably become part of standard multidisciplinary oncological care.

Key messages:

- Smoking cessation at or around diagnosis is associated with a significantly improved overall survival of smokers diagnosed with different types of cancer.
- Smoking cessation strategies (and counselling) should become part of standard multidisciplinary oncological care.

Abstract citation ID: ckac129.556
Rapid systematic review of smoking cessation interventions for people who smoke and have cancer

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Background:

Higher rates of cancer are reported in smokers compared to non-smokers, and continued smoking following a cancer diagnosis is associated with reduced health outcomes and survival. Despite international evidence of increased risks, a substantial percentage of people with a cancer diagnosis continue to smoke. Patients may be unaware of the additional risks associated with continued smoking, and health care professionals may not engage with quit supports. As part of a larger feasibility study to develop a smoking cessation pathway in cancer services in Ireland, a rapid review of the evidence was completed.

Methods:

Systematic searches of PubMed, Embase, and CINAHL 2015 to December 2020 were conducted; with studies restricted to adults with a cancer diagnosis [lung, breast, cervical, head and neck] and published in English. No restriction was placed on study designs. 6404 studies were identified and uploaded into COVIDENCE platform, Cochrane's systematic review methods were adopted throughout, PRISMA reporting guidelines were used, and narrative data synthesis was completed (CRD 42020214204).

Results:

The twenty-three-studies report evidence from USA, Canada, England, Lebanon, and Australia. The setting for all interventions was hospitals and cancer clinics. Evidence identifies high dropout rates, inconsistencies in approaches and duration of smoking cessation interventions with varied outcomes. A wide-ranging number of critical components emerged associated with optimal quit support- including the timing of and frequency of quit conversations, use of electronic records, in-person support meetings, provision of nicotine replacement therapy and extended use of Varenicline, smoking cessation services embedded in oncology depts, and engaging with families wanting to quit at the same time.

Conclusions:

Developing tailored smoking cessation interventions are needed for smokers diagnosed with cancer to enable engagement.

Key messages:

- Continued smoking following a cancer diagnosis is associated with reduced health outcomes.
- Smoking cessation programmes for cancer patient should be tailored to meet needs.

Abstract citation ID: ckac129.557
The burden of musculoskeletal disorders in Belgium: a national population-based study

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Background:

According to WHO, approximately one in three people worldwide live with a chronic, painful musculoskeletal (MSK) disorder. Low back pain (LBP), neck pain (NKP), osteoarthritis (OST) and rheumatoid arthritis (RHE) are among the most disabling MSK disorders. According to the Global Burden of Disease (GBD) study, LBP was the leading global cause in terms of years lived with disability and OST showed an increase in prevalence and is predicted to be one of the leading future causes. Our study aimed to analyse the burden of these MSK disorders in Belgium, providing a summary of morbidity and mortality outcomes from 2013 to 2018.

Methods:

Prevalence and disability-adjusted life years (DALY) were computed using data from the Belgian health interview surveys from 2013 and 2018, the INTEGO database (Belgian registration network for general practitioners) and GBD study 2019. Mortality data was retrieved from the Belgian statistical office for people dying from RHE. Following GBD methodology, LBP, NKP and OST were assumed to not generate any deaths.

Results:

The prevalence of MSK disorders increased from 2013 to 2018 with OST being the disorder with the highest number of cases (1.7 million cases in 2018). The burden was higher in women and the gender disparities increased with age. Women died also more frequently due to RHE compared to men. In total MSK disorders contributed to 180,746 comorbidity-adjusted DALYs for female and 116,063 comorbidity-adjusted DALYs for men in 2018, with LBP being the largest contributor (140,031 DALY).

Conclusions:

The burden of MSK disorders has increased over the years. In 2018, 2.5 million Belgians were affected by at least one MSK disorder that resulted in almost 300,000 DALY. Our study provides valuable information of a part of the health burden that is known to have a great impact on the total burden of disease but that is sometimes disregarded by public health institutions.

Key messages:

- MSK disorders represent a major health problem in Belgium.
- Acting on risk factors associated to these disorders is crucial to mitigate their burden.

Abstract citation ID: ckac129.558
Healthcare use among cancer survivors during the COVID-19 pandemic

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Background:

The COVID-19 pandemic and the restrictive measures applied to prevent and control this disease have led to a substantial shift in healthcare systems, with a redefinition of priorities and essential care, causing a serious impact in the oncological care. Therefore, we aimed to estimate the association of a previous cancer diagnosis on healthcare use during the COVID-19 pandemic among European and Israelis cancer survivors (CS).

Methods:

This cross-sectional study was based on data from the Survey of Health, Ageing and Retirement in Europe (SHARE), including the SHARE COVID-19 Survey, which was conducted in the summer of 2020, in 27 countries. All CS (n = 6,490) were country-, sex-, age- and education-matched (1:2) to non-cancer individuals (NC). Odds ratios (OR) and 95% confidence intervals (95%CI) were computed using logistic regression.

Results:

Overall, CS were more likely to refer that they forwent medical appointments due to fear of COVID-19 (OR = 1.29, 95%CI:1.19-1.41), than NC, particularly those who lived with their partner and other relatives (OR = 1.79, 95%CI:1.39-2.30). Likewise, CS reported the occurrence of postponements more often (OR = 1.54, 95%CI:1.44-1.64); this association was stronger among CS who lived with their partner and other relatives (OR = 1.96, 95%CI:1.63-2.36), who reported higher economic difficulties (OR = 1.73, 95%CI:1.50-2.00) and those with no multimorbidity (OR = 1.85, 95%CI:1.62-2.11). CS were also more likely to refer that they were unable to book an appointment (OR = 1.43, 95%CI:1.26-1.63), particularly those who reported that a person close to them died due to COVID-19 (OR = 2.72, 95%CI:1.47-5.01).

Conclusions:

CS were more likely to forgo medical treatment and to report healthcare postponements and to be unable to book an appointment than NC, which highlights the importance of closely monitoring the long-term impact of the COVID-19 pandemic along the cancer care continuum.

Key messages:

- During the COVID-19 pandemic, a previous cancer diagnosis was associated with a more frequent report of appointment cancellations, postponements or denials.
- The first months of the COVID-19 pandemic led to changes in healthcare provided to cancer survivors, which may have a deleterious impact in their care and prognosis.

Abstract citation ID: ckac129.559
Gender bias in cardiovascular practice guidelines: the example of ischemic heart diseases

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Background:

Despite declines in cardiovascular disease mortality, evidence suggests women have a higher mortality and worse prognosis after ischemic events compared with men. This work investigates to what extent clinical recommendations made by cardiovascular guidelines might include sex and gender biases.

Methods:

We reviewed the primary literature base underlying the 2019 European Society of Cardiology guidelines' recommendations on chronic coronary syndromes focusing on sex and gender sensitivity aspects pertaining to ischemic heart diseases. We applied an adapted Cochrane Collaboration appraisal checklist and only included recommendations with direct citation to literature evidence. We used beta regression to model the association between the proportion of female participants within the study population and the year of publication (modeled as cubic polynomial), impact factor, and sex of the first/last author.

Results:

In the 20 recommendations that quoted the literature, gender-sensitive propositions were fully absent, while 4 included sex-sensitive statements. Sex- or gender- specific study design or a priori statistical considerations were largely absent in the included publications. The term "gender" was used exclusively to denote biological sex. The included studies published between 1991 and 2019 comprised of more than 2.1 million individuals (29% female). Representation of women as study participants undulated over time. Female sex of first (OR = 1.84, 95%CI = 1.30-2.60) or last (OR = 2.27, 95%CI = 1.31-3.92) author were statistically significantly associated with the probability of having more female study participants.

Conclusions:

Methodological sex- and gender-sensitive considerations are largely missing in the evidence base used to guide cardiovascular care decision-making in Europe. Women remain underrepresented in the studies from which the guidelines are derived. Studies with female first or last authors were more likely to have better representation of women.

Key messages:

- Though differences in morbidity are well-described, current European cardiovascular recommendations lack sex and gender sensitivity, and women remain underrepresented in the underlying evidence base.
- To what extent the clinical cardiovascular recommendations may or may not be valid for groups not well-represented in the underlying evidence base remains unknown.

Abstract citation ID: ckac129.560
Social environment and cardiometabolic health outcomes: systematic review and meta-analysis

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A number of studies investigated the relationship between the social environment (SE) (i.e., the social relationships and social context in which groups of people live and interact) and lifestyle behaviours. However, to what extent this relation extends to cardiometabolic disease (CMD) outcomes is unknown. This systematic review and meta-analysis summarizes the available evidence. We systematically searched PubMed (Medline), Scopus, and Web of Science from inception to 16 February 2021. Outcomes of were type 2 diabetes mellitus and cardiovascular diseases and determinants were SE factors. We assessed the quality of the studies with Newcastle-Ottawa Scale (NOS). We meta-analysed exposure-outcome combinations when ≥ 3 associations from high quality papers were available. Results are expressed as OR, 95%CI. From 7,671 records screened, 208 were included. Of these, 92% were conducted in high income countries, 58% were cross-sectional studies, and 20% were of poor quality. Among the 208 studies, 746 relevant associations were investigated. The largest number of associations investigated was on the dimension Economic and Social Disadvantage (ESD; 59%), followed by Social Relationships and Norms (21%) and Discrimination and Segregation (9%). Less evidence was found for the remaining dimensions. Meta-analysis of 14 exposure-outcome combinations indicated that worse SE was associated with increased odds of CMD outcomes. Despite this tendency, only the association between ESD and heart failure was statistically significant (1.58, 1.11-2.27; n = 4; I2 = 92%). Generally, heterogeneity was high. In conclusion, higher levels of ESD seem to contribute to increased risk of heart failure. The existing literature is highly heterogeneous and varies notably in terminology. Moreover, the dimensions Social Cohesion and Social Capital, Crime and Safety, Civic Participation and Engagement and Disorder and Incivilities are underexplored in relation to CMD. (PROSPERO-ID: CRD42021223035).

Key messages:

- Worse SE was associated with increased odds of CMD outcomes, with higher levels of Economic and Social Disadvantage being statistically significantly associated with increased risk of heart failure.
- The existing literature is highly heterogeneous and varies notably in study design and terminology.

Abstract citation ID: ckac129.561
Association of birthweight with lung function and respiratory diseases: results from the GEIRD study

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Background:

Early life conditions are associated with lung function and the development of respiratory and non-respiratory illnesses. The relationship with birthweight (BW) is however conflicting. We examined associations of BW with lung function and respiratory diseases within the GEIRD (Gene-Environment Interaction in Respiratory Diseases) study.

Methods:

GEIRD is an Italian multi-centre, multi-case control study of people aged 20-84 from the general population conducted from 2008 to 2014. The study included cases of COPD, asthma, allergic rhinitis and controls. Multinomial logistic regression was performed with case/control status (control/COPD/asthma/allergic rhinitis) as response variable, and BW as main determinant adjusting for sex, age and smoking status.

Results:

Of 2,287 reporting BW, 6.4 % (n = 147) had low BW (<2500 gr), and this proportion was greater in women than men (7.8% vs. 5.1%; p = 0.006). Lung volumes were significantly lower in individuals with low than normal BW.

Median FEV1 was 3.01 L (p25-p75 = 2.60-3.45 L) versus 3.16 L (2.65-3.86 L) (p = 0.019) and median FVC was 3.68 L (3.19-4.34 L) versus 3.91 (3.34-4.81 L) (p = 0.003). However, FEV1 and FVC were not affected by BW when expressed as percent predicted. Of note, both men and women with low BW were shorter than those with normal BW (mean±SD: 160.2±5.5 vs. 162.6±6.5 cm in women, p = 0.009; 172.4±6.1 vs. 174.8±7.2 cm in men, p < 0.001). FEV1/FVC expressed as absolute ratio or as percent predicted, was not affected by BW. In multinomial analysis, BW was not associated with respiratory diseases in adulthood. However, those with low BW had a higher risk of self-reported hospitalisation for lung disease before age 2 (10.3% vs. 4.1%) and severe respiratory infection before age 5 (16.9% vs. 8.8%) (p = 0.003).

Conclusions:

BW was not associated with lung function in adulthood, when controlling for sex and height. Low BW was a risk factor for respiratory diseases in childhood, not in adulthood.

Key messages:

- Low birthweight was associated with respiratory diseases in childhood but not in adulthood.
- Although spirometrically-assessed lung volumes were lower in adults with low birthweight, this is likely explained by associations of low birthweight with sex and height.

9.E. Pitch presentations: Health hazards and sustainability

Abstract citation ID: ckac129.562
Covid-19 pandemic in north-west Italy: the potential role of meteorology, air pollution and pollens

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Background:

Italy was the first western country severely affected by the Covid-19 pandemic attesting more than 16 million cases since the outbreak began. Po Valley regions have been most afflicted, with Piedmont ranking sixth at 25,899 cases/100,000 inhabitants. Within this area, air dispersion is hampered making Po Valley a recognised air pollution hotspot. We aimed to explore the potential association between the environment and Covid-19 incidence.

Methods:

Daily key air pollutants (NO2, NO, CO, O3, PM10, and PM2.5), meteorological parameters (temperature, %humidity, wind speed and solar radiation), pollens and Covid-19 cases were collected from 01/01 to 31/12/2021 in Turin, Italy. This ecological study preliminarily tested correlations (Spearman) between air pollutants and Covid-19 cases.

Results:

The Covid-19 pandemic followed a seasonal trend with the highest number of cases (/100,000 inhabitants) in winter and spring (3.1) followed by autumn (1.3) and summer (0.5) (KW test $p < 0.0001$). Likewise, all air pollutants showed peaks in winter and autumn and sensibly decreased during spring and summer apart from pollens and O3. O3 follows the photochemical processes reaching its peak in the sunniest periods, while pollens undergo their natural vegetative process. Daily Covid-19 cases were positively correlated with daily-averaged NO2 (0.50, $p < 0.0001$), NO (0.48, $p < 0.0001$), CO (0.81, $p < 0.0001$), PM10 (0.36, $p < 0.0001$), PM2.5 (0.39, $p < 0.0001$), pollens (0.15, p = 0.073) and inversely with O3 (-0.44, $p < 0.0001$). We plan future analyses to test the hypothesized association by enhanced models with lagged air pollution variables, with demographic characteristics and meteorological data as potential confounders.

Conclusions:

Results from ecological studies may support researchers' preliminary understanding of the interplay between environment and Public Health issues, including pandemics. A multidisciplinary approach is mandatory to deepen the complexity of this topic across European regions

Key messages:

- The Covid-19 pandemic may be associated with environmental conditions and air pollution but further research is needed.
- Atmospheric particulate matter, including aeroallergens, can favour many airborne-related diseases by acting as immune suppressor and/or carrier, but these hypotheses deserve future research.

Abstract citation ID: ckac129.563
Ethnic and socioeconomic inequalities in relation to air pollution exposure in the Netherlands

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Background:

Air pollution (AP) contributes to a large disease burden and some populations are disproportionately exposed. It is unclear to what extent AP exposure differs across ethnic groups in the Netherlands and how this intersects with socioeconomic position (SEP). First, we identified differences in AP exposures between ethnic groups in the Netherlands. Second, we examined the interrelationships between ethnicity and SEP in relation to AP exposures.

Methods:

We assessed AP exposures for residents of the Netherlands in 2019 (N = 17,251,511). Home address AP levels were estimated by dispersion models of the National Institute of Public Health and the Environment (RIVM). We linked exposure estimations of particulate matter <10 or $< 2.5\,\mu m$ (PM10, PM2.5), nitrogen dioxide (NO2), and elemental carbon (EC) to demographic data gathered by Statistics Netherlands. Absolute and relative differences in AP levels across ethnic groups were assessed. We conducted multivariable linear regression analyses and estimated marginal mean exposures to evaluate differences by ethnicity, SEP, age and sex within urban and rural areas. We tested for interactions and stratified accordingly.

Results:

For the 40 largest minority ethnic groups (N > 18,314 per group), exposure to all pollutants was higher than for ethnic Dutch, with up to 1.5-fold differences for NO2. After stratification for urbanity and SEP, ethnic exposure inequalities persisted. For ethnic Dutch and some migrant groups, we found the lowest AP exposures in the middle SEP group (i.e. U-shaped trends), while we found linear patterns in other large migrant groups, with higher exposures at lower SEP.

Conclusions:

Exposure to PM10, PM2.5, NO2, and EC was consistently higher in minority ethnic groups compared to ethnic Dutch. The association between SEP and AP levels showed different patterns between the majority ethnic Dutch and some of the largest minority ethnic groups. Further research is needed to define the equity and health implications.

Key messages:

- Minority ethnic groups in the Netherlands are consistently exposed to higher levels of air pollution (PM10, PM2.5, NO2, and EC) than the ethnic Dutch population.
- Depending on the ethnic group, the association between SEP and air pollution exposure was either linear (i.e. lower exposures at higher SEP) or U-shaped (i.e. lower exposures in the middle SEP group).

Abstract citation ID: ckac129.564
Policies out of sync – are healthy ageing agendas fit for the future?

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Background:

In both scale and impact, population ageing has far reaching implications for our planet, not least as a major driver of population growth and the ever-increasing human demands on natural resources and ecosystems. This fundamentally impacts sustainable development efforts to eradicate poverty, achieve food security, build inclusive and resilient communities, and ensure sustainable consumption. The overarching connections between global ageing and sustainability are clear: a focus on sustainable healthy ageing is fundamental to a healthy planet. Our responses to date have however largely been disconnected. To progress this dual agenda, our work aims to i) assess whether current national/international strategies addressing healthy ageing include a strategic focus on sustainability; ii) present the evidence for such alignments; and iii) develop a framework of sustainable actions and aligned policy.

Methods:

A mixed-methods approach using content and applied thematic analysis was utilised to examine strategy documents, and develop an analytical framework derived from relevant theory to guide quantitative and qualitative analysis of the resultant data. Evidence themes were developed iteratively during analytical phases. Findings informed the development of the framework.

Results:

We identified and analysed 36 strategies published from 2000 to 2021 containing over 600 wide-ranging policies. No strategies and only a minority of policies included a strategic sustainability focus. A larger subset made reference to links between ageing and sustainability or environmental elements yet these were largely theoretical and not carried through in the key strategic approaches or resulting polices.

Conclusions:

This work provides valuable insights into strategic approaches to foster sustainable healthy ageing and identifies levers for greater alignment and sustainable action. The recently declared 2021-30 UN Decade of Healthy Ageing provides an ideal platform for action.

Key messages:

- While the evidence for strong alignment is unequivocal, global healthy ageing and sustainability agendas are largely disconnected.
- By strengthening the links between healthy ageing and sustainability agendas, stakeholders across sectors can reinforce and design approaches that meet human needs while protecting our planet.

Abstract citation ID: ckac129.565
Identifying cross-sectoral cooperation for urban health

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Empirical evidence for collaborative health promotion practices is still limited. The Cross-Sectoral Cooperation Self-Assessment Tool (CroCo SA) presented here provides a tool for cities to assess their current commitment to promote urban health and well-being across sectors. The SA tool was validated by co-operating with 9 pilot cities and seven countries in the framework of the Healthy Boost project funded by Interreg Baltic Sea Region (2019-2022). Addressing the current complexity, interdependence and emerging challenges of health promotion requires cross-sectoral cooperation and tools to assess cross-sectoral processes and make their impact visible. A digitized CroCo SA tool was developed and validated. An SA evaluation matrix was created, including 162 cells of options for reflective and guiding responses according to 6 scale x 27 items used in the SA tool. After submission of the electronic form, respondents can view anonymized results in a digital form on the Healthy Boost platform. The feedback report summarizes the results for respondents and provides, both numerical and descriptive, verbal feedback on the state of the assessed city's capacity for cross-sectoral cooperation, based on each assessment. The steps the respondents could take in their respective cities to improve cross-sectoral cooperation are outlined. Recommendations are based on the evidence found to be the prerequisites for effective cross-sectoral work for health promotion. SA can be conducted in many languages offered by the Google translation programme. Guiding feedback of CroCo SA defines areas for improvement in strategies and actions, allowing respondents also to do benchmarking and learn from other cities and countries. Self-assessment itself is a learning process.

Key messages:

- The CroCo SA tool offers a method for gathering information about the state of cross-sectoral cooperation for urban health promotion.
- By identifying strengths and weaknesses in cooperation, the city can build capacity for cross-sectoral cooperation.

Abstract citation ID: ckac129.566
To what degree are health insurance enrollees aware of the restrictive conditions of their policies?

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Background:

Over recent decades, many Western countries have added market incentives to their health systems. In a system of managed competition, health insurers are supposed to be prudent purchasers of health care on behalf of their enrollees. They can contract healthcare providers selectively. Enrollees who choose a health insurance policy with restrictive conditions, will have to make a co-payment if they consult a non-contracted provider. If the co-payment is unexpected, it may cause a problem for the enrollee. This study aims to gain insight into enrollees' awareness of the conditions of such health insurance policies in the Netherlands.

Methods:

In August 2020, an online questionnaire was sent out via health insurers to enrollees with restrictive health plans. In total 13,588 enrollees responded. Descriptive statistics and logistic regression analyses were performed on various outcome measures relating to enrollees' awareness of the restrictive conditions.

Results:

One fifth (19%) of the respondents appeared to be totally unfamiliar with the policy conditions. Men, younger people, people with a low level of education, a lower income, a poorer health status, and non-care users were found to be less familiar with the conditions ($p = 0.00$ for all). 62% who wanted to visit a healthcare provider whose care was not fully reimbursed, still went to that provider. Of those who had to pay extra because hospital care was not fully reimbursed, 62% did not know this in advance and 30% indicated that paying extra was a serious problem.

Conclusions:

Not all enrollees who choose a policy with restrictive conditions are aware of the consequences of receiving care from a non-contracted provider. There seems room for improving the information provision, in particular for people with a low income and people with a poorer health status, as these groups more often reported unawareness about having to pay extra and more often faced financial problems.

Key messages:

- Not all enrollees are well informed about their policy with restrictive conditions.
- Selective contracting does not always affect enrollees' choice of a healthcare provider.

Abstract citation ID: ckac129.567
Let's not forget those who forget! Participatory design in the context of dementia built environment

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Dementia is a major cause of disability and dependency among older people worldwide. Eco-bio-psychosocially supportive design can significantly reduce agitation and depression while improving mobility and daily activities. For this we need to include dementia patients as experts while understanding the neurological changes and functional impairments associated with the progression of the disease over time. How can we support dementia patients to participate? What tools/processes can we use to involve them in the design process? The aim of this project was to map and evaluate co-design methods for dementia and neurodiversity, in order to create an eco-bio-psychosocially supportive environment. Mixed methods were used comprising a systematic literature review on co-design techniques for spaces for dementia, three workshops: a 3-day one with seven early career researchers translating patient involving methodologies to the dementia context, a round table Patient and Public Involvement and Engagement with six service providers and stakeholders cross three countries and a cross-sectoral international day conference with four academics, four early career researchers and eight stakeholders and a series of co-design workshops for dementia and neurodiversity, which were then classified according to applicability so as to generate co-production methods for living environments for dementia. This transdisciplinary project highlighted the challenges of participatory design in the context of dementia built environment. The importance of the topic was highlighted by clinicians and staff but there are still significant limitations in terms of research and methodologies. The workshops outcome was an inclusive code of conduct for participatory design and research for dementia patients, which will help to improve home and care environments for people with dementia. The framework involved aspects such as time, space, equipment in relation to people involved (carers, patients, proxies).

Key messages:

- The project created a framework to support dementia patients' involvement for built environment decision making that considers aspects such as time, space and equipment to foster communication.
- The framework described the phases and the tools/methods in order to build trust and enable fluidity to accommodate dementia patients' needs.

Abstract citation ID: ckac129.568
Exposure to phthalates, potential endocrine disruptors, in an infant cohort in Modena, Italy

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Phthalates are pollutants ubiquitous in the environment. Human exposure to phthalates and their endocrine disrupting effects have been widely studied. Therefore, the European Union forbids phthalates in toys, cosmetic and kitchenware manufacturing. However, phthalate metabolites can still be found in human biological matrices. The purpose of this study is to investigate phthalate exposure over time in a group of Italian healthy newborns. In a prospective cohort study, we enlisted 187 women who gave birth in the University Hospital of Modena, Italy, between January 2019 and May 2020. Urine samples from women after delivery and from their infants at birth, 3 and 6 months were collected and 8 metabolites of 6 phthalates were analysed. Descriptive statistics were calculated and preliminary correlation coefficients tests were performed. Monoethylphthalate (MEP) was always detectable in urine samples. MEP, monomethylphthalate and diethylhexylphthalate metabolites showed an increasing trend over time, while monobutylphthalate and monobenzylphthalate showed decreasing levels over time. Associations between levels of phthalates metabolites in mother and infant pairs at birth were found for a few metabolites, while metabolites in infant samples at 3 and 6 months appeared often significantly associated. Infants' phthalate exposure in Modena is still high and prolonged over time, even to those more toxic and strictly regulated. As phthalates presence in indoor environment can be a risk factor especially for the most fragile groups of population, such as children, public Health campaigns addressing childbearing age women should stress about the risk posed by these substances and how to avoid their exposure. Moreover, regulatory actions and a stricter legislation should be considered.

Key messages:

- In Italy infant exposure to phthalates, including those strictly forbidden, appears still high and continuous over time.
- Public heath intervention and stricter regulatory actions should be considered.

9.F. Pitch presentations: Digital solutions and experiences

Abstract citation ID: ckac129.569
Perceived quality and willingness to continue using telemedicine services in patients with diabetes

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Background:

Plenty of literature reported the applicability and usefulness of telemedicine and teleassistance (TMTA) services in the management of diabetes and other chronic conditions. Specifically, TMTA proved to be effective for conditions that require radical lifestyle modifications, tailored pharmacological interventions, and periodic monitoring of clinical health status. The purpose of this study is to investigate the individual and contextual determinants of the perceived quality (PQ) of the telemedicine and teleassistance (TMTA) services and the willingness to continue (WC) with them among patients with diabetes using TMTA during the COVID-19 pandemic in one large region of Italy (Emilia-Romagna).

Methods:

A structured survey was administered to patients with type 1 and 2 diabetes who used TMTA services during the first wave of the COVID-19 pandemic. The questionnaire was comprised of questions on TMTA service experience and participants' socio-demographic characteristics. Multiple regression models investigated the independent factors associated with PQ (score 1-100) and WC (yes/no).

Results:

The final analysis included 569 patients with diabetes (54.7% female), with an average age of 58.1 years. TMTA services' PQ and WC were high. A higher education (OR = 1.83; 95%CI 1.04, 3.31) and being unemployed (OR = 2.57; 95%CI 1.17, 6.02) were factors associated with an increased WC. Older age was negatively related to PQ (b = −3.6; 95%CI −6.8, −0.29). Perceived support from TMTA service was positively associated with PQ (b = 10.1; 95%CI 5.1, 15) and WC (OR = 2.03; 95%CI 1.07, 3.85). Perceived increase in disease self-management was positively associated with PQ (b = 5.3; 95%CI 0.24, 10) and WC (OR = 7.11; 95%CI 4.04, 12.8).

Conclusions:

Our study identified several determinants of PQ and WC. These socio-demographic and patient-perception related factors should be considered in the implementation of care pathways integrating in-person visits with TMTA services.

Key messages:

- Socio-demographic factors play a crucial role in TMTA acceptance and should be taken into due consideration when implementing health pathways integrating in-person visits with TMTA services.
- Health workers should always try to improve patients' self-management skills and should always make patients feel supported. This is also true in the digital health era.

Abstract citation ID: ckac129.570
Specchio-COVID19: a digital cohort study to improve public involvement in epidemiological research

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Background:

To manage the sanitary crisis and rapidly assess the seroprevalence of anti-SARS-CoV-2 antibodies in the canton of Geneva, we invited previous participants of an annual health survey of the general population to a first serological test. As the pandemic progressed, it become clear that there would be a significant longer impact on health and wellbeing of population. Moreover, there was a need to assess the adherence of the population regarding COVID-19 prevention measures, over time, as well as to provide scientific knowledge about antibodies dynamics and protection from new infections. For all these reasons, a long-term follow-up has been settled via the dedicated digital platform Specchio-COVID19 and on-line questionnaires and repeated serological tests.

Methods:

Several measures were designed to maintain high retention and involvement, including regular electronic newsletters with links to a ''News'' webpage, a ''Research'' webpage for dissemination of publications and the organization of webinars specifically dedicated to participants. A specific email address and a dedicated hotline were set up so that participants can get in touch with the Specchio-COVID19 team.

Results:

Specchio-COVID19 was launched in November, 2020. Up to February 2022, 10'946 individuals (57% women, median age 48) joined the project. Over time, participation rate remains around 65% for each release of questionnaire. 550 participants (5%) definitely dropped out.

Conclusions:

Our digital cohort facilitates participants' involvement, allowing participation from remote locations, organizing webinar, promoting news and scientific information via newsletters and specific webpages and enabling interaction between researchers and participants.

Key messages:

- When designing the Specchio-COVID19 digital cohort, the purpose was not only to collect data.
- But to establish a reciprocal exchange of information between researchers and participants, fostering long-term involvement and health empowerment.

Abstract citation ID: ckac129.571
Effect of a mobile app on breastfeeding among cesarean deliveries: A randomized controlled trial

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Aim:

Cesarean section has negative impacts on breastfeeding rates. This study is to evaluate the effect of a mobile application on breastfeeding outcomes among mothers who had cesarean section using a randomized control trial in Vietnam in 2020 - 2022.

Methods:

A triple-blinded randomized trial of a mobile application was conducted. The mobile application was tailored to Vietnamese culture with two separate versions for the intervention and the control group. The intervention version auto-generated three messages per week and linked the information in the library content to improve breastfeeding while the control version sent messages on maternal and child health care. Pregnant mothers were recruited during their antenatal visits and randomly assigned to two groups. Outcomes of interest included early initiation of breastfeeding and exclusive breastfeeding rates.

Results:

A total of 275 mothers in the control and 293 in the intervention group who had undergone a cesarean section were included in the analyses. Significant increases were observed for early initiated breastfeeding within two hours (aOR = 1.51, 95%CI: 1.01 to 2.27) and exclusive breastfeeding during hospital stay (aOR = 1.59, 95%CI: 1.02 to 2.49).

Conclusions:

Our results support the use of a theory-based design mobile phone application as a part of a promising intervention to improve breastfeeding outcomes.

Key messages:

- A mobile phone application could be a widely accessible, acceptable, and effective intervention to improve breastfeeding outcomes.
- To improve exclusive breastfeeding rates, comprehensive interventions at different levels of sociocultural and market contexts, settings, and individuals are needed.

Abstract citation ID: ckac129.572
Content related with preschool children's health on Facebook: a study of parental informational needs

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Background:

Little is known how Lithuanian mothers use social networks to seek information about preschool children's health. This study aimed to identify health topics of the posts, characteristics of the most engaging posts, and practices shared in the comments.

Methods:

This study included all accessible posts published in 2021 on one Facebook group with more than 21 000 Lithuanian mothers. In total, 1674 posts and 3192 comments on the most engaged group of posts (gastrointestinal disorders) were analysed. Number and type of reactions to posts, categories of health topics, aim, form, tone, and structure of the posts, also practice type on comment were registered.

Results:

Among all posts, 72.9% were related to children's health. The most common health topics included injuries (17.1%), healthcare (15.1%), gastrointestinal disorders (9.7%), allergies and skin diseases (9.7%), nutrition, physical activity and health promotion (9.3%), nurture (8.9%). The most common form was text only (48.7%), repetitive aim was to ask about personal experience (47.5%), and recommendations (35.5%). Larger numbers of reactions achieved posts with sensitive tone, including appeal, child's health description, gratitude in advance, and written in Lithuanian ($p < 0.05$). Comments with healthy lifestyle recommendations, recommendations for medication, also recommendations to treat children by themselves, to visit physicians accounted for 73.6%, 26.4%, 36.0% and 10.8% respectively.

Conclusions:

Main topics of children's health on Facebook for Lithuanian mothers are injuries, healthcare, gastrointestinal disorders, allergies, skin diseases, nutrition, physical activity, health promotion, nurture. Posts with sensitive tone, appeal, situation description, gratitude, written in Lithuanian achieve the largest number of reactions. Comments most frequently include advices to treat children at home, also healthy lifestyle recommendations.

Key messages:

- Lithuanian mothers most frequently seek advices regarding preschool children's injuries, healthcare, gastrointestinal issues, allergies and skin diseases, and nurture.
- Publication of posts including text only, sensitive tone, greetings, situation description, and gratitude might help to promote health more effectively.

Abstract citation ID: ckac129.573
Youth health promotion in countries affected by forced migration: The role of mHealth technologies

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Issue/problem:

Young refugees often face barriers in accessing youth-friendly health information and care. Differing cultural norms, languages, laws, financial difficulties, gender disparities, and stigma pose additional challenges for youth in forced migration settings.

Description of the practice:

REACH is a regional initiative of Columbia University, which aims to bridge the gap in health literacy and health care access among refugee and disadvantaged youth in Turkey, Lebanon, and Jordan, which are heavily affected by the Syrian conflict. Supported by TaiwanICDF, Blue Chip Foundation, and Columbia University, the REACH Project uses a community-based participatory action research approach and aims to assess the impact of mHealth technologies on improving health literacy and health care access among youth in host countries. With a strong adult-youth partnership, the project includes stakeholder meetings, mixed-methods studies with youth, health service providers and policy makers, in addition to health advocacy, communication and dissemination activities such as photo exhibitions, panels, and production of policy briefs and scientific publications. REACH has been working with youth, software developers, health professionals, academia, and I/NGOs to develop the multilingual and freely available REACH4Health app to promote youth health.

Results:

Findings from three countries show that mHealth technologies have the potential to provide innovative, youth-friendly and widely used solutions to address the health education, health communication, and health care needs of disadvantaged and marginalized youth.

Lessons:

Youth-adult partnerships, working with mixed groups of refugee and local youth, using community-based participatory research, peer-to-peer methodologies, and co-design approaches, as well as using social media tools contribute to the overall success of mHealth and health promotion interventions for disadvantaged youth in countries affected by forced migration.

Key messages:

- mHealth technologies have a strong potential to improve health literacy and health care access of refugee and disadvantaged youth in countries affected by forced migration.
- Youth-adult partnerships, working with mixed groups of refugee and local youth, using participatory approaches and peer-to-peer methodologies significantly contribute to youth health interventions.

Abstract citation ID: ckac129.574

Real-time classification of causes death using Artificial Intelligence – sensitivity analysis

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Background:

Last year Europe registered >365 000 excess deaths, most from preventable causes. In order to timely track deaths, the Portuguese Directorate-General of Health developed a deep neural network that codifies ICD-10 causes of death (AUTOCOD) by analyzing free text in a death certificate (DC). While the performance of AUTOCOD has been demonstrated, it was not clear if it was sustained during excess mortality periods, when text quality could be lower due to the increased pressure on health services.

Methods:

We performed a sensitivity analysis comparing the ICD-10 classifications of 330 098 Portuguese DC by AUTOCOD and by human-coders, from 2016 to 2019. Excess mortality was defined using the EuroMOMO methodology and a sub-analysis in periods of extreme excess (+4 and +6 SD). We compared the periods without excess mortality with the periods of excess and extreme mortality by chapter. The same analysis was performed for ICD-10 blocks, for the three most common chapters (neoplasms; diseases circulatory and respiratory system). The confusion matrixes allowed us to calculate AUTOCOD's performance metrics, like sensitivity.

Results:

AUTOCOD showed high sensitivity ($\geq$0.75) in 10 chapters, with values above 0.90 for the three most common ones. The weighted-average of sensitivity showed no difference between periods without excess mortality and periods of excess mortality, a difference of 0.01 for periods of extreme mortality (+4 SD) and a difference of 0.04 for periods of extreme mortality (+6 SD). For the block classification, performance was similar.

Conclusions:

Even in periods of excess and extreme mortality, AUTOCOD accurately predicts the classification of the cause of death. Meaning that it is not affected by a potential loss in text-quality due to pressure in health services. This allows for the use of AUTOCOD for real time mortality surveillance and it highlights the importance of Artificial Intelligence as an advisory tool for Public Health policies in emergencies.

Key messages:

- Artificial Intelligence algorithms like AUTOCOD can predict the ICD-10 cause of death with very high sensitivity, during periods with and without excess mortality.
- Artificial Intelligence algorithms like AUTOCOD can be used for real-time cause specific mortality surveillance, providing valuable information for policy making during periods of excess mortality.

9.G. Workshop: Health in all Policies: key driver for better health still awaiting of greater governing stewardship

Abstract citation ID: ckac129.575

Organised by: EUPHA-HIA, EUPHA-PHPP, EUPHA-ECO, EUPHA-LAW
Chair persons: Piedad Martin-Olmedo (EUPHA-HIA), Monica O'Mullane (Ireland)
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Healthy public policies are those that take accountability of all possible health impacts, acknowledging the causal pathways resulting from the modification of upstream health determinants (e.g. transport strategies, etc.), and related risk factors downstream (e.g. air pollutants). The strategy of Health in All Policies (HiAP), promoted by the World Health Organization (WHO) and adopted by the European Union (EU) in 2006, reinforced the need to reduce inequalities and improve health and wellbeing as essential pillars for a sustainable economic development. Central to HiAP is the notion that health is not only the responsibility of the health sector, but also a shared responsibility with many other sectors. In this context, Health impact Assessment (HIA) was proposed as the combination of methods to support HiAP implementation by providing scientific evidence on the positive and negative effects that any new proposal may have on health and health equity. The COVID-19 pandemic, and the climate change threat, are two of the main challenges that emphasise the need of integrated responses across many sectors to mitigate not only effects on health and inequalities, but also in the economy. However, HiAP and HIA implementation remains almost at a conceptual level, with a few remarkable exceptions in Europe. One of the most relevant reported barriers contributing to this uneven HiAP implementation is the lack of political stewardship and commitment. The difficulties in applying the guiding principles of HiAP (and consequently of HIA) at local, regional, or national governance level are in many cases linked to a conflict between the right to work and mobilization of the economy, with the right to health and reduction of inequities. This is where the role and drive of public health actors comes across, as HiAP requires public health professionals to build partnerships and engage meaningfully with the sectors affecting the social determinants of health and health equity, external to the health sector. A good proxy example to HiAP implementation, facilitating local and regional initiatives with communities, is the WHO initiative of Healthy Cities. The present panel discussion intends to analyse, from different perspectives, why HiAP has not gained a meaningful place within governing contexts, the current and future status of the intersectoral approach, and the advocacy role of public health in this context. The session is scheduled with a first overview presentation followed by a debate framed around the following aspects:

– Different perceptions regarding the concrete implementation of HiAP at all political levels.

– Perceived barriers or trade-offs for a broader implementation of HiAP.

– Role of public health actors in the implementation of HiAP at a strategic, policy level, and how it could gain a more prominent role.

– Level of understanding and awareness of the utility of HIA for HiAP implementation by public health actors.

Key messages:

- HiAP, a recognised approach requiring all sectors to address decisions' health and equity implications for reaching better global health, has not yet been implemented with an overarching vision.
- Public Health actors can disentangle political and technical aspects, seeking for synergisms, and clarifying to non-health sectors the complexity and interrelatedness of social health determinants.

Abstract citation ID: ckac129.576
Health in All policies: what do we mean and where are we now?

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This presentation sets what HiAP is and is not, and its evolution since it was conceived. It also addresses how HiAP can be mobilised in practice via the use of tools such as HIA and the key role that enabling structures and contexts - both politically strategic and locally operational- to ensure that health, wellbeing and equity is promoted in the European region. It discusses the enabling context of Wales, with the Future Generations (Wales) Act 2015, which provides political leverage for the implementation of HiAP in practical terms, enabling addressing health considerations intersectorially by non-health policies and projects. This Act along with supporting documents, guidance and legislation implicitly incorporates the principles of HiAP so the rest of non-health sector understand (and also have the statutory obligation) to address the health considerations of policies and plans. It does this by requiring all public bodies in Wales to strive to maximise 7 Well-being Goals - which include 'A healthier Wales', 'A more equal Wales' - and requires that they do so by working with other agencies in order to prevent negative impacts and promote participation, long-term thinking and integration to ensure that inequalities are minimised. These are key public health principles from which to have conversations. Wales also provides a good example with its advocacy and policy in respect to Economies of Wellbeing - a critical challenge for HIAP is that HiAP is, by its nature, political, and may challenge some policy proposals. Although the focus is on identifying 'win:wins' and co-benefits, sometimes there is a conflict between health and other outcomes. There may be a need to balance health gains against economic growth or other policy aims. The following debate intends to discuss the challenges and enablers to achieve that aim, and how public health can make its voice heard.

Abstract citation ID: ckac129.577
Alternative routes to HiAP implementation

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From a public health political science perspective there are alternative routes to HiAP. Besides the 'classic' HiAP approach seeking government internal departmental alignments, facilitating and rewarding bottom up social initiatives by communities, or marketed health innovations by commercial health-related consultancies and enterprises, and regional (socio-) economic innovation networks that after a developmental stage can start to pressure multi-level governments for action. A final route lies along the litigation path (Think of climate agreements and governments being held accountable by the judiciary to comply with agreed emissions reductions etc.)

Abstract citation ID: ckac129.578
Economics and health economics as a major determinant towards HiAP

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COVID-19 pandemic response was an opportunity to advocate for HiAP as everyone developed opinions on how policies could affect the different dimensions, including health and economy. Health planning, from the local to the international level, is the main setting where we still need to advocate for the inclusion of all political sectors and actors in order to ensure an effective HiAP implementation. From a more technical perspective, there is still a lot to do when it comes to implementing and improving economic evaluations, including on data on costs, valuing benefits or using cost-effectiveness approaches.

Speakers/Panellists:
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9.H. Workshop: Understanding the institutional context of health inequalities. A life stage approach

Abstract citation ID: ckac129.579

Organised by: Research Unit FOR2723(Germany)
Chair persons: Irene Moor (Germany), Dennis Jepsen (Germany)
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Background:
The health of young people is strongly linked to their socioeconomic background. However, there is little systematic research on the complex mechanisms underlying the association between family socioeconomic position and health among young people, particularly regarding contextual factors at the (intermediate) meso-level. Several institutional contexts are relevant for young people's lives: the family, kindergarten, primary and secondary school, higher education system, vocational school and training, workplace and the healthcare system. Previous studies demonstrated that characteristics of these institutional contexts are associated with young people's health and well-being. It is unclear, which role they play regarding health inequalities. The aim of the workshop is to analyse the role of institutional characteristics, such as compositional (which people are found in an institution) and contextual (the structural characteristics of an institution) factors for the development or existing health inequalities.

Methods:
The research unit FOR2723 analyses the role of meso-level, institutional characteristics regarding health inequalities considering the whole period of early life based a common conceptual framework. The results are based on empirical analyses of various secondary data, such as the National Educational Panel Study (NEPS) or the German Health Interview and Examination Survey for Children and Adolescents (KiGGS). Bodymass index (BMI) and the subjective self-assessment of health are considered as outcomes.

Results:
We found substantial social inequalities in health and health behaviour at any life stage investigated. In each life stage we found meso-level characteristics of the family (family investment, family stress, family atmosphere, and parental health behaviour and well-being), the kindergarten (the association between ECEC centre focus and family SEP on pre-school children's BMI), the school (composition of the school in terms of education, income, and occupational prestige of the students' parents), the institutions and labour market states involved in the school-to-work transition (vocational training places, universities, workplaces, unemployment spells) as well as the health care system (regional health policy), which are associated with social inequalities in young people's self-rated health, subjective well-being and BMI.

Discussion:
In addition to micro-level determinants, meso-level characteristics of important institutions that young people are exposed to (family, kindergarten, school, school-to-work-transitions, healthcare system) are relevant for their health and reinforce health inequalities. More research is needed to understand how institutional contexts contribute to health inequalities and which institutional changes are needed to reduce inequalities.

Key messages:
- The role of institutional characteristics, such as compositional and contextual factors for health inequalities is unclear.
- Meso-level characteristics of institutions in young people (family, kindergarten, school, school-to-work-transitions, healthcare system) are relevant for their health and reinforce health inequalities.

Abstract citation ID: ckac129.580
Socioeconomic position and self-rated health among adolescents: the mediating role of the family

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Background:
Although health inequalities in adolescence are well documented, the underlying mechanisms remain unclear. Few studies have examined the role of the family in explaining adolescents' health inequalities. The study aimed to explore whether the association between socioeconomic position and self-rated health (SRH) was mediated by familial determinants.

Methods:
Using data from wave 2 of the KiGGS study (1,838 female and 1,718 male 11- to 17-year-olds), linear regression analyses were conducted to decompose the total effects of parents' education, occupation, income, socioeconomic position index, and adolescents' subjective social status on SRH into direct effects and indirect effects through familial determinants (family cohesion, parenting styles, parental well-being, stress, obesity, smoking and sporting activity).

Results:
A significant total effect of all socioeconomic position indicators on SRH was found, except for income in male adolescents. In female adolescents, more than 70% of the total effects of each socioeconomic position indicator were explained by familial mediators, whereas no significant direct effects remained. The most important mediator was parental well-being, followed by family cohesion, parental smoking and sporting activity. In male adolescents, the associations of parental education, the socioeconomic position index and subjective social status with SRH were also mediated by familial determinants (family cohesion, parental smoking and obesity). However, a significant direct effect of subjective social status remained.

Conclusions:
The family appears to play an important role in explaining health inequalities, particularly in female adolescents. Reducing health inequalities in adolescence requires policy interventions, community-based strategies, as well as programs to improve parenting and family functioning.

Abstract citation ID: ckac129.581
Do family characteristics explain a social gradient in overweight in early childhood?

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Background:
Children's overweight is associated with many factors, including their living situation, in particular their family's socioeconomic position (SEP) and family characteristics. Research on the extent to which family characteristics account for a social gradient in overweight in early life is scarce. This study evaluated whether family characteristics explain SEP differences in the risk of overweight in early childhood.

Methods:
The study used baseline data of 3-6 year-old children (n = 1,116) from the intervention 'Ene mene fit' conducted at kindergartens in Baden-Württemberg, Germany. Data included overweight (body mass index > 90 percentile) and parents' reports on their education and family characteristics associated with overweight (child consumes: sweets in front of TV, soft drinks; family joined time: outdoor, breakfast, sports; cooking; child sets table; role model). Model-based single mediation analyses decomposed the total effect of highest parental education on overweight into direct (unmediated) and indirect (mediated) effects (OR, 95% CI).

Results:
Girls and boys with low parental education had higher odds for overweight than children with high/medium education. Among boys, low education influenced the risk of overweight via indirect effects of i. 'sweets consumption in front of TV' (OR = 1.31, 1.05-1.59) and ii. 'no joined sports' (OR = 1.14, 1.00-1.44). The direct effect of low education only remained significant when 'no joined sports' was considered (OR = 2.19, 1.11-5.19). Among girls, family characteristics measured here did not explain SEP differences in overweight.

Conclusions:
The family characteristics 'sweets consumption in front of TV' and 'no joined sports' contribute to inequalities in overweight among boys, but not among girls. Therefore, more gender-sensitive research is needed to identify family risk and protective characteristics that explain health inequalities among both boys and girls.

Abstract citation ID: ckac129.582
A sport focus of ECEC centres appears especially health-promoting for boys from lower socio-economic background

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Background:
Pediatric overweight is considered one of the 21st century's most serious public health challenges. Many studies investigated individual level determinants of children's body mass index (BMI), yet studies measuring determinants at the meso-level are sparse. As there is a lack of theoretical and empirical knowledge about the role of child care facilities, the aim was to examine the combined effects of family socio-economic position (SEP) and the meso-level variable early childhood education and care (ECEC) centre with sport focus on the BMI of pre-schoolers.

Methods:
We used data from the German National Educational Panel Study (NEPS) and included 1,891 children from 224 ECEC centre groups. Multilevel mixed-effects linear regressions were applied to calculate the main association of ECEC centre focus and family SEP, as well as their interaction on children's BMI. All analyses were adjusted for age, migration background, number of siblings, and employment status of parents and were stratified by gender.

Results:
Boys attending an ECEC centre with a sport focus have on average a lower BMI than boys from ECEC centres not having this focus. Interactive effects between family SEP and ECEC centre focus were found. Considering predictive margins, boys with low family SEP not attending a sport focused ECEC centre had the highest BMI while boys with low family SEP attending a sport focused ECEC centre had the lowest BMI. For girls, no association regarding ECEC centre focus or interactive effects emerged. Girls in the high family SEP tertile had the lowest BMI in both ECEC centre types.

Conclusions:
Our analysis shows the social gradient towards a higher BMI for children from lower SEP families. Considering meso-level factors, we provide evidence for the relevance of ECEC centre characteristics for BMI in boys, whereas for girls the association of family SEP with BMI remains. The ECEC centre focus appears to lower the association of family SEP with BMI for boys.

Abstract citation ID: ckac129.583
The impact of the school-to-work transition on self-rated health & subjective well-being in Germany

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Background:
During the school-to-work transition (STWT), young people enter different states as vocational training, university or unemployment that may have immediate or long-term effects on health. Since research has not paid much attention to this, we investigate the development of self-rated health (SRH) and subjective well-being (SWB) during the STWT.

Methods:
We used data from Starting Cohort 4 of the German National Educational Panel Study (NEPS), a nationally representative

cohort of 11,098 ninth graders (50.5% girls) followed over nine years. Linear panel regression analysis with fixed-effects (FE) was used to explore intra-individual changes in SRH and SWB when moving between different STWT states (school, prevocational program, vocational training, university, employment, unemployment, inactivity). FE impact functions were used to compare trajectories of SRH and SWB by states reached after school-leave. Time-varying control variables were age, household composition, and residential area.

Results:

School-leave was linked to increases in SRH and SWB, whereas no impact was found for job entry after vocational training or university. Upward transitions (e.g. from a prevocational program to vocational training, from vocational training to university or from unemployment to employment) increased SRH or SWB, while downward transitions (e.g. from vocational training or employment to unemployment) were related to decreases. Over the years after school-leave, we found a decline in SRH and SWB, which was faster in case of transitions to unemployment or prevocational programs directly after school.

Conclusions:

Findings suggest that a smooth STWT is key for good health in youth and adulthood. Health and labour market intervention programs should focus on the time after school-leave, especially on those who are not able to find an academic or vocational training position.

Abstract citation ID: ckac129.584
The role of regional health policy for socioeconomic inequality in health services utilization

Wiebke Schüttig

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Background:

“J1” is a preventative routine examination in Germany recommended for adolescents at the age of 12-14 years. In contrast to the well-established U1-U9 examinations for younger children, with participation rates above 90%, the attendance of the J1 examination is approximately only 40%. The most frequent reason for not attending J1 is the unawareness of this examination. “Ticket to J1” is an intervention including an information leaflet introduced in Bavaria in 2017 to inform adolescents about J1. The aims of the present analysis are to investigate (1) if the regional policy was effective in increasing the attendance in J1, (2) if the effects vary by family socioeconomic status (SES), and (3) which meso-level characteristics of the healthcare system correlate with attendance rates in J1.

Methods:

We used anonymised data of a large statutory health insurance in Germany for the timeframe of 2016-2018. To investigate the effect of the policy, a difference-in-differences design at the individual level was used. Assuming a parallel trend at the level of federal states, the likelihood of attendance in J1 of 13- and 14-year-olds was compared between Bavaria and other federal German states before and after policy introduction. All analyses were additionally stratified by SES.

Results:

The introduction of “Ticket to J1” increased participation in J1 by 1% after controlling for all confounders. Furthermore, the effect was stronger for children from families with lower SES (an increase of 5%). Density of pediatricians was positively significantly correlated with participation in J1.

Discussion:

Regional health policy intervention had a significant positive impact on attendance of J1 and appears to have the potential to reduce socioeconomic inequalities in healthcare utilization. Informing adolescents about J1 seems to increase the attendance, in particular for children from families with lower SES.

9.J. Round table: Experiences on infodemic management in public health authorities in Europe and internationally

Abstract citation ID: ckac129.585

Organised by: PHIRI, EUPHA-PHMR, EUPHA-LAW, WHO
Chair persons: Petronille Bogaert (EUPHA-PHMR), Tim Nguyen (WHO Europe)
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The COVID-19 pandemic and current recovery efforts have been complicated by a parallel infodemic, an overwhelming amount of information, including mis- and disinformation, accompanying emergencies as individuals and communities struggle to separate scientific facts and guidance from manipulative, emotionally charged or inaccurate content. The infodemic has manifested itself in the rapid spread of questions, concerns and misinformation that can affect population attitudes and behavior harmful to health-from promoting stigma and discrediting science, to promoting alternative, non-recommended treatment and cures to politicizing public health programs and eroding trust in healthcare personnel and health system. Since the beginning of the COVID-19 pandemic, major advances in the nascent field of infodemiology and the practice of infodemic management have been made, with over 80% of WHO Member States reporting in a pulse survey that they are tracking COVID-19 misinformation and doing infodemic management work. Infodemic management, analogous to epidemic management, is an evidence-based practice in detecting, characterising, responding and managing the infodemic and its harmful effects. It is a leading area of concern for Ministries of Health, who have established infodemic management teams and insights units to help inform programmatic and communications shifts in face of a constantly evolving infodemic. During the COVID-19 crisis and ensuing recovery efforts in face of competing health priorities, public health authorities have been challenged in the way they engage with the public. Advances in social media and media consumption that have eased information sharing between people and communities have also become areas for infodemic risk, such as closed messaging apps, minimally regulated social media platforms, a noisy media environment and under-resourced communications and community engagement functions of MoH and IPH staff who are not versed in technology. The Population Health Information Research Infrastructure (PHIRI) generates and supports their partners in the generation of evidence for research on health and well-being of populations impacted by COVID-19. It supports exchange of expertise across Europe in the area of infodemic management as well.

This workshop aims to share the experiences with infodemic management during the pandemic and key learnings to take forward during recovery and future health systems strengthening and pandemic preparedness efforts. It will be organised as a round table, where speakers will present on how their health systems have built infodemic management capacity, what lessons they have learned and plan to apply to future efforts. Common themes from the participants will become a frame for the Q&A and for audience members to submit questions and their own lessons learned for discussion on these themes through an interactive interface.

Key messages:

- Infodemic management is growing from nascent science into full-fledged and more integrated public health practice ripe for innovation and application to health topics beyond COVID-19.
- Implementation science and evaluation of what works and doesn't in infodemic management must be systematically used for preparedness and response and improvement of routine health service delivery.

Speakers/Panellists:

Elena Petelos
CSFM & HSR-PH Lab, Faculty of Medicine, University of Crete, Iraklion, Greece

Christina Leuker
Robert Koch Institute, Berlin, Germany

Neville Calleja
Department of Health Information and Research, University of Malta, Msida, Malta

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9.K. Oral presentations: Health promotion tools

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A gamification-based intervention to encourage active travel

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Purpose:

'Beat the Street' is a community-wide intervention which aims to increase active travel by turning an area into a 6-week game. Residents earn points and prizes by walking and cycling and tapping a smartcard on RFID readers called 'Beat Boxes' placed on lampposts at half-mile intervals. To-date, over 1 million people have taken part in the intervention, however, the impact of the program on adult active travel is yet to be explored.

Methods:

In Autumn 2019, Beat the Street was delivered throughout the London Borough of Hounslow. Prior, and immediately following the intervention, residents were invited to complete a self-report questionnaire (Sport England Active Lives Survey-SF) to assess changes in physical activity. Time-stamp data generated through Beat Box activity provided an objective measure of intervention engagement and a traffic survey camera was used to measure the number of cars travelling along 1 target road between 1-week pre- and 1-week post-intervention.

Results:

28,219 people took part in the six-week game. Between pre- and post-intervention there was 7% decrease in adults reporting less than 30mins of activity per week and a 13% rise in adults reporting 150+ mins ($n = 346$, $p < 0.01$). Beat box data ascertained that 25% of total taps at all Beat Boxes were made between 08:00-08:59am and a further 28% were made between 3:00-3:59pm, typical travel to school/work periods. Further, traffic camera data showed that between the week before and week following Beat the Street, 1199 and 705 fewer cars and 130 and 36 fewer vans were observed travelling along Cambridge Road between 07:00-09:30am and 2:00-4:30pm, respectively.

Conclusions:

These data sources, in combination, suggest gamification may be an encouraging approach to increasing levels of active travel at a community-wide level.

Key messages:

- Gamification based intervention increases physical activity.
- Gamification encourages active travel to school and work.

Abstract citation ID: ckac129.587
Quality changes of workplace health promotion in Austrian companies over time

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Background:

Workplace health promotion (WHP) is effective when it is implemented in a high-quality and sustainable manner. Companies in the Austrian quality management system can apply for a WHP quality certificate every three years. More and more companies are integrating WHP into their regular operations. This work investigates the WHP quality system and how the companies develop over time.

Methods:

WHP quality is measured using 15 holistic quality criteria, which are assessed by an external, independent institute. For the period 2014-2021, evaluations from $n = 570$ companies with two and from $n = 278$ companies over three measurement points in time are available (initial and renewal awards). The (potential) change of the WHP quality is examined with a longitudinal design by the means of confirmatory factor analyses and autoregressive models with latent variables.

Results:

The measurement of WHP quality shows acceptable to good measurement accuracy (internal consistency-reliability: $\alpha = 0.85\text{-}0.89$), validity (convergent and discriminant validity) and metric measurement invariance over time. At structural level, relative stability of WHP quality can be demonstrated for the measurement points ($\beta = 0.40\text{-}0.52$, $p < 0.001$). Both the quality of WHP and the temporal stability differentiate significantly according to the firm size and the experience of the company with WHP structures and processes.

Conclusions:

The use of the criteria allows a reliable, valid and objective quality assessment of WHP quality due to the concept of the assessment process. WHP quality is a relatively stable characteristic of the company, which, however, varies according to temporal, structural and process-related aspects. Company size moderates to a lesser extent of quality changes over time. This is in line with expectations, but also indicates that small companies should be clearly motivated and supported for their WHP measures. The insights help to further develop quality assurance in WHP and public health.

Key messages:

- The criteria used allow a reliable, valid and objective assessment of WHP quality.
- Because firm size moderates the change in WHP quality, small firms should be continuously encouraged and supported.

Abstract citation ID: ckac129.588
Assisted Reproductive Technology: Gaps in young adults' perceptions and information from clinics

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Background:

Around 186 million individuals are facing infertility worldwide, with a huge impact on their wellbeing. Fertility care is considered a key element to promote reproductive health. This study aims to explore young adults' knowledge, perceptions and concerns about infertility and Assisted Reproductive Technology (ART), and to contrast it with the information provided by ART clinics.

Methods:

A multi-country qualitative study was conducted in Albania, Belgium, Slovenia, Spain, Italy, Kosovo, North Macedonia and Switzerland within the H2020 B2-INF project (Grant Agreement 872706). In 2021, 10-15 semi-structured interviews were conducted in each country with participants aged 18-30, childless and non-ART users. Additionally, 3-5 clinics' websites in each country were explored. Data was collected in native languages and translated into English. A thematic analysis was carried out.

Results:

In total, 98 interviews were conducted and 38 clinics' websites were explored. Three themes emerged from the analysis of the interviews: 1. Parenthood and (in)fertility; 2. Young people's perception on ART; 3. Information and publicity of ART. Parenthood was described as a relationship beyond biological ties and infertility as a social taboo. Most participants perceived ART positively and would use it if needed, although knowledge on ART was low. Participants considered information on ART as scarce and suggested that government-led information campaigns should be launched to raise awareness on it. Concerning clinics, the websites provided information on infertility and exhaustive technical descriptions of ART techniques, although it may be difficult for the general population to understand. Data offered on success rates were unclear and heterogeneous.

Conclusions:

Gaps in citizens' expectations and needs and the information provided by ART clinics were identified. Awareness campaigns are needed to diminish social taboo on infertility and ART and to promote reproductive health.

Key messages:

- Assisted Reproductive Technology is positively perceived by young adults, though their knowledge of it and infertility is low. Information campaigns are thus needed to raise awareness among the young.
- ART clinics have room for improvement in aligning the information provided on their websites with young people's perceptions and needs, and to show it in a more accessible and understandable way.

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Leo&Giulia: a cartoon series to promote health and prevention in primary school-aged children

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Background:

Coronavirus (COVID-19) pandemic control measures actively involved people who were called to adopt new and unusual lifestyles. In this context, children had to stay home from school for weeks, had to adapt to new teaching methods and give up socializing. In many countries, not much attention was paid to the educational sector, and, ultimately, to children's physical and psychological well-being.

Objectives:

In this context, we developed an innovative health education audio-visual model to teach children about public health, empower them to adopt preventive behaviours and limit the risk of infection transmission in schools and in the community.

Results:

We designed and produced the animated cartoon series ''Leo&Giulia'' to convey solid scientific content and key public health messages related to the ongoing COVID-19 pandemic to primary school-aged children. Contents and dialogues were validated by a scientific committee composed of experts in the fields of public health, paediatrics, infectious diseases, and neuroscience, as well as communication experts. The first episode of Leo&Giulia focused on COVID-19 and explained to children what SARS-CoV2 was, its transmission and why schools were closed. Endorsed by the European Commission, it was broadcasted by national public and private television channels and went viral on social media. The second episode of Leo&Giulia, funded by the Italian Ministry of Research, was launched in April 2022 and focused on vaccines and immunization explaining to children how vaccines work and why herd immunity is important for collective health.

Conclusions:

Leo&Giulia is an innovative health education project to help children to better understand how to cope with COVID-19 as a public health challenge. More broadly, the series aims to increase youth engagement by promoting public health values and healthy behaviours.

Key messages:

- Health promotion targeting children is important and contributes to societal health and wellbeing.

- Cartoon series are an innovative digital health education tool that effectively increase youth engagement on public health values.

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Are French local health contracts promising in addressing determinants of diet and physical activity?

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Background:
There is a consensus on the need to transform the built, economic and socio-cultural environments to promote healthy eating (HE) and physical activity (PA). Yet, limited capacity and the biomedicalisation of public health are often blamed for steering investments towards individual risk factors. In France, local health contracts (LHCs) agreed between a regional health agency (RHA) and a local government could improve health promotion strategies. We examined how LHCs take into account the environmental determinants of HE and PA.

Methods:
Using the CLoterreS national census, we analysed a stratified random sample of 53 LHCs with a view to identify if actions target individual (knowledge, skills, etc.) or environmental (interpersonal, organisational, community or political) determinants. To this end, we developed an instrument drawing from different typologies of action and consensus documents to assess the integration of the socioecological approach in programmes. We ran a series of interviews with RHA staff (n = 39) and local actors (n = 23) to put into context our results.

Results:
Out of 53 LHCs, 42 included at least one action on HE or PA. For these topics, there was a higher proportion of actions targeting individuals (83% and 76% per contract, respectively) than environments (51% and 58%). For the latter, actions on interpersonal determinants (e.g. family) were the most common. However, we also found instances of actions on more distal ones (e.g. to improve nutrition standards in school canteens and walkability). Contextual factors such as local priorities, past experience with health promotion and the involvement of local actors in needs assessment and action planning may influence such orientations.

Conclusions:
LHCs constitute a promising avenue to address the environmental determinants of health-related behaviours. A key feature of this instrument is its capacity to develop intersectoral strategies. Further research will show if LHCs deliver on their action plan.

Key messages:
- Local health contracts facilitate the mobilisation of a broad diversity of NGOs and agencies.
- This makes it a promising device for addressing the environmental determinants of HE and PA, provided adequate resources are devoted to stakeholder engagement and local government capacity-building.

9.L. Workshop: A motivated, healthy and high-performing workforce: Innovation in health workforce research in Europe

Abstract citation ID: ckac129.591

Organised by: Technische Universität Berlin
Chair persons: Reinhard Busse (Germany)
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Background:
Hospitals and their health care staff were severely impacted by the Covid-19 pandemic. Many health professionals faced high levels of stress and burn-out due to unfavorable work environments, limited staffing and highly pressured workloads. Yet, even prior to the pandemic, health professionals in many countries faced challenging work environments with often limited resources and support. At the same time, the roles of health professionals are changing across Europe, with new roles, task-shifting and sharing happening in teams, also driven by the Covid-19 pandemic. From a health system and management perspective, recruitment and retention is critical to ensure that there is a sufficient and well-educated health workforce capable to perform high-quality care. Multiple innovations have been implemented across Europe, these will be presented and discussed with a view towards evaluating complex interventions, sustaining innovations, ensuring the scalability and transferability of proven interventions for the benefit of health professionals and wider society.

Objectives:
This workshop will address innovative strategies at the micro (team level), meso (healthcare setting) and macro level (policy) to ensure that health professionals are motivated, perform high-quality care in teams and are sufficiently supported by enabling work environments and recruitment and retention policies. Innovations to improve work environments, task-shifting as well as recruitment and retention will be discussed, based on the findings from four EU-funded research projects: Magnet4Europe, H-Work, TASHI and METEOR. The format is a ‘round table’ with 5 panel discussants. The Magnet4Europe project focuses on the reorganization of hospital work environments for nurses and physicians in hospitals in five European countries. Innovative elements include a system-, inter-professional, organization-wide change management, structural empowerment of clinical staff and one-on-one twinning of European hospitals with U.S. twinning partners.

Innovations in the EU projects:
The H- WORK project aims to design, implement and validate psychosocial interventions to promote mental health and well-being in SMEs and the public sector. Innovative elements are the evaluation of interventions at multiple levels (individual, team, manager and organisational level) and the development of the H-Work innovation platform with toolkits, policy briefs and novel digital solutions. The TaSHI project provides a novel and up-to-date knowledge on task shifting and transferability of good practices in implementation. Through a cross-national and -sectoral perspective, the focus is on task shifting as an innovation towards more effective organisation of care and workforce, to improve efficient and sustainable systems. METEOR aims to enhance scientific knowledge on the predictors of job retention for healthcare workers and develops

evidence-based policy recommendations through stakeholder engagement and co-creation workshops.

Key messages:

- Innovations to improve work environments include system-wide, integrated approaches spanning individual, team, management and organisational levels.
- Elements of effective implementation of innovations are effective leadership at highest level, empowerment, evidence-informed action and tailored strategies on recruitment and retention of staff.

Speakers/Panellists:

Walter Sermeus
KU Leuven, Leuven, Belgium

Ronald Batenburg
NIVEL, Utrecht, Netherlands

Lode Godderis
KULeuven - IDEWE, Leuven, Belgium

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9.M. Pitch presentations: Antimicrobial resistance and infection control

Abstract citation ID: ckac129.592

Role of surfaces and sinks in the control of multiresistant bacteria in Intensive Care Unit

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Background:

Control of multiresistant bacteria (MRB) outbreaks in the Intensive Care Unit (ICU) is a challenge of Public Health. There is strong evidence that surfaces, and sinks are reservoirs of MRB. In 2020, because of isolation of Klebsiella type IMP, OXA-48 and VIM in moist reservoirs in ICU of Clinico San Cecilio Hospital and another carbapenemase-producing Enterobacteriaceae (CPE) outbreak, it arises our aim, which is to highlight the relevance of periodic control of humid reservoirs and surfaces in ICU to prevent MRB transmission.

Methods:

Retrospective, descriptive study from March to June 2021. Due to a rise of cases of a CPE outbreak in our ICU in Granada, samples of surfaces and taps of different boxes were taken, after discharging patients and their corresponding terminal cleaning, whether they were CPE-colonised patient or not.

Results:

Samples of 20 boxes were taken (N = 325). CPE OXA-48 was isolated in 7,38% of the samples which correspond to 40% of the boxes, most of them Enterobacter cloacae. 25% of the positive samples isolated two types of resistance, OXA-48, and VIM. 79,2% of the positive samples were found in March. The rest of them in April and May, after establishing control measures in surfaces. CPE was isolated in blood pressure monitor, pulse oximeter, electrocardiogram and stethoscope from 6 boxes. 3 CPE humid reservoirs were found in the tap and drain sinks of 2 boxes, one of them with CPE colonised patient.

Conclusions:

We have observed the existence of carbapenem-resistant plasmids in surfaces and the persistence of humid reservoirs in our ICU, despite of establishing control measures of an outbreak. In conjunction with classical monitoring measures such as observation and training of hand hygiene, we recommend the use of disposable materials, systematic disinfection of reservoirs, appropriate use of gloves, chlorination of sinks and the goal of an ICU without water should be fundamental elements in the prevention of MRB transmission.

Key messages:

- Multifactorial approach for the control of multiresistant bacteria outbreaks in the Intensive Care Unit.
- Intensive Care Unit without water to avoid humid reservoirs of multiresistant bacterias.

Abstract citation ID: ckac129.593

Prevalence of unnecessary antibiotic use in European hospitals – a systematic review

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Background:

Antibiotics (AB) are essential to modern day medicine as prophylaxis and therapy. Yet, unnecessary use has various negative effects on individual and global health, such as antimicrobial resistance (AMR) and contribution to high greenhouse gas (GHG) emissions of the healthcare sector. This systematic review provides an overview of unnecessary AB use in European hospitals in order to present possible ways forward.

Methods:

The systematic review followed PRISMA guidelines, included as databases were: Embase, ProQuest Environmental Science Collection, PubMed, ScienceDirect, Scopus and Web of Science. Studies conducted among adult in-patients in EU/EEA countries were included if they provided assessment methodology, included a clear standard of measurement and chart reviews were used as evaluation basis.

Results:

Fifty-six included studies were categorised into the following three groups: (1) Studies using an established evaluation method; 20 studies belong to this group, 18 used the same, established approach. Eleven of these studies performed an observational audit, while the interventions in the remaining studies were of educational or advisory nature. Unnecessary AB use ranged from 1.5% to 51% of all observed prescriptions. Outcomes of interventions showed great variation of effects on unnecessary use (-34.7% - +11.6). (2) Studies using a newly developed, clearly stated evaluation method (4 studies); (3) Studies which conform with established evaluation methods but the processes were not specified (32 studies). Results are subject to further analysis.

Conclusions:

The studies included reported a great range of unnecessary AB use in adult in-patients, for both prophylactic and therapeutic indications. Evaluation methods of unnecessary AB use vary greatly between studies. In future research, comprehensive application of established approaches is essential for better overview and identification of key areas for AMR and GHG emission reduction activities.

Key messages:

- Unnecessary antibiotic use varies greatly among studies conducted in European adult in-patients.
- In future research, wider application of established evaluation methods will improve comparability and targeting of interventions.

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Impact of sepses caused by three Multi-Drug Resistant bacteria in a tertiary hospital in 2018-2020

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Background:

Healthcare-associated infections represent a major health issue, particularly if caused by multi-drug resistant (MDR) microorganisms, with additional hospitalisation days and relevant costs besides illness and deaths. This study aimed at evaluating the economic impact of healthcare-related sepses caused by three MDR Gram-negative bacteria (Acinetobacter baumannii, Klebsiella pneumoniae and Pseudomonas aeruginosa) in a tertiary hospital.

Methods:

An observational, retrospective-cohort analysis was based on data related to patients admitted to the ''SS. Antonio e Biagio e Cesare Arrigo'' Hospital in Alessandria (Italy) between 2018 and 2020. Starting from the microbiology laboratory database, the set of patients developing sepses from the examined species was selected, by also checking that the relevant antibiogram provided evidence of resistance to ≥ 2 antimicrobial classes indicated by the European Centre for Disease Prevention and Control. Data were retrieved from patients' medical records and from the hospital's computer-based application.

Results:

In years 2018-2020, 174 patients developed septic infections from the examined species, the majority of which (88, i.e. 50.6%) in 2020 only. Altogether, these cases were responsible for 3,295 additional hospitalisation days (median 14 days, mean 19 days), with 901 imaging and 7,365 laboratory exams being reasonably ascribable to the septic episodes. Sepsis-related costs could be estimated in around 3 million Euros, about 85% of which (≈2.5 million Euros) were due to the actual cost of extra hospital stay. Specific antimicrobial therapy accounted for around 11.2% of the total (≈336,000 €).

Conclusions:

The results of this study pointed out that MDR sepses were responsible for conspicuous costs, largely grounded on the extra length of hospital stays but also due to the use of highly-expensive new-generation antimicrobials. Further research is needed to explore costs of septic episodes in different contexts.

Key messages:

- MDR sepses entailed high costs (around 3 million Euros in three years only in a single hospital), due to extra length of hospital stays and use of highly-expensive new-generation antimicrobials.
- In order to provide wider-scale estimates of the economic impact of sepses, further research is needed to explore costs of septic episodes in different sanitary systems and contexts.

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Trends in mortality associated with surgical site infections: a cohort study in Italy, 2009-2019

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Background:

Surveillance programs have proven to be effective in reducing surgical site infection (SSI) rates. In 2008 Piedmont joined the Italian national surveillance system. The aim of this study was to evaluate mortality rates and trends associated with SSIs in Piedmont from 2009 to 2019 for the two most frequently performed surgical procedures, hip arthroplasty (HPRO) and colon surgery (COLO).

Methods:

Data were collected through the national surveillance system, which includes 42 hospitals in Piedmont who participated in the surveillance program from 2009 to 2019. Procedure-specific SSI rates, overall mortality rates and case fatality rates (CFR) associated with SSIs were calculated, overall and per year. Trends were evaluated using the chi-squared test for trends. Analyses were performed using Epi Info v. 7.2.

Results:

A total of 33438 surgical procedures (21645 HPRO, 11793 COLO) were monitored over the study period from the hospitals participating in the network. 1215 SSIs (293 HPRO, 922 COLO) were observed and 617 deaths were registered (222 HPRO, 395 COLO). For HPRO procedures, an overall SSI rate of 1.35% was found, with an overall mortality of 1.03% and a CFR of 3.75%. No significant trend was observed. Considering COLO interventions, an overall SSI rate of 7.82% was found, with an overall mortality of 3.35% and a CFR of 6.94%. There was a statistically significant downward trend in SSI and overall mortality rates ($p = 0.046$ and 0.005, respectively).

Conclusions:

Considering HPRO, it is possible that the lack of significant trends could be due to the already low SSI and overall mortality rates, with the protective effect of surveillance having reached a plateau. Regarding COLO procedures, a significant reduction in SSI and overall mortality rates was observed during the study period. The reduction in mortality could be due to the decrease in SSI rates, however other factors not analysed in our study could have contributed.

Key messages:

- This study brings further evidence to the protective effect of surveillance, attributable to an improvement in healthcare quality and patients' safety.
- A significant decrease in COLO mortality rates was observed, which could be due to the decreasing trend in SSI rates.

Abstract citation ID: ckac129.596
Aetiology of influenza-like illnesses in the pre-COVID-19 season 2019-2020: role of coronaviruses

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Background:

Only a proportion of seasonal influenza-like illnesses (ILIs) can de facto be attributed to influenza viruses. This study investigated the aetiology of ILIs to estimate the prevalence of human coronaviruses (CoVs) and to analyse their clinical-epidemiological traits.

Methods:

A sample of 613 outpatients (253 adults, 360 children) with ILI in Veneto Region, Italy, was included. ILI was defined according with the EU Decision 2018/945. Sigma-Virocult nasopharyngeal swab were used. Nucleic acids were extracted with the QiaAmp Viral RNA Mini Kit (Qiagen). Molecular detection of respiratory viruses was performed with commercial One-step RT qPCR reagents (Allplex® Respiratory Panels, Seegene). Information on age, sex, symptoms, co-infections and comorbidities was collected.

Results:

CoVs were the 3rd most frequent pathogen in adults (7.5%, after influenza and rhinovirus) and the 4th in children (4.7%, after influenza, rhino- and adenovirus). Subtype distribution was similar, with OC43 the most frequent. Probability of CoV involvement was twice in males (AOR = 2.16; 95%CI: 1.05-4.39), whereas no association with age was noted. Co-infection with other viruses was frequent in children (65% of cases). CoV symptoms were not peculiar, although respiratory tract involvement was less likely than influenza (AOR = 0.13; 95%CI: 0.04-0.41). Among CoV outpatients, 36% had one or more chronic diseases, compared with 5.6% among influenza (p = 0.001).

Conclusions:

Even before the COVID-19 pandemic, CoVs had a substantial role in ILI aetiology: 1 case of CoV every 3 influenza infections in adults. The higher prevalence of comorbidities among CoV positives compared to influenza indirectly shows the benefits of flu vaccines in individuals at higher risk. Careful surveillance of the viruses responsible for ILI continues to be desirable, including, but not limited to, detecting a possible change in the aetiology of ILI after the administration of SARS-CoV-2 vaccines in the population.

Key messages:

- Pre-pandemic virological surveillance of influenza-like illnesses (ILIs) reveals how seasonal coronaviruses were the third most frequent respiratory pathogen in adults.
- Prevalence of comorbidities was significantly higher in patients with a coronavirus-related ILI compared to influenza, supporting the benefits of flu vaccination for high risk groups.

Abstract citation ID: ckac129.597
Flu vaccination coverage in healthcare workers during a 3-year period in the context of the pandemic

Giuditta Scardina

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Background:

Vaccination of healthcare workers (HCWs) against seasonal influenza is considered the most effective way to protect HCWs and maintain essential healthcare services during influenza epidemics. With the present study we aimed to evaluate the efficacy of measures implemented during the three flu campaigns of 2018/19, 2019/20 and 2020/21 in a university hospital in Pisa, Italy, through the assessment of vaccination coverage (VC) in HCWs and to assess attitudes toward flu vaccination.

Methods:

Flu VC was stratified according to sex, age, job and vaccination status for each season and the association between each variable and vaccination status was explored. In 2020, a survey collecting data on knowledge and attitudes on flu vaccination was distributed.

Results:

Starting from the 2018/19 campaign, an increasing flu VC rate was registered: contained in 2019/20 (from 11.6% to 14.3%, $\Delta\% = 23.1$) and significant (VC = 39.6%, $\Delta\% = 177.6$) in 2020/21 as compared with the previous year. Physicians were the professionals most willing to get vaccinated during all seasons. Considering age the situation changed greatly over the study period, with VC rising in 2020/21 in those age groups marked by low VC in previous years (<30 and 41-50 years old, $\Delta\% = 293$). Having been vaccinated in the previous year represented the most important variable to predict likelihood of accepting flu jab. However, while previously vaccinated HCWs were 13 times more likely to get the flu jab in 2019/20 compared with the others; in 2020/21 they were only 3 times. Only half of HCWS considered themselves at higher risk of contracting influenza compared to the general population, while 71% totally agreed that receiving the flu jab in 2020/21 was more important than the previous years due to COVID.

Conclusions:

A significant increase in VC was observed in 2020/21, especially among those sub-groups with consistently lower uptake in previous years, due to the COVID pandemic that positively influenced vaccination uptake.

Key messages:

- This study evaluates the impact of subsequent flu vaccination campaigns implemented in a large university hospital in Italy through the assessment of flu VC among HCWs.
- A significant increase in flu VC among HCWs was observed in 2020/21, especially in those categories characterized by lower VC rates in the previous years, more likely due to the COVID-19 pandemic.

Abstract citation ID: ckac129.598
Information technology systems to support antimicrobial stewardship programs

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Problem:

Inappropriate antibiotic use contributes to the emergence and spread of multidrug-resistant organisms that are responsible for life-threatening infections. Furthermore, overprescription of antibiotics is associated with an increased risk of adverse effects and higher costs.

Description of the problem:

Careggi is a tertiary care teaching hospital in Italy, with nearly 1,200-bed units, involved since 2015 in antimicrobial stewardship (AMS) programs. Despite implementation programs, carbapenems (CAR) consumption rates remained higher than the national average; for this reason, the AMS hospital team started a project aimed at improving the appropriateness of this type of drug.

Results:

The project started in October 2021 and involved 10 hospital Units selected as the major prescribers of CAR. The strategies were planned by a multi-professional and multi-disciplinary team of experts in AMS and were set in place by a multimodal approach focused on information technology (IT) functions implemented in the electronic medical record such as:

- time-out alerts at 72 hours inviting physicians to evaluate if the prescribed antimicrobial is still warranted or effective against the identified organism(s);
- interactive and customizable prescribing algorithms to support physicians in empirical and targeted therapies;
- electronic dashboards viewable by physicians and the AMS team to daily monitor and review CAR prescriptions.

These functions were complemented by a series of training sessions for prescribing physicians aimed to promote a more rational and appropriate antimicrobials use. Six months after the project began, an overall reduction in the prescription of CAR was observed: from 6.2 DDD/100 patient-days to 4.9 DDD/100 patient-days.

Lessons:

AMS programs use different interventions to influence the behavior of prescribers toward more appropriate use of antimicrobials. IT functions represent complementary and useful tools to promote antimicrobial stewardship programs.

Key messages:

- Antimicrobial stewardship programs aim at optimizing antibiotic use and reducing inappropriate antibiotic prescriptions.
- Information technology systems represent useful tools within AMS programs.

Abstract citation ID: ckac129.599
A systematic review of randomized clinical trials on quadrivalent influenza vaccines for adults

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Background:

Vaccination is the most effective intervention to prevent influenza. Adults at risk of complications are among the targets of annual vaccination campaigns and can receive different types of quadrivalent influenza vaccines (QIV). To assess the immunogenicity of different QIVs we performed a systematic review of available randomized controlled trials (RCTs) with the aim of indirectly compare them through a network meta-analysis.

Methods:

The systematic review was conducted in accordance with PRISMA-NMA guidelines. We systematically searched RCTs conducted in adults aged 18-64 years that assessed the immunogenicity, namely seroprotection and seroconversion rate (SPR and SCR), of any QIV compared to any comparator. The literature search was performed on three databases (Medline, Cochrane Library and Scopus) until March 30th, 2021.

Results:

Twenty-four RCTs were included in the systematic review. A network meta-analysis was not possible: the assumption of transitivity was not satisfied. Therefore, we decided to combine data on immunogenicity and efficacy of each QIV through single meta-analyses in the presence of at least two studies. Live attenuated QIV showed the worst results in terms of both SCR and SPR. Standard dose egg based, low dose adjuvanted, cell based, recombinant and intradermal QIV showed similar SCR in respect to influenza strain A, whereas low dose adjuvanted QIV showed an overall better profile in respect to B lineages. Regarding SCR, the better results were issued by standard egg based, cell based, recombinant, and low dose adjuvanted QIVs.

Conclusions:

Albeit an indirect comparison among different QIVs was not possible, the assessment of SCR and SPR provided an overview of their respective potentiality and criticality in adulthood. In particular attention should be paid to new generation influenza vaccines that can have an antigen sparing effect and to the collection of real world data to make comparison among different QIVs possible.

Key messages:

- Available evidence does not allow to perform indirect comparison of the quadrivalent influenza vaccines for adults.
- Some QIVs, including new generation ones, elicit a better antibody response.

9.N. Workshop: It Takes Two To Improve European Child Health (Care)

Abstract citation ID: ckac129.600

Organised by: EUPHA-CAPH
Chair person: Danielle Jansen (EUPHA-CAPH)
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Many societal developments have an impact on health care in general and on child health care, in particular. Internationally challenges include an aging population, more cultural diversity and a rising prevalence of chronic diseases among children and adolescents, revealing potential risks for child health care. A strong focus must be placed on prevention strategies that are effective, sustainable and equitable. Planning and implementing prevention strategies may require shifts in the organization of care, such as the forging and strengthening of interdisciplinary and intersectoral partnerships within a country. A promising example of such partnerships is the collaboration of public health with paediatrics. Both professional groups acknowledge the call for greater integration since prevention strategies can only be achieved and sustained by working together.

The objectives of this workshop are to:

- Provide a selective overview of three partnerships and plans for cooperation between public health and paediatrics.
- To exchange experiences and possibilities with the audience to pave the way for further successful partnerships.

In this workshop, we outline the partnership and plans for cooperation between public health and paediatrics in three European countries: Netherlands, Finland and Switzerland. In the first presentation, Danielle Jansen and Károly Illy will share the new vision towards the year 2030 of the Dutch Paediatric Society in which building blocks are presented to guarantee accessible, high-quality, timely and effective care for every child. One of the building blocks to be highlighted is the interprofessional collaboration between paediatricians and public health professionals. In the second presentation, Julia Dratva and Susanne Stronski from Switzerland will present a shared paediatric and public health vision of a digital child health booklet. The digital booklet will empower parents and adolescents, provide access to personal health irrespective of place or time, improve sharing health information among care professionals, thus ensuring continuity of care and limiting redundancy of investigations and in addition, and provide data for public health research and monitoring. Challenges and solutions will be shared with the audience. In the third presentation, Silja Kosola from Finland will present a Finnish vision for school health care where professionals trained in public health and medicine collaborate with each other as well as with teachers for the benefit of children and adolescents. This multidisciplinary collaboration across governing bodies is especially important as Finland undergoes a national reform of social and health care services. After the three presentations, we engage the audience by asking for their experiences and sharing the examples of collaborations between public health and paediatrics, as well as barriers and facilitators. At the end of the workshop, we would like to summarize the results of the workshop in an overview of preliminary best practices.

Key messages:

- Global climatic, societal and politic developments reveal potential risks for child health cand health care, which must be countered effectively, sustainably and equitably.
- Greater integration of prevention across sectors is elemental and can be achieved through interprofessional partnerships.

Abstract citation ID: ckac129.601
The vision of Dutch paediatric care until the year 2030: prevention and collaboration as key ingredients

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There are many societal developments in The Netherlands that have or will have an impact on Dutch paediatric care. These developments both reveal potential risks in paediatric care and require future improvement of paediatric practices to achieve the best possible outcomes for Dutch children. To realise this, the Dutch Paediatric Society decided in their renewed vision to have a closer focus on prevention and on building partnership with public health, by implementing a building block 'Interprofessional Collaboration between Paediatricians and Other Health Care Providers'. This building block formulates the wish of the Dutch Paediatric Society to work together in networks with other domains of care, such as public health. Preferably, it will be a flexible network in which the disciplines involved align the needs of the specific child. In order to develop and participate in such a network, pediatricians and public health professionals actively have to invest in connecting, establishing, and further developing professional networks (including patient societies). A first precondition for the development and successful functioning of such a network is the implementation and use of a joint electronic medical record in which all diagnostics, treatment plans and positive health aspects of the child are collected, and which is accessible to all professionals involved. A patient record which guarantees a barrier-free exchange of medical and non-medical information between paediatricians and public health professionals within the framework of the current privacy legislation. A second precondition regards an improvement of the paediatric training curriculum in which the paediatrician of the future will gain knowledge of positive health and integrative medicine. The future paediatrician must be trained to function in networks and to make connections. In this presentation we present an update of the implementation of this building block: what is already realised and how.

Abstract citation ID: ckac129.602
Toward a digital child health booklet

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Public health, paediatrics as well as other health professionals share the interest in providing services and improving conditions to ensure life-long health and well-being of children and adolescents. In this interprofessional setting and aim, parents are central partners, as are adolescents when they take over the responsibility of their own health. Ensuring the availability of health data for parents and adolescents at any given time and place is a key factor to empower and improve health management and literacy, providing continuity of health information along the care chain, and analysing health data of healthy and sick children is of high importance. The digital booklet will have a positive impact on sharing of health information among care professionals, thus ensuring continuity of care and limiting redundancy of investigation, and in addition provide data for public health research and monitoring of health and determinants. The Swiss Society of Paediatrics, the ZHAW/Institute of Public Health and the Kollegium of Hausarztmedizin (general practices) founded an association to digitalize the current paper child and adolescent health booklet with the aims:

1. Empower parents as 'owners' of health data to take responsibility and have greater autonomy in managing their child's health and illness
2. Provide a digital infrastructure for
   - low-threshold and reliable source of advice
   - easy update of data/information, digital communication with parents
   - sharing of data with professionals and non-professionals involved in care of child.
3. Monitoring of children's health data (parental consent provided)

The speakers with present their collaboration and project, its current status, as well challenges and solutions found.

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This abstract has been withdrawn.

9.O. Pitch presentations: Access to health services by migrants

Abstract citation ID: ckac129.604
Ethnic differences in COVID-19 deaths across various waves of Coronavirus pandemic in Netherlands

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Background:

It is not known how ethnic differences in COVID-19 deaths in the Netherlands evolved throughout the pandemic, especially after introduction of ethnicity-oriented COVID-19 prevention measures. We investigated associations between ethnicity and COVID-19 deaths across first wave of the pandemic, inter-wave period, and second wave in the Netherlands.

Methods:

We obtained multiple registry data from Statistics Netherlands spanning from 01 March 2020 to 14 March 2021 comprising of 17.4 million inhabitants. We estimated incidence rate ratios (IRRs) for COVID-19 deaths among ethnic groups using Poisson regression models and adjusted for relevant sociodemographic factors. We used similar models to estimate IRRs for non-COVID-19 deaths among ethnic groups.

Results:

Ethnic minority populations exhibited higher risk of COVID-19 deaths than the Dutch origin population throughout various study periods. The most elevated risk of COVID-19 deaths was in populations originating from low- and middle-income countries, especially those with Turkish, Moroccan, and Surinamese background. The elevated risk of COVID-19 deaths among ethnic minority groups (as compared to Dutch origin population) was higher in inter-wave period (4 times higher) and second wave (2 times higher) when compared to the first wave (1.5 times as higher). Ethnic differences in COVID-19 deaths were larger compared to non-COVID-19 deaths.

Conclusions:

Ethnic differences in COVID-19 deaths persisted across first wave, inter-wave period and second wave in the Netherlands despite introduction of ethnicity-oriented prevention measures. Research on explanatory mechanisms and novel prevention measures are needed to address the ongoing differences in COVID-19 deaths across ethnic groups.

Key messages:

- Ethnic differences in COVID-19 deaths persisted in the Netherlands despite introduction of ethnicity-oriented prevention measures.We therefore call for better prevention measures.
- Well known drivers of SARS-CoV-2 infection such as household wealth, did not explain our findings calling for an in-depth understanding of drivers of ethnic differences in COVID-19 deaths.

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Unseen abilities – how refugee women with disabilities experience social participation

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Background:

In the European context, refugee women especially those with physical disabilities are confronted by many unequal conditions that have an impact on their health and social wellbeing. To address these, it is important to understand refugees' social participation and integration process. Furthermore, the purpose of the study is to identify refugee women's resources and their strengths in their everyday life that are related to current problems and needs.

Methods:

This research project is embedded in occupational science theories which include the effect of social and environmental issues on an individual's health and wellbeing. An ethnographic, longitudinal study using visual and narrative methods was used to explore the phenomena of the everyday life and social participation possibilities of five refugee women with physical disabilities living in Stockholm, Sweden. Moreover, to illustrate the process of meaning-making, the frame of intersectionality was used within the whole research process.

Results:

Through the lens of intersectionality, it was possible to determine gender, ableism, religion, and ethnicity issues as influencing factors concerning health and social participation. The women's narratives illustrate accessibility, e.g. public transport as a big resource in comparison to the country they came from. Still, to be a woman, a refugee, and having a disability at the same time is a challenge for social participation. One reason is less consideration of disabilities in the integration process. Having faith was mentioned as a safe place and using the public transport to independency. However, the women stress, that they want their abilities to be used instead of experiencing being limited by their disabilities.

Conclusions:

In conclusion, the women emphasize being engaged in the hosting community. Health and social policymakers should consider the refugee women's voices to develop integration strategies with and not for refugee women with disabilities.

Key messages:

- Through the lens of intersectionality, refugee women's narratives bring new insights about social participation.
- Refugee women with a disability want to engage in the hosting society and become active members.

Abstract citation ID: ckac129.606
Which effects had the pandemic in migrants' health and well-being? A mixed-methods approach

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Background:
The COVID-19 pandemic affected populations' health, with a disproportionate impact on those most socially vulnerable such as migrants. The way these populations experienced the pandemic lockdowns and its effects on daily life are yet to be known. This study aimed to understand the effects of the pandemic on health and well-being of migrants in Portugal.

Methods:
In a mixed-methods approach, a survey was conducted with a community-based sample of 1126 migrants in the Lisbon Metropolitan Area, assessing sociodemographics, migration-related characteristics and the perceived impact of the pandemic on health. In addition, n = 12 migrants purposively recruited were invited to participate in a photovoice study, sharing photographs about their daily life during the lockdowns. Following semi-structured interviews were conducted. Quantitative data were analysed using multivariable analysis and qualitative data were analysed through content analysis.

Results:
A fifth of the participants perceived having worse health condition since the pandemic, which was more likely among women (OR = 1.58, CI95% 1.13-2.20), those >45 years old (OR = 1.78, CI95% 1.02-3.16), with lower education (Basic education: OR = 1.57, CI95% 1.01-2.47) and with lower monthly income (<EUR 650: OR = 1.69, CI95% 1.18-2.44). Two themes emerged from the photovoice: effects of the pandemic lockdowns on daily life (routines, social relations, work) and on health and well-being (eating habits, physical exercise, leisure). Strategies to cope with the adverse effects included social activation and changes in lifestyles.

Conclusions:
The pandemic had disproportionate effects on some migrant groups, intensifying social and health inequalities, with consequences for their well-being. Participatory methods can contribute to further understand migrants' experiences while involving and empowering them for health promotion.

Key messages:
- The pandemic had adverse effects on migrants' health and well-being, disproportionately affecting most socially vulnerable migrant groups.
- Participatory research methods as photovoice are valuable to gain access to individual experiences and perspectives, while involving and empowering participants.

Abstract citation ID: ckac129.607
Resilience in Syrian refugee youth

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Background:
The importance of resilience factors in the positive adaptation of refugee youth is widely recognised. However, their actual mechanism of impact remains under-researched. The aim of this study was therefore to explore protective and promotive resilience mechanisms on both negative and positive mental health outcomes. Promotive resilience is seen as a direct main effect and protective resilience as a moderating effect.

Methods:
Cross-sectional study with 160 Syrian youth aged 13-24 years, who recently resettled in Norway. A multi-dimensional measure for resilience was used to explore the potential impact of resilience factors on pathways between potentially traumatic events from war and flight (PTE), post-migration stress, mental distress and health-related quality of life (HRQoL). Analyses included regression, moderation and moderated mediation using the PROCESS macro for SPSS.

Results:
A direct main effect of resilience factors (promotive resilience mechanism) was found for HRQoL and general mental distress, but not for post-traumatic stress disorder (PTSD). No moderating effects of resilience factors (protective resilience mechanism) were found. Post-migration stressors mediated the effects of PTE, and this indirect effect was present at all levels of resilience. Relational and environmental level resilience factors and combined amounts had more impact than individual level factors.

Conclusions:
Despite high risk exposure and mental distress, resilience was also high. The direct main effect of resilience factors and less impact on PTSD, suggests universal resilience building interventions may be beneficial, compared to exclusively targeting groups with high symptom levels. These interventions should target relational and environmental resilience factors as well as individual coping techniques. Additionally, reducing current stress and symptoms could increase the efficacy of resilience factors already present.

Key messages:
- Refugee youth may have both high levels of risk and high resilience.
- Universal resilience interventions should focus on relational and environmental support, as well as individual resilience.

Abstract citation ID: ckac129.608
Elevated stress during pregnancy in women of Turkish origin: Results from a prospective cohort study

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Background:
Ethnic health disparities exist in the context of pregnancy and childbirth, suggesting that women of Turkish origin (i.e., they or their parents born in Turkey) in Germany have higher risks for some adverse maternal health and child developmental outcomes. Stress is believed to be a relevant pathway by which migration may be associated with these risks. In this study, we tested associations of Turkish origin with stress biology and psychological stress experiences during pregnancy.

Methods:
140 pregnant women (33 of Turkish/26 of other origin) participated in a prospective cohort study that was carried out in Bielefeld and Berlin (Spallek et al., 2020). Inflammatory markers CRP and IL-6 from venous blood samples and diurnal cortisol profiles from salivary cortisol samples were derived and participants completed the Perceived Stress Scale (PSS) and Center for Epidemiologic Studies Depression Scale

(CESD) at two study visits during pregnancy (T1: 20-25 weeks of gestation, T2: 30-35 weeks of gestation). Multilevel models were conducted to account for the nested data structure due to repeated measurements.

Results:

Compared to non-migrant women, women of Turkish origin had significantly higher inflammatory levels (b = 0.28, SE = 0.14, p = .052) (Spallek et al., 2021), a blunted cortisol awakening response (b = -0.21, CI = -0.38–0.03, p<.05), a flatter diurnal cortisol slope (b = 0.02, CI = 0.00-0.04, p<.05), and higher PSS (b = 0.46, SE = 0.13, p< .001) and CESD scores (b = 0.29, SE = 0.08, p<.001) during pregnancy after adjusting for socioeconomic factors.

Conclusions:

The results of our study suggest higher stress at the biological and psychological level in pregnant women of Turkish origin. Stress is a risk factor for pregnancy complications and poor birth and child developmental outcomes. To reduce such unequally distributed risks, interventions for stress reduction are needed that are tailored to women of Turkish origin.

Key messages:

- Women of Turkish origin in Germany have elevated psychological and biological stress levels during pregnancy compared to non-migrant women.
- This finding underscores the need for targeted interventions to reduce stress in this high-risk group.

Abstract citation ID: ckac129.609
Stressful life events as predictors of refugee adolescents' subjective mental health need

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Background:

Asylum seeking and refugee (ASR) adolescents fleeing armed conflict have lived through stressful events. Although not all stressful life events are experienced as post-traumatic stress, they may still lead to subjective need for mental health support. In this study, we assessed which stressful events predicted subjective need.

Methods:

We collected and analysed cross-sectional data (February 2019-November 2020) from ASR adolescents aged 11-18, coming from Syria, Afghanistan and Iraq (n = 216). Subjective mental health need was measured with the question "Do you think you have emotional difficulties that you need help with?" and stressful life events (SLE) by the SLE Checklist, a self-report screening tool that asks if participants experienced stressful events in three categories: separation from family, witnessing armed conflict, experiencing violence. Binary logistic regression was run to assess the relative contribution of stressful life events to subjective need.

Results:

30.1% of participants reported subjective need for mental health support. Most commonly encountered events were witnessing armed conflict (53.2%) and experiencing the death of a loved one (51.9%). Only one stressful event significantly predicted subjective need for mental health support: separation from family or relatives against one's will (e.g., by police or military) [OR = 6.32, 95%CI(1.79,22.31)].

Conclusions:

ASR adolescents who have been separated from their family by force report subjective need for mental health support. It is important to supplement diagnostic tools with subjective report of needing mental health care. ASR adolescents who have experienced separation from famil by force should be given spaces to talk about their need for mental health support. Public health interventions could focus on creating or utilising such spaces where mental health support is available. Crucially, bureaucratic and legal burdens that impede speedy family reunification should be reduced.

Key messages:

- ASR adolescents who have been separated from their families by force are more likely to report subjective need for mental health support.
- The higher reported need highlights the importance of reducing bureaucratic and legal burdens that impede fast family reunification.

Abstract citation ID: ckac129.610
Training peer researchers for CBPR on racism in health care in Germany

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For many affected by ongoing coloniality, research is not neutral or objective, but is part of the colonial violence inflicted through disciplines as diverse as medicine and ethnography. Against this background, choosing Community-based Participatory Research (CBPR) as research strategy for researching racism in health care can be seen as a way of challenging existing epistemologies of ignorance by embracing diversity of knowledge production. 'Community Perspectives on Racism in Health Care' is a participatory research project carried out in the frame of the National Discrimination and Racism Monitor which aims to improve the involvement of people affected by racial injustice in the research process, collect data on and generate theory about healthcare-related racism. It is conducted by DeZIM-Institut in collaboration with different racialized communities. Community members were trained as peer researchers and supported to conduct CBPR-projects. Two CBPR-projects were conducted: 1) digital focus groups with people marked as Muslims 2) digital focus groups with Black people. 'Racial' health disparities were identified on three levels: differential access to health care, differential care within the system and differences in exposures. The theory was built inductively, while drawing on existing theoretical concepts from the disciplines of public health, postcolonial and decolonial studies. Racialized people used the opportunity to be trained as peer researchers. They conducted CBPR projects tailored to the needs of their communities and conceptualized racism in the broader context of health care. Suggestions were made for improving health care services. Including those most impacted by racial injustice as peer researchers enables us to widen the "we" who constitute the researchers and to harvest the wisdom of situated knowledges. However ongoing challenges have been faced raising the question of the (im)possibilities of democratic knowledge production in German academia.

Key messages:

- Including those most impacted by racial injustice as peer researchers enables us to harvest the wisdom of situated knowledges.
- Ongoing challenges have been faced by trying to establish democratic knowledge production in German academia.

9.P. Pitch presentations: Mental health policies

Abstract citation ID: ckac129.611
Reform of the mental health care system in the Republic of Croatia

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Issue/problem:

The pandemic and earthquakes that hit Croatia have increased the need to develop an effective community based mental health care system.

Description of the problem:

In Croatia, the hospitalization rate for depression has doubled in the last 20 years, and the growing needs are mainly related to the mental health of children and young people. The average length of hospital stay due to mental disorders is higher than the EU average, as is the suicide rate. Due to insufficient recognition at the primary level of health care, inadequate treatment and stigma, people with mental disorders rarely seek help.

Results:

Croatia is in the process of adopting the Strategic Framework for Mental Health 2022-2030. The Action Plan for community based mental health service and the Action Plan for mental health promotion, the early detection and treatment of mental disorders are being developed. Emphasis is on intersectoral cooperation, reorientation of the mental health system to community-based care, empowerment, especially of young people, through social emotional learning in school programs, peer support and involvement of young people in decision-making processes. Increasing the mental health literacy, destigmatization, empowering people with mental health disorders to participate in designing interventions, establishing multidisciplinary mobile teams to provide community services and the cooperation of all sectors in mental health care are emphasized. The national program for improvement mental health literacy of educational staff was launched. Telemedicine services have been developed, and the pilot project Providing psychosocial services by mobile multidisciplinary teams have been implemented.

Lessons:

Comprehensive, multidisciplinary and multisectoral action is needed to effectively address the problems in the mental health care system.

Key messages:

- Community based mental health care is client oriented care.
- People with experience of mental disorder and their families must be involved in the decision-making process.

Abstract citation ID: ckac129.612
Self-cutting in bullying victimized adolescents is mediated by depression and dissociation

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Background:

Bullying victimization is a universal public health threat with numerous negative mental health consequences, including anxiety, depression, and dissociation.

Aims:

We explored 1) firstly whether bullying victimization is associated with self-cutting in Finnish adolescent population and, 2) if the possible association is mediated by dissociation and/or depression.

Methods:

We used cross-sectional questionnaire data from 13-18- year-old Finnish students (N = 4214; boys n = 1942; girls n = 2229).

Results:

Bullying victimized adolescents were older, more likely to come from single-parent families and to take drugs and drink alcohol, had a poorer relationship with parents and siblings, as well as poorer school performance compared to non-bullied adolescents. According to logistic regression analysis the association between bullying and self-cutting remained significant despite adjustments for age, gender, fear of going to school, school performance, social network-related factors, family-related factors, lifestyle related factors, and dissociative symptoms, but not for depressive symptoms. In mediation analyses we found that both depression and dissociation mediated the effect of bullying victimization on self-cutting.

Conclusions:

Self-cutting is more common in adolescents who have been bullying victimized. The association is mediated by depressive and dissociative symptoms. More studies are needed to clarify the exact mechanisms how of depressive and dissociative symptoms interact with the association between bullying and self-harm.

Key messages:

- Bullying victimized adolescents are associated with self-cutting.
- Depression and dissociation mediate the mentioned association.

Abstract citation ID: ckac129.613
Evaluating Mood and Anxiety Disorders in Canada Through a Gender-Based Analysis Plus (GBA+) Lens

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Background:

The prevalence of mental disorders continues to increase worldwide. We assessed the prevalence and associated factors of mood and anxiety disorders in the Canadian population using a Gender-Based Analysis Plus (GBA+) lens on a nationally representative survey.

Methods:

A secondary analysis of the 2017-2018 Canadian Community Health Survey (CCHS) - Annual Component was conducted using a GBA+ lens, an analytical process to incorporate sex, gender, and other intersecting identity factors into research, programs and policies. Sampling and bootstrap weights were applied to account for complex sampling design. Chi-square test and multivariable logistic regression models were used to assess associated factors of mood and anxiety disorders.

Results:

2017-2018 CCHS included 113,290 observations, representative of 98% of the Canadian population over the age of 12. Mood and anxiety disorders were more prevalent among females than males (11.0% vs 6.4% and 11.6% vs 6.3% respectively, $p < 0.001$). Logistic regression analyses revealed higher odds for both disorders for those who were female, unemployed, smokers, homosexual or bisexual, had low education and income levels, suffered from food insecurity or had disabilities. Statistically significant interactions were observed between sex and factors such as age, income, employment and sexual orientation. Of those who had a mood or anxiety disorder, 5.0% reported having unmet mental health care needs compared to 1.0% of the general population ($p < 0.001$). Those reporting unmet mental health care needs were more frequently younger, females, single parents, with disabilities, lower income and food insecurity.

Conclusions:

Females in Canada continue to be affected by mood and anxiety disorders at higher rates than males. Strategies for preventing mental health disorders and improving mental health care must be tailored towards the needs of specific groups. We recommend the use of GBA+ as a guide in both research and policymaking.

Key messages:

- This study provides estimates of the present state of mood and anxiety disorders in the Canadian population using secondary data from a cross-sectional, nationwide survey conducted through 2017-2018.
- The application of Gender-Based Analysis Plus (GBA+) helps with the systematic evaluation of healthcare disparities and development of targeted strategies to address gaps in mental health.

Abstract citation ID: ckac129.614
Mental health problems, low economic capability, and social marginalization among 28,047 adults

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Background:

Mental health problems and low economic capability increase the risk of social marginalization. However, few larger studies with a broad age group have investigated how the cumulative effect of having both these difficulties may affect social life. The purpose of this study was to examine the associations between having mental health problems or having low economic capability or reporting both, and social marginalization.

Methods:

The study is based on responses from 28 047 adults (> 18 years old) from the general population participating in The Norwegian Counties Public Health Survey 2019. The study had a cross-sectional design and included respondents' evaluation of own economic capability, mental health problems (HSCL-5) and social marginalization measured as lack of social support, low participation in organized social activities, low participation in other activities, missing someone to be with, feeling excluded and feeling isolated. Multivariable logistic regression was adjusted for sex and age.

Results:

Findings showed that having mental health problems or low economic capability were both associated with various measures of social marginalization with odds ratio [OR] 95% confidence interval [CI] ranging from OR 1.33; CI 1.23-1.43 to OR 12.63; CI 10.90-14.64. However, the odds of social marginalization strongly increased for respondents having both mental health problems and low economic capability compared to respondents without both these difficulties, with OR ranging from OR 2.08; CI 1.90-2.27 to OR 29.46; CI 25.32-34.27. Findings are preliminary.

Conclusions:

Having both mental health problems and low economic capability strongly increases the risk of social marginalization, far beyond the effect of each factor alone.

Key messages:

- Having both mental health problems and low economic capability strongly increases the risk of social marginalization, far beyond the effect of each factor alone.
- Services should aim to develop multi-faceted approaches to meet multiple life-challenges to prevent social marginalization.

Abstract citation ID: ckac129.615
Low-quality employment trajectories and mental health disorders among Swedish and migrant workers

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Aim:

This study aims to examine the effects of low-quality employment trajectories on severe common mental disorders (CMD) according to Swedish and foreign background.

Methods:

This is a longitudinal study based on Swedish population registries (N = 2,703,687). Low- and high-quality employment trajectories observed across five years (2005-2009) are the exposure with severe CMD as outcome (2010-2017). Adjusted hazard ratios (HR) were calculated using Cox regression stratified according to background (first-generation (i) EU migrants, (ii) non-EU migrants, (iii) second-generation migrants, (iv) Swedish-born with Swedish background) and sex. The reference group were Swedish-born with Swedish background in a Constant high-quality employment trajectory.

Results:

Second-generation migrants had an increased risk of CMD compared to Swedish-born with Swedish background when following low-quality employment trajectories (e.g., male in Constant low-quality HR: 1.53, 95% CI: 1.41-1.68). Female migrant workers, especially first-generation from non-Western countries in low-quality employment trajectories (e.g., Constant low-quality HR: 1.65, 95% CI:1.46 - 1.87), had a higher risk of CMD compared to female Swedish-born with Swedish background. The confidence interval for CMD risk showed little differences between migrant groups (1st and 2nd generation) compared to the reference group.

Conclusions:

Low-quality employment trajectories appear to be determinants of risk for CMD, having a differential impact according to background of origin and sex. We observe a higher risk for severe CMD across migrant groups, especially second-generation migrants, compared to Swedish-born with Swedish background. Further qualitative research is recommended to understand the mechanism behind the differential mental health impact of low-quality employment trajectories according to foreign background.

Key messages:

- First and second-generation migrants in low quality employment have higher risk of severe common mental disorders compared to Swedish born with Swedish background workers in low quality employment.
- Policies targeting working conditions in low-quality employment and promoting workers mental well-being are essential to reduce this higher risk for developing CMD, especially for migrant populations.

Abstract citation ID: ckac129.616
The within-person relationship of school climate and mental wellbeing in adolescence

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Background:

School climate is recognized as important for adolescent mental wellbeing. However, there is a lack of longitudinal studies, and most research focus on school climate as an antecedent of mental wellbeing while the relation could be in the opposite direction or bidirectional. Further, no study has examined this relation with analyses that separate between- from within-person variability to properly assess intraindividual developmental processes.

Methods:

Using a random-intercept cross-lagged panel model we investigated the longitudinal reciprocal relations of perceptions of a caring school climate and mental wellbeing across three time points (T1, T2, T3) in adolescence, and if socioeconomic position (SEP) predicted perceptions of a caring school climate and mental wellbeing at each time point. The sample consisted of 1508 Norwegian adolescents (60.7% female; baseline mean age = 16.33, SD = .62).

Results:

Results showed positive cross-lagged effects at the within-person level from mental wellbeing to later perceptions of a caring school climate across all time points (T1->T2 b = .12* [.01, .22], T2->T3 b = .12* [.01, .23]), but no similar effects in the opposite direction. Positive concurrent effects from SEP were observed at one time point for mental wellbeing (T1 b = .10* [.01, .19]), and all time points for perceptions of a caring school climate (T1 b = .12* [.02, .22], T2 b = .11* [.02, .20], T3 b = .12* [.02, .22]), indicating SEP to be related to intraindividual fluctuations mainly in perceptions of a caring school climate.

Conclusions:

The findings support a unidirectional temporal relationship from mental wellbeing to perceptions of a caring school climate and underscore the importance of investigating the subject longitudinally and as a function of within-person fluctuations. From a public health view, the findings support the importance of systematic efforts to promote mental wellbeing to facilitate positive school experiences of adolescents of all social classes.

Key messages:

- The study found a unidirectional temporal relation at the within-person level in adolescents where mental wellbeing predicted perceptions of a caring school climate, but not the other way around.
- The findings underline the importance of systematic public health efforts to promote mental wellbeing as one avenue to facilitate positive school experiences of adolescents of all social.

Abstract citation ID: ckac129.617
Femicides in Turkey: Analysis of the last two decades' cases

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Aim:

Femicide is the women's murder by men for misogynistic reasons. This research aims to determine the characteristics of femicides in Turkey.

Methods:

In this cross-sectional study, 13 news sites were scanned using keywords related to femicides between 2000-2019, and 1744 cases were included. In the study, the murdered women, the perpetrators', and the femicides' characteristics were determined and the percentages, central tendency, and distribution measures were calculated.

Results:

The mean age of the murdered women was 33.2 (SD = ±13.2); 55.5% who were married or cohabitated had at least one child (Mean = 2.2±1.4), and 977 children lost their mothers due to femicide. Of the women killed, 19.1% of them filed for divorce, 10.0% of them applied to law enforcement before, and 4.5% were pregnant. Of the perpetrators, 53.1% were husbands/ex-husbands. The mean age of perpetrators was 38.3±13.4 and 10.8% had criminal records. Of the perpetrators, 12.1% had threatened the women before, and 6.2% of them had been detained. Of the femicides, 80.4% were committed in urban areas. According to the news, 34.7% of the perpetrators were in the prosecution and detention process, 25.6% were on trial, 16.2% committed suicide. Of those whose sentences have been finalized, 26.6% of them were given aggravated life imprisonment and 36.3% of them to life imprisonment. Sudden quarrels, desire for divorce, jealousy, and honor/custom were the most cited reasons. Firearms or sharps were the most frequently used weapons.

Conclusions:

Women were killed by men who were close to them. Women's desires for separation/divorce or to make their own decisions for their lives posed a threat to traditional masculinity. The fact that one out of every ten perpetrators had a criminal record in femicides showed that violence was a way of life for some men. In addition, the ease of access to firearms led to their frequent use in femicides.

Key messages:

- Improve gender equality.
- Access to firearms should prevented.

9.Q. Skills building seminar: Redistribution of ill-defined deaths: a methodological conundrum

Abstract citation ID: ckac129.618

Organised by: COST Action CA18218– European Burden of Disease Network
Chair persons: Brecht Devleesschauwer (Belgium)
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Today, several countries are conducting national burden of disease (BOD) studies, calculating Disability-Adjusted Life Years (DALYs) for a variety of diseases, injuries and risk factors. The DALY metric is composed of a morbidity component, the Years Lived with Disability (YLDs), and a mortality component, the Years of Life Lost (YLLs). The calculation of YLLs typically starts from national cause of death data, which are coded using the International Statistical Classification of Diseases and Related Health Problems (ICD). National BOD studies however often follow (a modified version of) the cause hierarchy of the Global Burden of Disease (GBD) study, which applies coarser categories, and does not contain unknown or ill-defined causes. This implies that not all ICD codes can be mapped to one specific BOD cause, giving rise to so-called ''ill-defined'' or ''garbage'' codes. To include all deaths in a national BOD study, it is therefore necessary to redistribute the ill-defined deaths to specific BOD causes. Several methodological approaches exist for redistribution of ill-defined deaths, ranging from the use of fixed redistribution proportions to advanced redistribution algorithms based on multiple cause of death data. The choice of the methodology needs to depend on the nature of the available cause of death data, and as a consequence, methodologies are typically tailored to the specific data at hand. The absence of a single best methodology, and the methodological heterogeneity across applications, has made redistribution of ill-defined deaths into a methodological conundrum. This skills building workshop will present the redistribution methods applied in different national burden of disease studies, including a discussion of their strengths and weaknesses. By providing a step-by-step presentation of how the methods have been applied, attendees will gain unique insights in the different redistribution methods currently applied.

Key messages:

- Redistribution of ill-defined deaths is an essential part of national burden of disease studies, but is methodologically challenging.
- Attendees will receive an overview of the redistribution methods applied in different national burden of disease studies, including a discussion of their strengths and weaknesses.

Abstract citation ID: ckac129.619
Redistribution down under—dealing with ill-defined deaths in the Australian Burden of Disease Study

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Burden of disease analyses measure the healthy years of life lost due to living with and dying prematurely from disease and injury. It is now the global standard for comparable policy-relevant evidence on the impact of disease, injuries, and risks on a population. The Australian Burden of Disease Study (ABDS), undertaken by the Australian Institute of Health and Welfare, uses Australian-specific data and methods (based on the Global Burden of Disease Study, adjusted to suit the Australian context) to quantify disease burden for Australia. Despite the high quality of deaths registration data in Australia, in burden of disease analyses not all coded causes of death are considered appropriate or valid to estimate years of life lost (YLL). Therefore, these 'ill-defined deaths' are redistributed to one or more diseases on the ABDS disease list according to a more probable underlying cause of death. In the latest ABDS, almost 1 in 10 deaths in 2018 was an ill-defined death. Most of these were redistributed to other diseases using one of three methods developed for the Study:

1) direct evidence on more plausible causes of death from data linkage studies or other sources
2) redistribution algorithms based on the distribution of underlying causes of death where the ill-defined cause was recorded as an associated cause of death
3) reassignment of deaths across a specified range of target diseases according to patterns of causes of death observed in the mortality data for the ABDS disease list.

Expert advice was also received on the redistribution of deaths from septicaemia and deaths coded to ICD-10 code X59 Exposure to unspecified factor. Overall, 8.5% of the years of life lost for Australia in 2018 came from ill-defined deaths. These deaths generally followed age-specific all-cause mortality patterns. It is important to consider methods and target diseases when redistributing ill-defined deaths to appropriately quantify their contribution to disease-specific burden.

Abstract citation ID: ckac129.620
Redistribution of ill-defined deaths: the Scottish Burden of Disease approach

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Burden of disease (BoD) studies are an established method of quantifying health loss across - and within - a population. They aim to combine the impact of living with, and dying from, various health conditions to allow for comparability of conditions in an equitable manner. A key component of this is the calculation of the loss of years of life arising from premature death (Years of Life Lost (YLL)). Most high-income nations have robust death registration systems which ensure that deaths are routinely recorded, the causes are medically certified and the age at death is accurate. However, even in these situations the recording of ill-defined death (IDD) causes remains widespread and to some extent unavoidable, in that it is not always appropriate to undertake extensive investigation to establish an exact cause of death or the cause of death recorded does not map directly to disease groupings used routinely in BoD studies. The Scottish Burden of Disease (SBoD) uses cause of death data from the National Records of Scotland. These patient-level records include one underlying cause of death and up to 10 supplementary causes of death, all coded using ICD classifications. Around 12% of these deaths do not map directly to a BoD cause group and could therefore be considered ill-defined. The SBoD study have developed a 9-step hierarchical methodology for the redistribution of ill-defined deaths, utilising uses a mix of fixed and proportional redistribution and focusses on exploiting the data recorded on the death certificate at both an individual and population level.

In this presentation we will describe the methodology used to redistribute ill-defined deaths in the Scottish study - the development, the application and the strengths and weaknesses of our approach. We will also discuss the example of COVID-19 and how competition between the underlying cause of death is likely to impact how we need to approach IDDs in the future.

Abstract citation ID: ckac129.621
Redistributing ill-defined deaths in the German Burden of Disease study BURDEN 2020

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Having valid information on mortality within a country is of great importance for public health planning. This includes knowing the causes of death (CoD) within a population. However, these data are not always suitable for Burden of Disease calculations from the start and hence, need some realignment in advance. The CoD statistics in Germany include a relatively high share (26% in 2017) of ill-defined deaths (IDD) - using the definition of the Global Burden of Disease Study. Additionally, only the underlying CoD is included in the national statistics and no multicausal data are available yet. As part of the German Burden of Disease project BURDEN 2020 we redistributed IDD to valid CoD using a process of proportional redistribution. To do so, we made use of the distribution of the valid ICD-codes in the data. In the proposed presentation, we use examples of stroke, diabetes, and heart failure to illustrate how IDD were reallocated. After redistribution, the largest increases for both women and men were seen for lower respiratory infections, diabetes mellitus, and stroke. The numbers of deaths for these causes more than doubled after redistribution. Within this project, we carried out the first comprehensive redistribution of IDD for German CoD statistics.

Abstract citation ID: ckac129.622
Years of life lost for 137 causes of death in Belgium by age, sex, and region, 2004-2018

Aline Scohy

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Information on years of life lost (YLLs) due to premature mortality is necessary to assess the fatal impact of disease, crucial for the calculation of Belgian disability-adjusted life years (DALYs). This study presents a novel method to redistribute cause of death data. Belgian cause of death data are obtained from Statistics Belgium (Statbel). After mapping the ICD-10 codes defining the underlying cause of death to the GBD cause list, we redistributed ill-defined deaths (IDDs) to specific causes using a four-step probabilistic redistribution process developed to fit the Belgian context: internal redistribution, redistribution using predefined ICD codes, redistribution using multiple causes of death data, and redistribution to all causes. Finally, we used the GBD 2019 standard life expectancy table to calculate the years of life lost at age of death. In Belgium, between 2004 and 2018, IDDs increased from 31% to 34% of all deaths, reflecting increases in the average age at death. The majority was redistributed using predefined ICD codes (13%), followed by the redistribution using multiple causes of death data (10-11%). The total number of YLLs decreased from 1.83 to 1.77 million. In 2018, the top causes of YLLs were ischemic heart disease and lung cancer with a share of 8.4% each, followed by dementia and cerebrovascular disease with a share of 5.5% each. All results are stratified by age, sex, region, and year, and can be explored via an online tool: https://burden.sciensano.be/shiny/mortality.

10.A. Workshop: Integrated primary care: reform experiences from Estonia, Poland, and Slovenia

Abstract citation ID: ckac129.623

Organised by: European Observatory on Health Systems and Policies
Chair persons: Ewout Van Ginneken (Germany), Katherine Polin (Germany)
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The rising burden of multiple chronic diseases requires countries to change the reactive approach of their health systems, originally designed to cure acute illness, to a proactive approach that scales up preventive interventions and integrates cure (health care) and care (long term care and social care). This requires a central coordination role for primary health care (PHC). PHC is the foundation for delivering health services to the population. It mainly encompasses the first level of professional health care and includes PHC practitioners and other health workers. Together, PHC providers can satisfy most curative and preventative health needs, ideally providing integrated services. In this way, PHC has the potential to agilely respond to population health needs; help individuals navigate their way to good health and stay healthy; prevent disease by identifying risk factors; and manage chronic disease outside of hospital settings. Yet PHC in many countries is not designed to fully realize these promises and ongoing reforms aim to strengthen it. Meanwhile, this potential was on display in several countries during the COVID-19 pandemic, when primary care doctors played a key role in making an early diagnosis; helping vulnerable people cope with their anxiety about the virus; reducing the demand for hospital services; and delivering vaccinations-all while reaching out to vulnerable patients and maintaining access to essential (non-COVID) services for the wider population using new in-person protocols or new digital solutions. This workshop will update the audience on recent PHC reforms across the EU and provide insights from three key examples-Estonia, Poland, and Slovenia. An introductory presentation sets the stage by putting PHC reforms in a wider context of reforms introduced across the 31 countries of the Health Systems and Policy Monitor network of the European Observatory on Health Systems and Policies between 2018 and 2021. A second presentation describes how Estonia has introduced a series of PHC reforms over time and used financial incentives to encourage multidisciplinary care. A third presentation looks to Poland, which from mid-2018 through 2021 piloted a multi-professional model of PHC organization in around 40 PHC practices, with an emphasis on care coordination and disease prevention. A final presentation highlights Slovenia, where a multidisciplinary, community-based, prevention-oriented service delivery model is being expanded to play a larger role in the prevention and management of chronic diseases as well as the country's COVID-19 response. The workshop concludes with an audience discussion on lessons learned from the three case studies and potential implications for other countries.

Key messages:

- Strengthening primary health care is a key priority of many countries as they seek to improve integration of care.
- Implementation of primary care reforms in shaped by the legacy of care delivery and requires a strong workforce, ongoing financial support, sustained policy focus, and collaborative governance.

Abstract citation ID: ckac129.624
Trends in health reforms in the Health System and Policies Monitor network: increasing interaction of primary health care and care coordination

Katherine Polin

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Since 2018, the Health System and Policy Monitor (HSPM) network of the European Observatory on Health Systems and Policies has tracked health reform activity in its countries. Top three reforms are identified by national experts yearly and classified across 11 policy clusters. Efforts inform a standardized overview of healthcare development. 337 reforms have been assessed for 31 (mainly EU) countries over 4 years, with clear trends like the converging of PHC and care coordination. Main reform areas were primary/ambulatory care, governance, and hospital care (2018-2019); coordination, governance, and digital health (2020); and care coordination, governance, and insurance coverage/resource generation (2021). For PHC, this suggests a shift from leveraging innovations to support existing delivery mechanisms to transforming PHC. Some PHC reforms in 2018-2019 introduced elements of integrated care, but more focused narrowly on specific levers, e.g., gatekeeping. Early care coordination reforms focused on certain patient groups or care delivery across the system. Separately, PHC and care coordination have long been reform priorities. Since 2020, they are increasingly linked to one another, and to multidisciplinary care. This suggests a recognition that multidisciplinary processes/staffing are key to realizing the promises of PHC-to coordinate the care of patients and ensure comprehensive and continuous care over time for most health needs. This vision is underpinned by the UN SDGs and COVID-19, which highlighted the need for health systems to be set up for and with the resources to respond to crises while maintaining core functions. The overview of HSPM health reforms identifies reform trends and opportunities for cross-country learning. More research is needed for policymakers to benefit fully from reform experiences abroad. Case studies with in-depth analysis of reform design and implementation processes can help inspire or support future health reforms elsewhere.

Abstract citation ID: ckac129.625
Primary health care reforms in Estonia: using financial incentives to encourage multidisciplinary care

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Estonia has a historical legacy of large hospital networks and municipality-owned specialist clinics, with a low emphasis on primary health care (PHC). Since the 1990s, a transition towards PHC has occurred, delivering PHC in family physician practices rather than in specialist clinics. The transition has been underpinned by a series of comprehensive healthcare system reforms starting in the late 1990s. The most recent reforms, although lacking a legal basis, have been accompanied by financial incentives including EU structural funds to encourage change. These financial incentives were designed to improve quality of care, encourage working in remote areas, and more. A key focus of PHC reforms has been an emphasis on multidisciplinary care, and the reforms have aimed at increasing the involvement of home nurses, midwives, and physiotherapists in PHC. The reforms have also prioritized PHC centres, with multiple practicing physicians, over single physician practices. Although EU structural funds have supported building the infrastructure for expanded scope of services at PHC level, the uncertainty of long-term funding of expanded services remained a key challenge limiting the success of the reform. Further, the supply of family physicians will be problematic in the future, as the number of permanently vacant positions has quadrupled in the last five years and almost half are 60 years of age or older. As the PHC reform process in Estonia continues until today, it can serve as a case study for other countries interested in strengthening their PHC systems.

Abstract citation ID: ckac129.626
Primary health care reforms in Poland: ambitions versus reality

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Poland, like many other former eastern bloc countries, inherited a health system dominated by narrow medical specialties, a large number of hospital beds and relatively weak primary health care (PHC). Since early 1990s, efforts have been made to strengthen the role of PHC, starting with the introduction of specialization training in family medicine. With privatization of PHC practices the standard of PHC care has improved. However, national audits have repeatedly found PHC to still be inadequate, with the key weaknesses including shortages of family medicine specialists, insufficient provision of preventive services, and limited use of diagnostics, which led to inappropriate referrals and long waiting times for specialist consultations. Between mid-2018 and the end of 2021, a new model of PHC organization was piloted in around 40 PHC practices across Poland that met the model's requirements. The pilot, supported by the World Bank, put much emphasis on health promotion and disease prevention by including health educators and dieticians in PHC teams and by introducing periodic check-ups. It also aimed to reduce referrals to specialist care by allowing PHC doctors to order extensive diagnostic and laboratory tests and, if needed, consult with a range of cooperating specialists. It also sought to increase the role of PHC doctors in the management of chronic conditions by introducing disease management programmes (DMPs) for 11 most prevalent conditions. PHC teams were made responsible for coordinating patients' care pathways, including post-hospital treatment, and a new role of care coordinator was introduced to that end. After the pilot was concluded, all PHC practices were mandated to hire care coordinators. Implementation of other solutions tested in the pilot remains uncertain, mainly due to the lack of financial and human resources, and the dominance of small PHC practices that struggle to meet the ambitious requirements set out in the new model.

Abstract citation ID: ckac129.627
Primary health care reforms in Slovenia: leveraging existing structures to expand care

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Primary health care (PHC) in Slovenia is delivered mainly by a network of 63 public community-based primary health care centres (CPHCs), serving as entry points to the health system. Here, multidisciplinary teams provide an array of preventative, diagnostic, therapeutic, palliative, and health promotion services under one roof. Since 2011, several reforms in PHC highlight integrated care. A national scale-up of Family Medicine Practices is underway, where all family medicine teams include a 0.5 FTE registered nurse to improve prevention, early diagnosis and care coordination of chronic patients. Health promotion centers (HPCs) are being introduced in CPHCs to support people in healthy lifestyle, with currently 28 HPCs managed by CPHCs and supported operationally by the National Institute of Public Health. New mental health centers facilitate access to comprehensive mental health care. In 2020, dedicated temporary COVID-19 units in CPHCs played a key role in treating mild/moderate cases and shielding hospitals from overburden. Regarding implementation, pilots have been critical to creating a strong evidence base to enable sustainable (sometimes external) financing, while innovations capitalize on existing links between Slovenia's primary care and public health functions and the Ministry of Health for governance and the flexibility of the multidisciplinary, multiple-practice care model represented by CPHCs. Though this has eased their initial introduction into existing structures, challenges remain. These include dissatisfaction among family physicians due to high administrative burden and an outdated CPHC governance model that limits managers' authority as well as workforce shortages in public health and primary care. Financial incentives, task shifting, and adjustments to education and training have been used to mitigate these issues. Slovenia's experience may serve as a case study for countries interested in improving their primary healthcare services.

10.B. Round table: Shelter in place: lessons from policy making during the COVID-19 pandemic in three countries

Abstract citation ID: ckac129.628

Organised by: University of Augsburg (Germany)
Chair persons: Verina Wild (Germany), Angus Dawson (Australia)
Contact: angus.dawson@sydney.edu.au

The key aims of the workshop are: (1) to engage in early discussion of the findings of this timely project and gain critical feedback from the EUPHA audience, (2) discuss and debate with the audience comparable and contrasting experiences from across Europe. This workshop will outline and discuss results from a project, funded by the Volkswagen Foundation, about the experience of decision-making and the implementation of non-pharmaceutical public health measures (such as social distancing, school closures, lockdowns etc) in the early stage of the response to COVID-19 (the pre-vaccine phase) in three countries (Germany, Israel and Australia). The project combines both empirical research in the form of qualitative interviews with key stakeholders as well as theoretical and conceptual ethical analysis. These methods are integrated to propose a comprehensive ethics assessment building upon the resources of public health ethics to improve the capacity for ethically sensitive decision-making in the future. Key objectives will be: (1) to record some of the relevant values that are explicitly appealed to by stakeholders, (2) to record any implicit values visible in the decision-making process, (3) discuss some of the value conflicts that arose during decision-making, (4) tentatively suggest lessons to be taken into account in future pandemic policy making. The format of this workshop will be a roundtable with a series of short (5 minute) presentations from five panellists, all part of the project, as set out below (25 mins). The chair will then invite questions on matters of clarification arising (max. 10 mins) before inviting members of the audience to provide short comments documenting and reflecting upon their similar or contrasting experiences in their countries (20 mins) before a brief conclusion (5 mins).

Key messages:

- Ethical values are implicitly or explicitly used to justify proposed and actual policy choices, even during a pandemic. Discussion of such values is useful for refinement of future pandemic policy.
- It was common to assume that everyone had the same access to information and ability to respond etc. However, a great, more explicit focus on disadvantaged or vulnerable groups would be beneficial.

Abstract citation ID: ckac129.629
Report from public health decision-maker interviews

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Report from NGO interviews on impact on vulnerable communities

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Report from school interviews

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Report on selected key ethical issues arising from analysis

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Building for the future: some thoughts on a comprehensive ethics assessment

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10.C. Round table: Is public health just science?

Abstract citation ID: ckac129.630

Organised by: UK Faculty of Public Health, EUPHA-ETH, EUPHA-PHPP
Chair persons: Farhang Tahzib (EUPHA-ETH)
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Politicians and policy makers often assert that they are following the science and the evidence in their decision making. Public health is proud of its rigorous scientific and evidence-based approaches and providing the numbers and facts. It is clear though that such numbers and facts, as during the pandemic, have resulted in diverse policies in different countries. Some commentators have noted that public health has lost its way, arguing that its leadership is failing, lacks courage and not sufficiently concerned with issues about social reform and political accountability and change. Is providing facts and the science sufficient to fulfil our mandate and obligations in public health? What should be our role in advocacy and engagement in politics and policy-making to promote and protect the public's health and tackle health inequalities? The purpose of the roundtable is to explore questions of whether public health is ''just science'': is it built merely on a scientific skillset; or is it about justice-promoting science? This question goes to the heart of public health's mandate, with direct implications for public health practice. The questions will be considered largely from the perspective and evidence from the Covid pandemic. There will be presentations by senior distinguished academics and public health practitioners and leaders who have been researching and advising policy makers on wide range of public health issues. They will share their research and experience in particular from membership of the UK Independent Scientific Advisory Group (Indie_ SAGE) for the pandemic and on the Pandemic Ethics Accelerator, as well as other groups advising the government and public organisations on the analysis and implementation of policy options during the pandemic. This will be followed by reflections and discussion with the workshop participants and their reflections and insights on these critical questions.

Key messages:

- Public health is not merely a technical, scientific discipline; it incorporates norms and values, and operates in a political environment where value-judgments are fundamental to decision making.
- Public health practitioners and leaders need to consider advocacy and engagement, and the moral foundations of public health, as key to their mandate and professional obligations.

Speakers/Panellists:

John Coggon
University of Bristol, Bristol, UK

Martin McKee
LSHTM, London, UK

Marleen Bekker
Wageningen University & Research, Wageningen, Netherlands

Farhang Tahzib
Faculty of Public Health, Haywards Heath, UK

10.D. Workshop: Injury Severity Classification and burden of disability measurement

Abstract citation ID: ckac129.631

Organised by: EUPHA-INJ, EUPHA-EPI, EUPHA-PHMR, EUPHA-ECO
Chair persons: Maria Papadakaki (EUPHA-INJ), João Vasco Santos (EUPHA-ECO)
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Globally, injuries cause over 4.3 million deaths per year with incalculable costs for the health, legal, and social systems. Burden of disease analyses are being conducted across the world in order to map the health status of injured population, run comparisons and enable prioritization of preventive and interventional measures. Metrics of injury burden are therefore important indicators of population health that are increasingly being incorporated into national and international health information systems. To prevent injuries and their disabling health consequences, and to effectively reduce injury burden, it is essential to provide policy makers and health system planners with detailed measurements and assessments that allow them to focus resources where they are most needed and areas where more targeted policy attention might be required. However, efforts to fully understand the health outcomes of trauma patients remain inconsistent and insufficient, specifically for certain injury populations and health outcome domains. A wide variety of measures are available to track outcomes after injury in various health domains. Reaching consensus is an important step in benchmarking of outcomes across institutions and injury types to improve quality and advance the field of injury care. Modern, validated measures that are feasible and usable in both research and clinical contexts are needed to facilitate the improvement of quality and comparability of research. The workshop aims to discuss trends and variation of injury burden, which is critical to health system planning. The high human and societal costs as well as inequalities of injury mortality and burden will be highlighted based on comparisons with long-term trends. The workshop will discuss the latest developments in injury severity classification and disability measurement. The most efficient measures to calculate the valid burden of injuries will be presented and comparative measurements across EU countries will be promoted. Limitations of injury classifications and factors introducing uncertainty and potential bias in estimation of disability, will be identified. The workshop will contribute to the identification of evidence-informed tools and measurements of injury burden.

Key messages:

- Some injury outcomes are responsible for huge individual and societal burden but are still difficult to measure.
- Multiple measures are developed to assess severity and outcomes: e.g. AIS/ ISS/New ISS/ ICD-10. Efficient prevention and quality care requires validated and easy to use measures.

Abstract citation ID: ckac129.632
Severity in a Norwegian hospitalized injury material (N = 177,663) by two severity measures: threat-to-life and threat of disability

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We conducted a registry-based cohort study of all individuals aged 25-64 years residing in Norway by 1st of January 2008 (N = 2,535,213). This cohort was followed from 2008 through 2014 using inpatient registrations for acute hospitalizations due to all-cause injuries, getting 177,663 cases of hospitalized persons (incidence rate of new cases: 102.1 pr 10,000 person-years at risk). We derived two measures of severity: threat-to-life using the International Classification of Disease-based Injury Severity Score (ICISS) (Stephenson et al 2004; Gedeborg et al 2014), and threat of disability using long-term disability weights (DW) from the Injury-VIBES project (Gabbe et al 2014), also based on the ICD-codes. We found the following distributions of the hospitalized persons (N = 177,663): 1) Threat to life (ICISS): High threat to life: 4,186 (2.4 %); Lower threat to life: 173,477 (97.6%). 2) Threat of disability (Injury Vibes DW): High probability of long-term disability (DW-score < 0.807): 36,573 (20,6 %); Medium probability of long-term disability (DW-score 0.807-0.947): 97,590 (54,9 %); low probability of long-term disability (DW-score >0.947): 43,530 (24.5 %). Correlation between ICISS-score and the Injury Vibes disability weight score was moderate ($r = 0.418$, $p < 0.001$). The presentation will end up in a discussion on which of these two severity measures could be used for comparing burden of injuries across countries.

References

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Gedeborg R, Warner M, Chen LH, et al. (2014) Internationally comparable diagnosis-specific survival probabilites for calculation of the ICD-10-based Injury Severity Score. J Trauma Acute Care Surg, 76(2):358-65. DOI: 10.1097/ta.0b013e3182a9cd31.

Abstract citation ID: ckac129.633
Methodological considerations when assessing the Burden of Disease due to injuries

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Measuring the burden of disease due to injury is a similar process compared to the disease burden. However, burden calculations for injuries impose an extra complexity for the non-fatal burden, as it is important to consider both the ‘cause’ and the ‘nature’ of the injury. Cause of injury (e.g., road injuries, falls, drowning) have historically been used for assigning cause of death as opposed to the ‘nature’ of injury, which more directly specifies the pathology that resulted in death or disability. However, precisely estimating the disability as a result of an injury requires a mapping of, for example, individuals that have suffered a fracture hip (‘nature’ of the injury) because of falling (‘cause’ of the injury). This process would require a matrix of the nature-cause relation of injuries, which are only scarcely available, because they required dual-coded data registers. The presentation will zoom into the differences between disease and injury estimations and will appraise the methodological considerations for the estimations of injury-related burden of disease estimates.

References

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Quantification the cost of injuries

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The population health impact of injuries can be measured with a range of metrics. ranging from incidence and mortality to disability adjusted life years and cost-of-illness. Cost of illness gives insight into the societal burden of injury, and factors and characteristics that are associated with higher costs. Assessment of the economic burden of health care is important, because this information allows us to understand main cost drivers of health care and to monitor the impact of injury prevention and interventions. However, comparability of cost-of-illness is hampered by differences in included and excluded health care resources, the perspective and time horizon that is applied in the cost-of-illness studies and inclusion or exclusion of productivity costs. Productivity costs refer to that are caused by work absence. In our injury cost of injuries studies, we found that, among working age injury patients, productivity costs are a significant contributor to the total costs related to injury. We also found that there is a lot of variety in the health care and productivity costs in injury patients, and these costs are not solely dependent on injury severity. In this presentation, we will discuss data sources that can be used to assess the cost of illness of injuries, methodological choices that can be made and risk factors for high health care and high productivity costs.

10.E. Round table: Climate emergency, health and equity education: policy and practice recommendations for Europe

Abstract citation ID: ckac129.635

Organised by: ASPHER, Ecorys (Netherlands), EUPHA-ENV
Chair persons: Rana Orhan (ASPHER), Marija Jevtic (EUPHA-ENV)
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Climate change continues to be the biggest challenge of the 21st century, with profound and growing negative consequences on public health. While the public health and wider healthcare sector faces the health risks and consequences of climate change, it is also an important actor as producer of carbon footprint. There is therefore a need for public health and healthcare professionals to be prepared to address the climate emergency and its inequitable impacts across vulnerable populations. Climate resilience and climate-health-equity and political literacy should be built to enable public health and healthcare professionals to gain a deeper understanding of the needed changes and communicate the direct and indirect environmental impact of our health system, institutions and daily lives. This round table discussion will be framed by the joint statement ''Moving towards the right to 'health for all' by training the public health workforce on climate change and health'' issued by a network of public health stakeholders under the EU Health Policy Platform. Endorsed by more than 75 organisations from the global, European and national level, the statement calls actors in public health to bring climate change and health concerns to the forefront of the debates. During the round table, 4 panellists will touch on evidence, solutions and guidance to address the climate emergency from the different perspectives of ASPHER, EuroHealthNet, Ecorys and EHESP French School of Public Health. The added value of the round table is conveying the different views of the panellists, bringing together European CSOs and partnerships of public health authorities, academia and a research-based consultancy company, and laying out possible ways of how working together could steer the EU and national multidisciplinary policy and decision-making on the intersection of climate, health, social justice, and education. After setting the need for action, the round table will seek to produce recommendations from public health actors to address the climate emergency, bringing the dialogue parallel to COP27. This workshop will explore how different actors from inside and outside the public health domain can contribute to climate mitigation and adaptation actions. The discussion will cover: investing in climate-health training for public health and healthcare professionals; investing in public health research; designing and monitoring mitigation programmes (e.g., sustainable and resilience-enhancing healthcare policies); building climate-health-equity literacy; and providing space for dialogue for those communities who will be most harmed by an inadequate public health response. From a policy perspective, the workshop will help prepare recommendations for actions related to COP27 and will reflect on strategic processes taking place at the European level (including the Conference on the Future of Europe, the European Health Union, the Strategic Foresight, and the Recovery and Resilience Plans).

Key messages:

- Climate change poses an immediate threat to planetary health, and the co-benefits of climate change mitigation and adaptation actions to health and social justice should be highlighted in policies.
- The workshop provides public health actors the opportunity to produce recommended actions from public health actors to address the climate emergency at the European and national level.

Speakers/Panellists:

Tara Chen
ASPHER, Brussels, Belgium

Dorota Sienkiewicz
EuroHealthNet, Brussels, Belgium

Daniek Korver
Ecorys NL, Rotterdam, Netherlands

Laurent Chambaud
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10.F. Pitch presentations: Communicating public health messages

Abstract citation ID: ckac129.636

Storytelling to communicate public health messages during the COVID-19 pandemic; A systematic review

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Background:

Storytelling has been increasingly used in public health to disseminate health messages in a format that is more understandable and engaging. This project aims to summarize the findings from the studies that used storytelling approach for conveying health messages during the COVID-19 pandemic.

Methods:

The protocol for this systematic review is registered in PROSPERO (CRD42021281957). Studies were identified via electronic databases; EMBASE, Ovid MEDLINE and EBSCO using variations of the search terms 'COVID-19' and 'storytelling'. Studies that used storytelling interventions in COVID-19 and published in English after 2020 were eligible for inclusion. Data from eligible full text article was collated in a summary table. Quality of included studies were assessed using Joanna Briggs Institute Checklists.

Results:

Of the 4562 studies identified in the electronic search, 11 were eligible for inclusion. Participant numbers in each study varied from 14 to 3746. Eight of the 11 studies included were set online, looking at virtual forms of storytelling. This included online surveys and social media campaigns within hospitals, and online meetings with patients at home. Overall, studies showed that storytelling intervention increased engagement in health communication and has the potential to be used as an effective public health communication tool, for changing health behaviours. Studies were small, six out of 11 were of poor quality.

Conclusions:

Storytelling is a widely accepted intervention and has the potential to positively impact communication, empathy and health behaviour. As there is no standardized definition of storytelling, and studies into this area are new, it is important to continually re-evaluate data to enhance understanding and provide standardized guidelines for storytelling in the COVID-19 context.

Key messages:

- Storytelling has been increasingly used in public health to disseminate health messages.
- Storytelling has the potential to positively impact communication, empathy and health behaviour.

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Effectiveness of a health literacy intervention targeting kidney patients and professionals

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Background:

Chronic kidney disease (CKD) patients with limited health literacy (LHL) experience a faster kidney decline. To counteract this, we developed Grip on your Kidneys (GoyK). This intervention targets patients' communication and self-management. It trains health care professionals (HCPs) competences to support patients with LHL. This study aims to test the effectiveness of GoyK on patients' health and self-management, HCPs' communication competences, and the quality of consultations.

Methods:

A clustered and non-blinded quasi-experimental study was conducted, including 161 patients with mild to severe CKD and 48 HCPs from Dutch general practices and nephrology clinics. Patients (n = 77) and HCPs (n = 30) in the intervention group received GoyK. In the control group, patients (n = 76) had routine visits with HCPs (n = 19). Between March 2021 and June 2022, data were collected with questionnaires and from patient records at baseline (T0), 4 months (T1) and 9 months (T2). Primary outcomes were patients' self-management and HCPs' use of health literacy communication strategies.

Preliminary results:

At T1, the intervention improved the days per week patients exercised (B = 1.00, 95% confidence interval, CI = 0.35-1.65, P = 0.003), and Likert-scale reported (1-4) fluid intake (B = 0.37, CI = 0.10-0.63, p = 0.006). The intervention had a positive effect on several outcomes related to how patients perceived the consultation quality, and improved the reported use of communication strategies by HCPs at T1 (B = 0.68, CI = 0.35-1.01, p = <0.001). We found no effects on other patient outcomes, like activation for self-management or salt intake.

Conclusions:

Our health literacy intervention, targeting CKD patients with LHL and HCPs, improved lifestyle behaviors of patients and the quality of consultations. A further strengthening of other self-management behaviors and on HCPs' competences is needed, also to reach sustainable effects in the care for patients with LHL.

Key messages:

- A health literacy intervention, targeting patients and professionals simultaneously, improved the patients' self-management and care consultations.
- Training of HCPs improved their competences to support patients with LHL, and care organizations and studies need to implement education on this topic.

Abstract citation ID: ckac129.638
The risk and safety profile of electronic nicotine delivery systems (ENDS): An umbrella review

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Background:

Balancing electronic nicotine delivery systems (ENDS) health communication between limiting the harm for new users while offering current smokers the benefits of reduced-risk products is challenging. This umbrella review aims to summarize the evidence about ENDS risk and safety health profile to inform ENDS health communication strategies.

Methods:

Six databases were searched for systematic reviews presenting evidence on ENDS health effects. Ninety reviews divided into 5 categories were included: toxicity = 20, health effects = 40, smoking cessation = 24, transition to combustible cigarettes (CCs) = 13, and industry claims = 4. Findings were summarized narratively. Meta-analyses were conducted when appropriate. Quality assessment was conducted using the Measurement Tool to Assess Systematic Reviews. The Institute of Medicine's Levels of Evidence Framework was used to classify the evidence into high-level, moderate, limited-suggestive, and limited-not-conclusive.

Results:

We found high-level evidence that ENDS exposes users to toxic substances; increases the risk of asthma; leads to nicotine dependence; causes serious injuries due to explosion or poisoning; increases smoking cessation in clinical trials but not in observational studies; increases CCs initiation; and exposure to ENDS marketing increases its use/intention-to-use. Evidence was moderate for ENDS association with mental health and substance use, and limited-not-conclusive for its association with cardiovascular, cancer, ear, ocular, and oral diseases, and pregnancy outcomes.

Conclusions:

Currently, ENDS communication can focus on high-level evidence related to ENDS association with toxicity, nicotine addiction, respiratory disease, ENDS-specific harm (explosion, poisoning), and anti-ENDS industry sentiment. Further research is needed to assess the full spectrum of ENDS health profiles.

Key messages:

- Further research is needed to establish the risk and safety health profile of ENDS with consideration of the wide variety of ENDS, their frequency of use, and different segments of the population.
- More prospective cohort studies that take place over longer time periods and with larger sample sizes are necessary to gauge accurately the short- and long-term health-related risks of ENDS.

Abstract citation ID: ckac129.639
Improving the quality of translation for patients with language barriers

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Background:

Patients with language barriers have worse health outcomes. To promote equitable care, efforts must be made to ensure effective communication with patients, including providing professional translation. In a busy, overstretched health service this can be difficult to achieve. Language translators can reduce barriers, improve safety and ensure impartiality.

Description of the Problem:

Aims - To understand the quality of translation and explore interventions that could improve this in a busy diverse hospital in East London.

Methods:

A quality improvement project in the Medical Admissions Unit of the Royal London Hospital was completed over two years. Patients with language barriers were identified, methods of translation were analysed and interventions to improve access to independent translation were introduced.

Results:

Cycle 1- All medical admissions over a two-week period were analysed. 36 patients had documented evidence of a language barrier with 7 (19.4%) having independent professional translation. 20 (55.6%) patients had family members providing translation, for 4 patients limited English was used and previous documentation was used for 3 patients.

Cycle 2- Posters and information leaflets were disseminated regarding how to access translation services. There was no improvement in the types of translation used. Only 1 patient had impartial professional translation, out of 43 patients identified.

Cycle 3- Advocates (Bengali speaking professional translators) were made available on the ward twice a week. Results showed no significant improvement, with only 6 (10%) identified having impartial professional translation. However staff and patient feedback has been positive.

Lessons:

Impartial professional translation is essential in reducing barriers and delivering equitable health care. This can be difficult to achieve in busy healthcare services. Education alone is not enough. Good accessibility to translation services is paramount in promoting usage.

Key messages:

- Healthcare services often fall short of providing impartial professional translation.
- Education alone is not enough. Good accessibility to translation services is paramount in promoting usage.

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Health literacy, consciousness, and locus of control in relation to vaccine hesitancy and refusal

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Background:

About 35% of adult Europeans remain not fully vaccinated against COVID-19. Health literacy (HL), health consciousness (HC), and health locus of control (HLC) have been linked to different health behaviors, yet their role in COVID-19 vaccination uptake remains unclear. Here, we report preliminary findings from a cross-sectional survey conducted in Greece and Cyprus, aiming to elucidate the aforementioned associations.

Methods:

Participant recruitment for the current analysis took place from January to June 2022, following proportional quota sampling. The current sample comprises 190 participants, with full information on COVID-19 vaccine hesitancy (composite scale outcome) and refusal (binary outcome), as well as HL (European Health Literacy Survey Questionnaire-Q16), HC (Health Consciousness Scale-G), and HLC (Multidimensional Health Locus of Control Form B). Linear and logistic regression analyses were used to determine associations between the aforementioned factors, using the standardized versions of the independent variables.

Results:

After adjusting for sociodemographic factors and other predictors of vaccination status, HL (β, 95% CI: -2.56, -3.76; -1.36), 'internal' HLC (-2.76, -3.79; -1.73) and 'health professionals' HLC (-2.64, -3.66; -1.63) were strongly and negatively associated with vaccine hesitancy, while HC showed a weaker association in the same direction (-1.46, -2.58; -0.35). In contrast, 'chance' HLC was strongly and positively associated with vaccine hesitancy (4.40, 3.37; 5.43). Similar results were detected when vaccine refusal was used as a binary outcome.

Conclusions:

Health literacy and locus of control and to a lesser extent health consciousness, are independent predictors of COVID-19 vaccine hesitancy and refusal. Increasing vaccination uptake via programs aiming at enhancing health literacy and shifting health locus of control, can have a significant impact on COVID-19 pandemic management internationally.

Key messages:

- Health literacy, locus of control and to a lesser extent consciousness, are novel predictors of vaccine hesitancy and refusal in two Eastern Mediterranean European populations.
- Increasing health literacy and shifting health locus of control could render programs aiming to increase COVID-19 vaccine uptake more targeted and effective, internationally.

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Designing a bilingual health prevention website: challenges of using a participatory approach

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Issue/problem:

For some migrants, specific health information tools are needed in order to counterbalance lack of access to information both in countries of origin and of destination.

Description of the problem:

Migrants originating from Pakistan and newly arrived in France are highly affected by for instance hepatitis C. Many of them have a low level of litteracy, including health litteracy. We decided to create a bilingual Urdu/French website, to provide information on hepatitis C, but also on sexual and mental health. The project was conceptualized in a participary manner, in order to fit the targeted population needs. The project started in June 2021 and the website is expected to be launched by September 2022. We report here some of the key challenges which emerged when working with such hard-to-reach community.

Results:

The participatory approach involving community members consisted of 3 steps. In step 1, we confirmed content needs, and assessed preferences in terms of type of media to be used and media styles. About 30 themes were prioritized and the preferred media was video with formal style. After writing scripts, we organized focus-groups discussions to create culturally-appropriate messages. A third and last step will be the selection of titles and keywords for internet search, after shooting videos.

Lessons:

Despite working closely with a Pakistani cultural association and urdu-speaking health professionnals, recruitment of community members for participating in the website design happened to be extremely difficult. Despite initial enthusiasm, interests in the project tended to decrease according to sometimes hidden motivations. Focus groups dynamics were at times affected by significant differences in social situations between participants. Despite these challenges, the participatory process allowed us to reshape part of the content according to the community's communications codes, in order to enhance the efficiency of the messages.

Key messages:

- Working with socially disadvantaged community members is crucial in order to reduce social inequalities in health.
- However, caution is needed to anticipate and decrease unfulfilled expectations.

Abstract citation ID: ckac129.642
A novel stream of collaborative National portals to enhance preparedness and informed choices

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Issue/problem:

AGENAS supports the implementation of health policies in direct collaboration with Italian Regions and Autonomous Provinces. To improve public reporting, we aimed to complement the production of technical reports with new forms of timely communication, using National Portals.

Description of the problem:

Between October-December 2020, we designed and implemented the Covid-19 National Portal, including a suite of targeted indicators, fully automated via ad hoc scripts written in php and R on top of a relational database using internal and external data sources. Targeted information was widely communicated and continuously updated. Dedicated sections on forecasting and resilience were delivered in collaboration with specialised academic institutions. In 2021, we deployed the Portal for the Transparency of Health Services, broadly oriented towards health issues, the location of services and performance indicators.

Results:

Pre-post comparisons of web analytics for Jan-Apr 2020-2022 showed clear advantages of Covid-19 Portal. By Apr 2020, Italy had introduced national lockdown, while AGENAS covered the topic traditionally, recording 48,122 users overall, with daily peaks below 5,000 sessions. In 2021-2022, the number of users skyrocketed at 436,280, with daily peaks of 100,000 sessions, and 421,123 respectively, with daily peaks of 150,000 sessions. Visits to the Transparency Portal were considerably more limited.

Lessons:

To be widely used, public health information needs to be relevant (responding to personal need close to home), understandable, accurate and timely. National Portals can gain efficiency through the mediation of search engines, enhanced by: targeted naming (url), coherent semantic perimeter (third level domain in a highly referenced institutional website), continuous updating, and impact factor (linked by authoritative websites). The Transparency Portal will take stock of these lessons to succeed in a new funded program of NextGenerationEU.

Key messages:

- Relevant, understandable, accurate and timely dissemination for different types of audience may be effectively organised through National Portals.
- Productive collaboration between health specialists and communication experts can enhance usability and actionability of National Portals for public health.

10.G. Oral presentations: Health information and infodemic management

Abstract citation ID: ckac129.643
Semi-Automatic Knowledge Extraction from COVID-19 Scientific Literature: the COKE Project

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Background:

The COVID-19 pandemic highlighted the importance of rapidly updating scientific information. However, the guidelines' drafting process is highly time- and resource-consuming. The COKE Project aims to accelerate and streamline the extraction and synthesis of scientific evidence. To do so, the Project used deep learning to implement a semi-automated system that enhances the systematic literature review processes. We aim to show some preliminary results on the automatic classification of abstract sentences in papers related to COVID-19.

Methods:

The tool is based on Natural Language Processing algorithms to detect and classify PICO elements and medical terms and organize abstracts accordingly. We built a BERT + bi-LSTM language model. The tool was trained on a corpus of 24,668 abstracts unrelated to COVID-19. We assessed the tool performance in a specific topic related to COVID-19 that has not been covered during training. To carry out manual validation, we randomly selected 50 abstracts. Abstract sentences were classified by 2 domain experts into 7 types: Aim (A), Participants (P), Intervention (I), Outcome (O), Method (M), Results (R), and Conclusion (C). The performance of the tool was compared with that of the experts in terms of precision, recall, and F1.

Results:

The classifier proved to have a 76% overall accuracy. Precision, recall, and F1 were above 75% for all types of sentences except I, M, and P.

Conclusions:

The results indicate a promising ability of the semi-automated classifier to predict expert-validated labels on abstracts of different topics. Our proposed tool is expected to significantly reduce the effort for producing medical guidelines and therefore have a strong, positive impact, particularly in emergency scenarios. The COKE Project also represents a call-to-action for similar initiatives, aimed at enhancing the information extraction process in medicine.

Key messages:

- A rapidly changing healthcare requires fast decisions supported by scientific evidence. This is not compatible with the human limits in cognitive skills that reduce the ability to extract information.
- The COKE Project aims to speed up the creation of healthcare guidelines, semi-automating parts of the workflow, and supporting the human-performed process of extracting and analyzing contents.

Abstract citation ID: ckac129.644
Infodemic management for public health practitioners: landscape analysis and practical tools

Atsuyoshi Ishizumi

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Issue:

Infodemics (i.e., overflow of information in physical and digital spaces that makes it difficult for people to make good health decisions) can undermine emergency response, but capacity for infodemic management has been limited in countries thus far. Specifically, there is a need to build capacities in the field with practical and scalable tools.

Description of the problem:

WHO has developed tools and trainings to quickly build and enhance infodemic management (IM) capacity at the country-level, such as tools for rapid generation of IM insights and a framework for conducting landscape analyses to establish sustainable IM capacities. These were developed in collaboration with multidisciplinary experts who provided feedback. We sought to create tools that can be a basis for introducing evidence-generation in health information systems to inform emergency preparedness and response, and mainstream methods into routine infodemic diagnostics activities.

Results:

The tools and trainings provide a comprehensive framework for diagnosing and addressing infodemics, such as a public health taxonomy to guide digital intelligence analysis and integrated analysis methods for generation of actionable insights. Additionally, the landscape analysis framework outlines steps for assessing strategic needs and assets for routinizing IM functions as part of existing public health systems and programs.

Lessons:

The tools and trainings will be deployed in the field to evaluate utility. Feedback from users in the global WHO infodemic manager community will be systematically captured.

Key messages:

- Field responders need practical tools and trainings that guide quick infodemic response during health emergencies.
- These tools and trainings can be used to diagnose and intervene on infodemics, even in settings where infodemic insights units are not yet established.

Abstract citation ID: ckac129.645
Delivering actionable infodemic insights and recommendations for the COVID-19 pandemic response

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Issue:

The COVID-19 pandemic and current recovery efforts have been complicated by a parallel infodemic. The infodemic has manifested itself in the rapid spread of questions, concerns and misinformation that can affect population attitudes and behavior harmful to health -promoting stigma and discrediting science, non-recommended treatments and cures, politicizing health programs and eroding trust in health workers and health systems.

Description:

WHO's COVID-19 Pillar 2 (risk communication, community engagement and infodemic management) developed an integrated public health infodemic insights methodology for weekly analysis of social media, traditional media and other data sources to identify, categorize, and understand the key concerns and narratives expressed, and inform risk communication and response activities.

Results:

The infodemic characterization, integrated analysis and insights generation consisted of a 3-step mixed-methods approach. First, data was collected from publicly available social and news media and categorized into categories of conversations by a COVID-19 public health taxonomy. Second, the dataset was analyzed and compared week-on-week to identify changes in narratives and conversation sentiment. Third, the digital infodemic intelligence was reviewed by a group of subject matter experts and triangulated with other data sources to derive infodemic insights and provide recommendations for action for the week. The methodology has been applied to inform COVID-19 response, COVID-19 vaccine demand promotion, and preparing for mass gatherings or mass immunization campaigns.

Lessons:

The methodology for infodemic intelligence generation and integration has introduced evidence-based analytical practices for generation of infodemic insights and recommendations for action into the work of WHO. It must be further adapted for use by different health programmes and preparedness functions, and is described WHO Field Infodemiology Manual.

Key messages:

- Health authorities can use infodemic insights to respond to people's concerns, questions and information deficits in a timely and effective manner.
- An evidence-based methodology has been developed and validated to generate infodemic insights and recommendations for action during an acute health event or emergency.

Abstract citation ID: ckac129.646
PHIRI Rapid Exchange Forum (REF): A key tool for cross-country exchange in times of crisis

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The COVID-19 pandemic demanded a quick exchange between experts and institutions supporting national governments in the crisis response literally from the first day onward to provide evidence-based information. There was no such regular cross-country forum established in the field of population health in the beginning of the crisis. Thus, devoted members of the Joint Action on Health Information started already in April 2020 to meet regularly online to foster cross-country exchange. In these meetings, partners could approach each other for questions and shared views in a trusted environment. The European Commission recognized this achievement and supported this exchange as part of the Population Health Research Infrastructure (www.phiri.eu), allowing a quick exchange of data, indicators, good practices and experiences in the COVID-19 crisis response in an efficient manner. Till May 2022 34 REF meetings have taken place, involving project partners, national advisors to ministers/heads of agency, representatives of expert networks (e.g. Healthy Cloud), EU services (ECDC, JRC) and different health stakeholders (e.g. ELIXIR). The bi-weekly 1 hour online meetings cover in a moderated, structured format pre-agreed COVID-19-topics that are proposed by the participating countries and chosen via a survey ex-ante to each meeting). Responses by the countries (backed up by national reports, andguidelines that are briefly presented in the meetings) are compiled and shared immediately after the meeting via the Corona-Corner of the Health Information Portal (www.healthinformationportal.eu/rapid-exchange-forum).

Topics covered reach from a discussion on suitable non-pharmaceutical interventions and their application especially prior to the availability of vaccines to child vaccination strategies and overall testing regimes to the most suitable communication tools. In average, 25 to 30 delegates from different, mainly EU member states attend each exchange.

Key messages:

- The PHIRI Rapid Exchange Forum demonstrated its importance for regular decision making in the field of population health not only in times of crisis.
- The Rapid Exchange Forum is an integral part of the European Health Information Portal (www.healthinformationportal.eu) which shall be transformed into a sustainable infrastructure.

Abstract citation ID: ckac129.647

Effect of a client-accessible record on autonomy of parents and adolescents in Dutch care for youth

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Background:

In the Netherlands, since 2015, a paradigm shift towards client-centred 'care for youth' initiated a focus on client autonomy, enabling clients to make informed decisions in their care process. Client autonomy is assumed to positively correlate with mental and physical health and can be strengthened by autonomy-supportive behaviour from professionals. Aiming for client autonomy, three organizations developed an electronic health record (EPR-Youth), accessible for parents and adolescents. Although research shows that patient-accessible records contribute to patient autonomy, limited research is available about use of such records among adolescents. We investigated whether use of EPR-Youth in 'care for youth' contributed to experienced autonomy among adolescents and parents, and what role professional autonomy-supportive behaviour played.

Methods:

A mixed methods design combined baseline and follow-up questionnaires with focus group interviews, over a two-year period. Clients completed a questionnaire about experienced autonomy and portal use at baseline (1202 parents, 202 adolescents) and after one year (914 parents, 89 adolescents). Professionals completed questionnaires about autonomy-supportive behaviour at baseline (N = 100), after 5 months (N = 57) and 24 months (N = 110). After 14 months, focus group interviews were held with a purposive sample of parents (N = 8), adolescents (N = 4) and professionals (N = 12).

Results:

Twelve months after introducing EPR-Youth, higher autonomy scores were found among parents ($\Delta = 0{\cdot}23$; 95%CI = 0·18-0·28; $p < 0{\cdot}001$) and adolescents ($\Delta = 0{\cdot}53$; 95%CI = 0·34-0·73; $p < 0{\cdot}001$). Portal users showed higher scores than non-users. Focus group members reported a positive effect of portal use on client autonomy, which was strengthened by professional autonomy-supportive behaviour.

Conclusions:

The use of EPR-Youth was associated with increased autonomy among parents and adolescents. Autonomy-supportive professional behaviour enhanced this effect.

Key messages:

- The possible contribution of EPR-Youth to client autonomy is promising, but follow-up research is needed to strengthen evidence.
- Implementation of client-accessible records with the aim to enhance client/patient autonomy needs to address autonomy-supportive professional behaviour to increase impact.

10.H. Round table: Access, equity and the relevance of the Pandemic Treaty: lessons from the COVID-19 response

Abstract citation ID: ckac129.648

Organised by: EUPHA-HTA, EUPHA-LAW, European Association of Health Law
Chair persons: Dineke Zeegers Paget (EUPHA), Elena Petelos (EUPHA-HTA)
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Access to medicines, equity and fair pricing have been intensely debated in the context of EU policies and global health priorities for many years prior to the COVID-19 pandemic. To this effect, there have been efforts to develop mechanisms to jointly assess health technologies (HTA Regulation) and to establish cross-border partnerships for price negotiation and procurement. Although TFEU (art.168) is limiting the scope of activities and decisions to be taken at the EU level for public health matters, the Commission has also played an active part in global health discussions in the G20 and in the G7 since 2010, and there is explicit commitment to SDGs, and in particular UHC (SDG3.8) 'leaving no one behind' (2019). Indeed, according to its commitments "the EU advocates equitable, universal and high-quality healthcare coverage and promotes fair, effective financing of research to benefit the health of all [and] it is working to ensure that new products are safe, effective, accessible and affordable.'' In the context of the COVID-19 pandemic, the EU came together in solidarity within and beyond its borders, including through joint procurement of countermeasures. At the same time, different instruments were developed to combat the pandemic globally, such ACT-Accelerator deploying the diagnostic and medicinal products, including, vaccines, and its COVAX Global Vaccines Facility to scale up production and establish consensus on the international allocation of these products. In this transitional phase, issues that arise are:

What is the role of the EU in shaping European public health and global health? What are the fundamental principles enshrined in legislative and non-legislative instruments determining EU policies and actions of global health impact? Is such EU policymaking informed by evidence? Are the necessary interdisciplinary and intersectoral partnerships in place to generate the necessary evidence?

Which instruments and mechanisms have been the most efficient and effective in combating the COVID-19 pandemic? Are they relevant for future pandemics and for increasing preparedness and resilience? What has been the role and contribution of the EU in these initiatives? What are the values and fundamental principles determining EU action and policy, and to what degree are EU policies evidence-informed? Will the EU's efforts be determined by G20 decision-making, interests and priorities?

Each panel member will briefly (5 min) present work conducted to inform European public health and global health policies. The panel will then discuss EU public health and global health policies, assessing the extent to which they are evidence-informed and the degree to which they reflect the fundamental principles of the Union. There will be two rounds of questions/statements, the first elucidating the role of the EU, the second examining it in the context of the COVID-19 pandemic and future pandemics, incl. in the context of the development of the Pandemic Treaty.

Key messages:

- Sound governance, transparency and implementation monitoring is required for all instruments and mechanisms to combat the COVID-19 pandemic and ones, with due consideration to sustainability and UHC.
- The EU's role in global health needs to be strengthened via interdisciplinary and intersectoral collaboration for evidence-informed policies, and in a manner consistent with EU fundamental principles.

Speakers/Panellists:

Dimitra Lingri
National Organization for Health Care Services Provision, Athens, Greece

Rosa Castro
European Public Health Alliance, Brussels, Belgium

Tom Buis
Wemos, Amsterdam, Netherlands

Aurelie Mahalatchimy
UMR DICE CERIC & EAHL Interest Group on Supranational Biolaw, Aix-en-Provence, France

10.J. Pitch presentations: Health services research across the world

Abstract citation ID: ckac129.649

Diabetic ketoacidosis among patients admitted to a general hospital in Ethiopia: a spatial analysis

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Non-Communicable diseases are rapidly increasing in low- and middle-income countries. The number of patients with diabetes is estimated to reach 4.7 million in Ethiopia by 2045. Ensuring access to care is critical to improving the management and clinical outcome of diabetic patients. The study describes the characteristics of patients with diabetic ketoacidosis (DKA) and evaluates the relationship between the severity of clinical presentation and the travel time to the hospital. A retrospective cohort study was conducted on the charts of patients admitted for DKA at St. Luke Catholic Hospital (SLCH), Wolisso, Oromia Region (Ethiopia), between 01/01/2021 and 31/08/2021. Demographic and clinical data were collected. Negative binomial regression was used to explore the relationship between the incidence of admissions for DKA and travel time to the hospital. Logistic regression was used to estimate the odds of insulin treatment. Results were presented with 95% confidence intervals. During the study period, 651 patients were admitted, including 77 (11.8%) for DKA (33 females (42.9%) and 44 males (57.1%)), with no differences based on diabetes type ($p = 0.258$). The mean age was 35 years (IQR 19.0-52.0). Mean BMI was 18.4 kg/m2 (IQR 15.6-19.5), with no differences based on diabetes type ($p = 0.639$). Cumulative incidence of hospitalizations was significantly correlated to travel time to the hospital ($p = 0.039$) with an Incident Rate Ratio of 1.01%[1.00-1.02]. The cumulative incidence ranged from 7.0%[4.5-10.3] in Wolisso to 30.8%[14.3-51.8] in Ameya, the most distant district. The relative probability of insulin treatment was higher with increasing time to SLCH (OR 1.11[1.02-1.21] $p = 0.027$). The hospitalization rate for DKA was significantly correlated with the travel time to the hospital. Access to care is therefore a key factor for health that should be taken into account by improvement programs and the spatial analysis of travel time could help focus on priority areas.

Key messages:

- Spatial analysis can be a robust tool to tailor population healthcare needs on its own topography.
- Health policies must consider that accessibility can influence the severity of clinical presentation.

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health service utilization among older population in a terai region of nepal

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Introduction:
The world is heading towards a larger proportion of older population, indicating an increased risk of diseases, disability, and advanced ageing before death as well as the demand for the health system.

Methods:
This study is a community based cross-sectional study, total 329 older people aged 60 years and above were surveyed. Two stage cluster-sampling technique was used. Semi structured questionnaire was used for data collection.

Results:
Current study showed that 63.3% of the older population have utilized health services in the past one year. Multivariate analysis showed that, respondents with basic education and secondary education are 0.3(AOR: 0.31, 95% CI: 0.17-0.56) and 0.14 (AOR: 0.14, 95% CI: 0.83-0.26) times less likely to utilize health services, respectively. Similarly, respondents reporting current personnel income above forty thousand are 2.8 (AOR:2.81 95% CI:1.84-4.31) times more likely to utilize health services. Respondents at risk of malnutrition are 2.1(AOR: 2.18, 95% CI: 1.14-4.17) times more likely to utilize health services, similarly undernourished respondents are 3.3 (AOR:3.35,95% CI:1.50-7.51) times more likely to utilize health services as compared to respondents with normal nutritional status. Respondents with chronic disease condition are 11.8 (AOR: 11.89, 95% CI: 6.81-20.74) times more likely to utilize health services as compared to those with no chronic disease condition when holding other variables constant.

Conclusions:
There is urgent need to highlight the problems faced by the older population as regards health service utilization and dealing with the identified factors associated with health service utilization among the older population should receive high priority.

Key messages:
- Municipality and health facilities should create enabling environment for older population to get necessary health services.
- Awareness program targeting the underprivileged ethnic groups and poor houses are recommended.

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Health facilities readiness to provide primary cardiometabolic healthcare in Burkina Faso, 2012-2018

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Background:
Cardiovascular diseases (CVD) and diabetes, referred to as "cardiometabolic diseases" (CMD), are a growing health issue in developing countries like Burkina Faso. As the first contact point with the national health system, primary health care must play a crucial role in CMD prevention and control. This study aimed to analyse the primary health care (PHC) system readiness for CMD prevention and treatment in Burkina Faso from 2012 to 2018.

Methods:
We performed repeated cross-sectional data analysis from health facility-based surveys, conducted in 2012, 2014, 2016, and 2018. These surveys were conducted using the World Health Organisation (WHO) Service Availability and Readiness Assessment (SARA) tool. The readiness of PHC for CMD was defined according to the SARA manual.

Results:
A total of 586 healthcare facilities were included in 2012, 659 in 2014, 567 in 2016, and 653 in 2018. Between 2012 and 2018, the percentage of healthcare facilities providing CMD specific care significantly increased (66.2% to 92.0% for CVD and 39.4% to 46.6% for diabetes). However, the mean readiness index of the PHC system to manage CVD decreased from 26.0% to 21.6% (p for trend<0.001). For diabetes, the overall readiness index increased significantly (from 34.2% to 37.5%, p = 0.005). The readiness index of PHC for CVD significantly decreased in all health regions particularly in the Sahel region (from 31.7% to 20.8%, $p < 0.001$). While, for diabetes, it increased in all the health regions excepted the Centre-Sud region (from 37.8% to 32.2%, $p < 0.001$).

Conclusions:
There is a low level of preparedness of PHC system to provide CMD in Burkina Faso. Although improvements for diabetes, this is not enough (80% availability of affordable basic technologies and essential medicines recommended by the WHO). Strengthening of the primary healthcare system considering the geographical disparities is urgently required for early detection and management of CMD.

Key messages:
- There is a low level of readiness of PHC system to provide cardiometabolic healthcare in Burkina Faso.
- Public health policy makers must pay more attention to strengthening of the primary healthcare system to address the rising burden of CMD.

Abstract citation ID: ckac129.652
Socio-demographic determinants of infectious disease knowledge in Armenia

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Background:
There is substantial evidence that infectious disease knowledge (IDK) predicts people's behavioral intentions and preventive practices. Since level of IDK varies across socio-economic contexts and imposes a substantial burden on vulnerable groups, we aimed to assess the relationship between socio-demographic factors and IDK in the adult population of Armenia.

Methods:
A cross-sectional nationwide phone survey was conducted in the capital Yerevan and all Armenian provinces in 2021, using a stratified two-stage cluster sampling to complete a sample of 3,483 respondents. The questions on socio-demographic characteristics and IDK were included in a multi-domain structured survey questionnaire. Four questions measured IDK; a summative IDK score (0-4) was used in bivariate and multivariate linear regression analysis.

Results:
Females constituted 71.0% of the sample. The mean age was 49.5 years. About 68% of the study participants had some vocational (12-13 years) or university degree education and 54.4% were employed. About one fifth of the respondents reported family monthly expenditures of less than 100,000 Armenian drams (AMD) $\approx$ \$200, while the majority reported spending 101,000AMD to 400,000 AMD per month. The mean IDK score was 2.48. In the adjusted analysis, being female, holding a higher education level, being employed, having younger age and higher family monthly expenditures were positively associated with IDK score.

Conclusions:

Our findings suggest that there is a gap in IDK affecting specific population groups such as older people, those with incomplete or secondary education, unemployed and financially disadvantaged people. Educational interventions and campaigns should target these groups to minimize the gap and ensure even prerequisites for good health.

Key messages:

- Gender, age, education level, employment status and income level all independently influence population's infectious disease knowledge.
- Health communication campaigns on infectious disease knowledge should particularly target males, older people and socially disadvantaged groups.

Abstract citation ID: ckac129.653
Mortality among internal and international migrants in the 100 Million Brazilian Cohort

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Background:

There is limited evidence on the health of migrant populations in low and middle-income countries (LMICs). Here, we investigated the patterns of mortality risk in migrants and non-migrants in women and men over the life course.

Methods:

We linked socioeconomic and mortality data from 1st Jan 2011 to 31st Dec 2018 in the 100 Million Brazilian Cohort. We calculated all-cause and cause-specific age-standardised mortality rates according to individuals' migration status. Using Cox regression models, we estimated the age- and sex-adjusted mortality hazard ratios (HR) for internal migrants (i.e., people born in Brazil but living in a different Brazilian state to their state of birth) compared to Brazilian-born non-migrants; and for international migrants (i.e., people born in another country) compared to Brazilian-born individuals.

Results:

We followed 45,051,476 individuals, of whom 6,057,814 were internal migrants and 277,230 were international migrants. Internal migrants had a similar overall risk of all-cause mortality compared to Brazilian non-migrants (aHR = 0.99, 95%CI = 0.98-0.99), with lower mortality from some causes but higher mortality for some non-communicable diseases (NCDs). Compared to Brazilian-born individuals, international migrants had a lower risk of all-cause mortality (aHR = 0.82, 95%CI = 0.80-0.84), with up to 50% lower risk of death attributed to interpersonal violence among international migrant men (aHR = 0.50, 95%CI = 0.40-0.64), but a markedly higher risk of death by avoidable causes related to maternal health among young migrant women (aHR = 2.17, 95%CI = 1.17-4.05).

Conclusions:

Overall, internal migration was not associated with excess all-cause mortality, while international migration into Brazil was associated with lower all-cause mortality. Mortality patterns among migrant populations in Brazil show marked variation for specific causes of death, and risks varied by age and sex.

Key messages:

- Non-communicable diseases and maternal mortality are disproportionally higher among internal and international migrants, respectively.
- Further investigation of the underlying factors associated with higher maternal mortality among international migrant women is key to informing the targeting of social and health interventions.

Abstract citation ID: ckac129.654
Inequalities in adverse birth outcomes and survival in early childhood: birth cohort in South Korea

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Background:

Adverse birth outcomes (ABOs) are considered the most common factor of deaths in early childhood. Inequalities in child mortality occur due to interactions between intrinsic and socio-environmental factors related to socioeconomic disadvantage. There are, however, few studies investigating the impact of ABOs on mortality in terms of parental SEP.

Methods:

Using the Under-5 Infant Birth-Death Cohort Data in Korea, a pooled retrospective birth cohort of all children born in 2012-2014 was built (N = 1,356,584). We analyzed neonatal, post-neonatal, and childhood mortality by ABOs and with the interaction of parental SEP using the Cox proportional hazard regression model for survival analyses. We further stratified the analysis both by parental SEP and child age. Multiple logistic regression was performed to confirm the social inequalities in ABO itself.

Results:

After adjusting for covariates, children born with ABOs presented higher risk of mortality for all periods. For post-neonatal period, lower maternal education showed significant interaction effect with LBW (HR = 0.57; 95% CI = [0.39-0.85]), PTB (HR = 0.53; 95% CI = [0.33-0.86]), LBW & PTB ([HR = 0.67; 95% CI = [0.54-0.83]) while lower paternal education (HR = 0.67; 95% CI = [0.54-0.82]) and maternal unemployment (HR = 0.80; 95% CI = [0.63-0.99]) showed significance for babies with LBW & PTB. However, stratification analyses suggested that the impact of ABOs on mortality was greater for children born to lower parental SEP in neonatal period. Meanwhile apparent social inequalities in ABOs were suggested from regression analyses.

Conclusions:

We confirmed social inequalities in the incidence of ABOs as well as mortalities from ABOs. However, the difference in mortality between babies with and without ABOs was greater for advantaged children. Policies to reduce the mortality of children with ABOs as well as those of healthy children among socioeconomically disadvantaged families are required.

Key messages:

- Social inequalities in mortality from ABOs were apparent especially in the neonatal period while the incidence of ABOs itself was greater among children from disadvantaged families.
- Disadvantaged children are more likely to die not only from ABOs but also from other socio-environmental determinants, especially in the post-neonatal period than their counterparts.

10.K. Workshop: School health during the COVID-19 Pandemic. Perspectives from the COVID-HL school principal study

Abstract citation ID: ckac129.655

Organised by: EUPHA Working Group on Health Literacy, COVID-Health Literacy Network, Fulda University of Applied Sciences, Technical University Munich (Germany)
Chair persons: Kevin Dadaczynski (Germany), Orkan Okan (EUPHA-HP)
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The COVID-19 pandemic is associated with far-reaching challenges for the educational system, which impact the health of all involved in the school context, making it a critical public health topic. Consequences include school-closures, a switch from face-to-face classroom learning to homeschooling via online learning, resulting in uncertainty, stress and an increased risk of reinforcing already existing inequalities. Since the pandemic started, some research has been conducted in child and adolescent populations. However, there is very limited research available exploring the effects of the pandemic on school principals, who are responsible for all aspects of the school life and therefore have to cope with particularly high demands as a result of the COVID-19 pandemic. Pre-pandemic research shows that school principals report high work-related stress and more frequently psychological and physical burden compared to other professional groups (Dadaczynski et al., 2020; Phillips et al., 2008). Moreover, little attention has been paid to what health promotion activities are implemented by schools during pandemic times and what the schools' needs are in this area. To provide empirical evidence on that matter, a school principal survey was conducted within the international COVID-Health Literacy Research Network (www.covid-hl.org), that aimed to assess (1) work-related stress and strain, (2) corona-specific health literacy among school principals and (3) the implementation status of activities in school health promotion during the COVID-19 pandemic. This workshop aims to present and discuss findings of the COVID-HL school principal study from Germany, Italy, Poland, Switzerland and Wales, which have used the same instrument and study design. The first presentation will focus on the pandemic as a potential disruptive event impeding the implementation of holistic activities on school health promotion and prevention. In their presentation, Chiara et al. analyse beliefs about vaccines among principals and its associations with COVID-19 information satisfaction. The third presentation originates from Poland and will introduce findings regarding work-related coping behavior and its association with mental health of school principals. While the fourth presentation from Switzerland focus on the relationship between health literacy and health promoting activities implemented by schools, Marchant et al. explores the effects of the COVID-19 pandemic on senior leaders experiencing high job demands. Each project will be given ten minutes to present their findings, including questions, which will be followed by Q&A and an open discussion with the audiences. This workshop offers a forum for researchers, practitioners and policy-makers interested in school health promotion and school staff health. By dialogue and two-way communication, vivid interaction will be ensured, allow building synergies, and facilitate networking and capacity building.

Key messages:

- School leaders should be systematically supported as 'gate-keepers' of school health promotion.
- School principals represent a largely neglected target group for school health promotion.

Abstract citation ID: ckac129.656

The COVID-19 pandemic as an disruptive event in school health promotion. Survey results from Germany

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Background:

This study examines the extent to which schools implement activities on health promotion and prevention during the COVID-19 pandemic. Moreover, potential differences with regard to demographic variables, school type, state, and participation in state public health and health promotion initiatives are determined.

Methods:

As part of the international COVID-Health Literacy Research Network, an online-based cross-sectional study was conducted from March to April 2021 with 2,186 school principals from three German federal states. The implementation status of COVID-19 related school health promotion was assessed using a self-developed instrument. After examining the factorial structure of the instrument, univariate and bivariate data analyses were performed.

Results:

Three dimensions of implementing school health promotion can be identified (1. COVID-19- related support for pupils, 2. Health promoting design of teaching, learning and working conditions, 3. Principles of Health Promoting School). A low level of implementation can be observed for aspects of teaching, learning and working conditions (31%) as well as for participation (52%) and cooperation with community stakeholders (42%). Significant differences can be determined with female, older and primary school principals reporting a higher implementation status while for federal state mixed results are found. Stratified by participation in state health promotion initiatives, only schools with a certificate in health promotion show a higher level of implementation.

Conclusions:

The results indicate that the COVID-19 pandemic is a disruptive event for schools, impeding the implementation of holistic activities on health promotion and prevention. In addition to systematic support for school principals in the area of health promotion and prevention, it should be ensured that existing initiatives are provided with sufficient resources, especially in times of crisis.

Abstract citation ID: ckac129.657

Beliefs about vaccines and information about coronavirus, COVID-19 and the pandemic. Findings from Italy

Chiara Lorini

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Introduction:

In Italy, COVID-19 vaccination campaign for school personnel started in February 2021 and began mandatory from 15th December 2021 to all the people who work within schools. Here we described Italian school principals' beliefs about vaccines and its association with feelings about information regarding coronavirus, COVID-19 and the pandemic.

Methods:

Data collection started in October 2021 and is ongoing. Beliefs about vaccines were investigated both for COVID-19 vaccination and for vaccination in general.

Results:

A total of 726 questionnaires were analyzed so far. The majority feels to be well informed about the coronavirus or the pandemic (75%) and not at all nor a little confused about COVID-19 information (89%). Only 2% disagree/strongly disagree with the statement ''vaccination is compatible with my attitudes or religious beliefs''. Beliefs regarding vaccines in general are correlated with those regarding COVID-19 vaccines. When different beliefs are described, we observed a trend towards considering COVID-19 vaccines less safe and effective, but more important to protect themselves and their family than other vaccines. Moreover, beliefs about vaccination in general and regarding COVID-19 are associated with how well they feel informed about the coronavirus or the pandemic, and whether they feel confused about COVID-19 information. In particular: the better they feel informed about the coronavirus and the related pandemic, the higher the perception of vaccines in general and COVID-19 vaccine as important, safe, and effective; the less they feel confused about COVID-19 information.

Conclusions:

School principals showed a high level of confidence on vaccines. The association between beliefs in vaccinations and the characteristics of information about COVID-19 supported the effectiveness of Italian vaccination policy and information campaigns.

Abstract citation ID: ckac129.658
Life-work balance of school-principals during the COVID-19 pandemic in Poland

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Background:

The health crisis caused by the COVID-19 pandemic has severely affected the education sector and its whole community. Due to their responsibility for organizing schoolwork, school managers were in an extremely challenging position. The main objective of the present study is to reveal the extent to which school principals in Poland put aside their own needs in favor of fulfilling their professional duties during the COVID-19 pandemic.

Methods:

The results come from an online survey among school principals in Poland, which is part of the international COVID-19 Health Literacy School Principals Survey. The survey was conducted in 8 out of 16 provinces in Poland between June 2021 and December 2021. 1899 school principals participated in the survey, of which 928 completed the questionnaire.

Results:

The study revealed that 68,3% of school principals often and very often worked longer than contractually agreed and 71,3% reported to be available for their colleagues, pupils, and parents in their free time. Most of them also had to give up leisure activities in favor of work (67,9%), work extra hours in their spare time (60%), waive breaks during working hours (57,3%), and did not get sufficient sleep in favor of work (50,5%). Devoting more time to work and high stress levels during the pandemic were associated with somatic complaints among respondents (e.g. muscle pain (neck, shoulder, or back) and headache).

Conclusions:

The results suggest that Polish school principals worked at the expense of their free time and health during the COVID-19 pandemic. As such, findings emphasized a lack of life-work balance and the need to raise their awareness of the consequences of self-exploitation in work in challenging times. The ability to set healthy boundaries between work and private life among managers is one of the health promotion tasks in demanding times.

Abstract citation ID: ckac129.659
School health promotion during the COVID-19 pandemic: Associations with school leaders' health literacy

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Background:

School leaders are credited with an important role when it comes to school health promotion. During the COVID-19 pandemic, much health-related information was available and had to be interpreted and acted upon by school leaders. Therefore, it is crucial that they have sufficient health literacy as the ability to gain access to, understand and use health-related information. A study in Germany showed that limited health literacy among school principals was associated with low levels of health promotion activities. This paper explores the association between school leaders' health literacy and school health promotion in Switzerland, addressing the following questions: 1. What is the relationship between health literacy of school leaders and the implementation of school health promotion? 2. Does health literacy explain variance above and beyond other antecedents, such as principals individual mental health and attitudes?

Methods:

The quantitative analysis is based on an online survey conducted among school leaders in the German- and French speaking parts of Switzerland in June 2021 as part of the project ''COVID-19 health literacy school principals survey''. The final sample comprised N = 339 school leaders. The data were analyzed using stepwise regression with health literacy, stress, wellbeing and attitudes toward school health promotion as antecedents and COVID-19 related school health promotion as the outcome.

Results:

The results show that health literacy of school principals has played an important role in the implementation of school health promotion during the COVID-19 pandemic. It explains additional variance beyond other antecedents.

Conclusions:

One way to promote implementation of school health promotion is to strengthen the health literacy of school leaders.

Abstract citation ID: ckac129.660
The COVID-19 HL School Principal Survey (Wales) linked to routinely collected anonymised health data

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Background:

Evidence before the pandemic suggests that school headteachers report high work-related stress and psychological/

physical burden compared to other professional groups (1). There is an evidence gap exploring the effects of the COVID-19 pandemic on senior leaders in schools who have experienced high demands as a result of COVID-19. This is important because in the UK, teacher retention is policy priority.

Methods:

The COVID-19 HL: School Leadership Survey aimed to explore the burden and stress that school leaders in Wales, UK experienced during COVID-19, part of a global study with the COVID-HL network (3). 172 school leaders (62% female) from 130 primary (age 3-11) and 30 secondary schools (age 11-16) completed an online survey between July-Nov 2021, exploring topics such as work-related stress and mental health. A unique aspect is the use of data linkage using the SAIL (Secure Anonymised Information Linkage) Databank. SAIL is data repository containing individual-level, anonymised population-scale data for Wales.

Results:

Initial descriptive findings show 54% of senior leaders have depression (WHO-5), and lower wellbeing scores compared to other UK professions. 83% report moderate-high perceived stress (Perceived Stress Scale) and physical (38%) and mental (57%) work exhaustion. The next stage of this study is to perform data linkage of survey responses to health records and administrative data. Logistic regression analyses will examine wellbeing and work-related stress with outcomes including mental health (e.g. anxiety/depression) diagnosis and time off work.

Conclusions:

Preliminary results show high levels of stress, exhaustion and low wellbeing amongst school leaders in Wales. The next part of this study will examine this in greater detail using data linkage of routine records. Data linkage allows this sample to be extrapolated to population level to theorise work-related stress for all school leaders in Wales.

10.L. Round table: Health literacy in health professionals – conceptualising and piloting a new measuring instrument

Abstract citation ID: ckac129.661

Organised by: Careum Center for Health Literacy (Switzerland), Gesundheit Österreich GmbH (Austria), University of Bielefeld (Germany)
Chair persons: Doris Schaeffer (Germany), Saskia De Gani (Switzerland)
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Background:

Studies have shown that the population's health literacy is low in many countries, including Austria, Germany, and Switzerland. In order to improve the health literacy of patients and the population, health professionals have an essential role to play. However, as most studies have been conducted either outside of Europe or among health professionals in training, there is a lack of a clear definition, clear-cut concept, and reliable data on the professional health literacy of the healthcare workforce in Europe so far.

Approach of the Pilot Study:

The present study is a pilot study that aims to remedy this shortcoming. The underlying notion of health literacy is based on the definition by the HLS-EU Consortium and the HLS19-study. Following these definitions, a joint concept of professional health literacy was developed. It is comprised of the following complexes: a) communication with patients and users, b) dissemination of health related information with patients in a comprehensible manner, and c) dealing with relevant professional knowledge by health professionals. Based on this conceptual reflections, a quantitative survey was developed and conducted among health professionals in Austria, Germany, and Switzerland. This process revealed some challenges and limitations of a standardised questionnaire, as national discourses vary and different professions require distinctive vocabulary and frameworks of reference. Moreover, differences in professional qualifications and training challenge the comparability of both sample and results.

Objectives of the Workshop:

The objective of this workshop is threefold.

a. The first is to present the working group's concept, its experience with, and reflections on this first of its kind study in Europe - all before the backdrop of previous endeavours to examine professional health literacy. This is the more important as interest in professional and organisational health literacy is growing.

b. The second objective includes the presentation of the survey instrument, its development, and preliminary results (the analysis of the study's data will not be completed by the time of the workshop).

c. The third objective is to provide a platform for discussion about the study as well as the challenges and potential limitations of a wider international comparison across a larger variety of health professions.

Added Value of the Workshop:

The workshop will provide an overview of the general context, the approaches in the field of professional health literacy, and the concept. This combination offers a unique opportunity to discuss the study, its questionnaire, and preliminary results, while considering aspects and issues in this field of research in general. This discussion is essential, as it supports identifying opportunities and limitations in order to develop solutions in this field of research - and contribute to the possible progress in the development of the role of health professionals.

Key messages:

- Professional health literacy is essential to improve patients' health literacy.
- This workshop discusses potentials, challenges, and potential limitations examining this field.

Speakers/Panellists:

Robert Griebler
Austrian National Public Health Institute, Vienna, Austria

Lennert Griese
Bielefeld University, Bielefeld, Germany

Alexander Haarmann
Hertie School, Berlin, Germany

Rebecca Jaks
Careum, Zurich, Switzerland

10.M. Pitch presentations: COVID-19 vaccination strategies

Abstract citation ID: ckac129.662
COVID-19 vaccination hesitancy in Kazakhstan

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Background:
COVID-19 vaccine hesitancy is a major problem worldwide that impedes vaccine uptake. We explored factors associated with vaccine hesitancy in Kazakhstan.

Methods:
We conducted a cross-sectional face-to-face survey of 991 adults in Kazakhstan in July 2021, using quota sampling of respondents over 18 years old reflecting the distribution of gender, age, residence type, and geographical regions of Kazakhstan, according to the 2020 census.

Results:
Over two third (68.4%) of the sample was vaccine hesitant; 22.11% - received a vaccine (18.6%-Sputnik V, 2%-Hayat-Vax, 0.9%-QazCovid and 0.6%- CoronaVac). We used logistic regression to explore factors that were associated with vaccine hesitancy, adjusting age, education, employment, type of residence, self-reported COVID-19. The odds of not being vaccine hesitant were higher among those who had a higher perception that the COVID-19 vaccine was important for health OR = 2.66 (95%CI:2.24,3.17), higher belief in vaccine safety/effectiveness OR = 3.16 (95%CI:2.57,3.89), higher trust in government/health providers OR = 3.32 (95%CI:2.72,4.05), higher trust in official sources of information OR = 1.16 (95%CI:1.12,1.21), higher adherence to preventive measures OR = 1.05 (95%CI:1.03,1.08), knew someone diagnosed with COVID-19 OR = 1.36 (95%CI:1.01,1.82), or who died of COVID-19 OR = 1.47 (95%CI:1.04,2.08), had been ever tested for COVID-19 OR = 1.75 (95%CI:1.30,2.35), had ever received flu vaccine OR = 2.16 (95%CI:1.62,2.88), among health professionals OR = 2.76 (95%CI:1.38,5.51), and who had lower vaccine conspiracy beliefs OR = 0.48 (95% CI:0.40,0.58).

Conclusions:
Vaccine accepting individuals held positive beliefs about the COVID-19 vaccine, had greater trust in government/official sources of information/health care workers, had greater exposure to COVID-19. Interventions aimed at reducing vaccine hesitancy need to address sources people find credible and may need to target individuals who have had limited exposure to the risks of COVID-19.

Key messages:
- Strategies to increase trust in government/ health care workers and official sources of information can be an effective approach to reduce COVID-19 vaccination hesitancy.
- Interventions to reduce COVID-19 vaccination hesitancy should target individuals who have had limited exposure to the risks of COVID-19.

Abstract citation ID: ckac129.663
Development of a strategy to control COVID-19 in hard-to-reach migrant communities

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Issue/Problem:
The risk of SARS-Cov-2 infection and its adverse health effects proved to be higher among socially disadvantaged groups, including migants and ethnic minorities. Hard-to-reach (HTR) migrants, such as undocumented people, those living in informal settlements (e.g squats) or roma people have experienced severe barries to access COVID-19 information, testing and vaccination services.

Description of the problem:
During 2020 and 2021, the Migrants'Health Unit of Roma 2 Local Health Unit (ASL) developed different strategies to control the COVID-19 epidemics in HTR communities, addressing both the containment of clusters in informal settelments and access to COVID-19 vaccination for these population.

Methods:
A multicomponent and multidisciplinary strategy was implemented, based on a strong collaboration of different services across the ASL and with Non Governmental Organizations (NGOs). Starting from a mapping of the settlements and the identification of the main critical issues for the control of the epidemic in the target populations, interventions were carried out that included the involvement of NGOS in active surveillance, reporting of suspected cases of COVID-19 to the ASL and information to the communities, and the reorganization of health interventions (eg, swabs, epidemiological investigations, COVID-19 vaccinations) directly in HTR communities' life places.

Results:
In the period from April 2020 to February 2021, 15 outbreaks were controlled, for a total of over 4500 persons reached, and 265 COVID-19 cases identified. From July to November 2021, vaccinations were offered in outreach or with dedicated vaccination sessions, which reached 1664 people. The intervention model, based on a deep context analysis, strong multisectoral collaboration, community involvement, lays the foundations for the design of public health strategies, not only aimed at HTR populations.

Key messages:
- Controlling COVID-19 in Hard- to- reach migrant populations was possible thanks to a strong collaboration between public health services and NGOs.
- Public health interventions addressed complex groups should envisage intersectoral collaborations, reorientation of services in order to meet target groups' need and community involvement.

Abstract citation ID: ckac129.664
Impact of COVID-19 vaccination on risk perception: a cross- sectional study on vaccinated people

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Background:

High risk perception and perceived threat of COVID-19 had played an important role on public attitudes toward vaccination and protective countermeasures acting as motivational factors to perform behaviors that facilitated disease prevention. To explore COVID-19 vaccination influence we conducted a cross-sectional study on vaccinated people (18-80 years old).

Methods:

Partecipants, randomly selected, were recruited during the vaccination campaign in the Hub of Cosenza, Calabria Region, Italy, at the end of the 2nd wave of pandemic (Jul-Aug 2021). A multivariable logistic regression model was built to calculate odds ratios (OR) and 95% confidence intervals (95% CI) comparing risk perception and preventive measures confidence pre vs. post vaccination.

Results:

Globally 625 partecipants fully responded; 51.4% women, mean age 40.5 years (SD +/-15.36). Infection risk perception and protective measures adherence significantly decreased after the vaccination even if a significant gender gap was present; women were always more worried and respectful than men. More prudent partecipants had a significantly higher mean age. 64.2% of participants believed that compliance with social distancing was yet absolutely necessary after the immunization and about half of them believed that also the use of masks was yet necessary. Results of multivariable analysis confirmed that risk perception decreases after vaccination in different contexts: workplace (0.65; 95% CI 0.44-0.94); sport activities (0.60; 95% CI 0.39-0.95); bars and restaurants (0.51; 95% CI 0.33-0.80); means of transport (0.32; 95% CI 0.19-0.50) as well as handwashing practice (2.23 95% CI 1.20-4.12).

Conclusions:

The research shows that COVID-19 vaccination significantly decreases self-perceived risk and adherence to preventive measures. Public Health communication strategies could underline that COVID-19 vaccination is indispensabile but not sufficient to protect the World against this devastating catastrophe.

Key messages:

- Public Health should promote consciousness and strengthen the importance of health-protective measures in order to further reduce risk of human-to-human transmission after immunization.
- Even after vaccination, extra precautions are still required and necessary to do not nullify vaccination protective effect, mostly in more exposed and less careful groups like young people.

Abstract citation ID: ckac129.665

How to deal with COVID-19 vaccine hesitancy in pregnant and breastfeeding women? A meta-analysis

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Background:

Pregnant and breastfeeding women are at an increased risk of severe illness from COVID-19 compared to people who are not pregnant. Therefore, the CDC recommends COVID-19 vaccination for women who are pregnant, breastfeeding, and trying to become pregnant or who may become pregnant in the future. Despite this, low vaccination coverages are reported in this population sub-group. The purpose of this study is to estimate the proportion of pregnant and breastfeeding women expressing hesitation to the COVID-19 vaccine worldwide. Determinants of vaccine compliance and options suggestedto address vaccine hesitancy were also analyzed.

Methods:

Forty-six studies were included in the meta-analysis and systematic review, selected from scientific articles available in the MEDLINE/PubMed, Google Scholar, and Scopus databases between January 1, 2020 and February 6, 2022. The following terms were used for the search strategy: (adherence OR hesitancy OR compliance OR attitude) AND (covid* OR SARS*) AND (vaccin* OR immun*) AND (pregnan* OR post-partum OR breastfeeding OR lactating).

Results:

The vaccine hesitation rate was 48.4% (95%CI = 43.4-53.4%). In a sub analysis by study period, the pooled prevalence of vaccine hesitation was 40.0% (95%CI = 31.6-46.6%) considering surveys administered in 2020, 58.0% (95%CI = 48.9-66.9%) considering surveys administered in the first semester of 2021, and 38.1% (95%CI = 25.9-51.2%) considering surveys administered in the second semester of 2021. The main reasons for vaccine hesitation were lack of information about vaccination, opinion that the vaccine is unsafe, and fear of adverse events for both mother and fetus/child.

Conclusions:

In order to achieve high vaccination coverage, a multifactorial approach is needed, requiring major social, scientific, and health efforts. The success of the vaccination campaign in this population depends on the capillarity and consistency of the interventions implemented.

Key messages:

- Vaccine hesitancy can be a determining factor in the success (or otherwise) of the anti-COVID-19 immunization campaign.
- Vaccine hesitancy in pregnant and breastfeeding women is a genuine public health concern worldwide.

Abstract citation ID: ckac129.666

Impact of booster vaccination on COVID-19 outcomes in Portuguese population aged 80 or more years old

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Background:

Vaccination is essential to control SARS-CoV-2 transmission and complications. The study aimed to estimate the number of SARS-CoV-2 infections, COVID-19 hospitalizations and deaths averted by booster vaccination in Portuguese population aged 80 or more years old.

Methods:

We developed an ecological study for the period of the Omicron variant of concern predominance (week 2 to week 16, 2022). Data on vaccine coverage and effectiveness, and number of events of different severity reported to the national COVID-19 surveillance system were used to estimate the number of averted events, prevented fraction and number needed to vaccinate. Uncertainty intervals (UI) were obtained using Monte Carlo simulations.

Results:

By week 2 2022, vaccination coverage in the target population reached 91.2%. Booster vaccine effectiveness was 4.1% (CI95%: -0.1 to 9.0), 87.5% (CI95%: 84.9 to 89.7) and 83.2 (CI95%: 80.3 to 85.7) against infection, hospitalization and death, respectively. During the study period, 70862 SARS-CoV-2 infections, 2697 COVID-19 hospitalizations and 2106 deaths were reported. Booster vaccination averted 2731 (UI95%: -298 to 5838) infections, 10629 (UI95%: 9173 to

12127) hospitalizations and 6608 (UI95%: 5725 to 7546) COVID-19 related deaths among individuals aged 80 years or more resident in Portugal. Prevented fractions were 3.7% (UI95%: 0 to 7.6%), 79.7% (UI95%: 77.3 to 81.7%) and 75.8% (UI95%: 73.2 to 78.1%), respectively. It would require to vaccinate 59 individuals (UI95%: 52 to 69) to prevent one hospitalization and 94 individuals (UI95%: 82 to 109) to prevent one death in the target population.

Conclusions:

The booster vaccination strategy had considerable impact on preventing severe outcomes in the Portuguese population aged 80 and more years old.

Key messages:

- High vaccine coverage combined with high vaccine effectiveness resulted in considerable reduction of severe COVID-19 outcomes.
- Information on number of outcomes of different severity levels averted by COVID-19 booster vaccination allows to strength public health communication.

Abstract citation ID: ckac129.667
A dynamic transmission model to calculate vaccination coverage needed to control COVID-19 in Germany

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Background:

Control of the 2019 coronavirus disease (COVID-19) pandemic in Germany and return to pre-pandemic behaviour can only be achieved through natural or vaccine-induced immunity. Sufficient vaccine capacity promotes interest in the necessary and feasible target vaccination coverage.

Methods:

An age and risk group stratified SEIR transmission model was used to assess the impact of vaccination coverage ranging 65%-95% for 12-59-year-olds and 90%-95% for $\geq$ 60-year-olds on COVID-19 incidence and intensive care unit (ICU) utilization between 01.07.2021-31.03.2022. Separate implementation of licensed vaccines allows to consider different efficacies, delivery rates and age-specific national vaccination recommendations. The analysis was conducted under different assumptions about contact behaviour during summer, reduction of daily contacts with increasing number of cases, daily vaccination uptake and the dominant variant. Data from the COVIMO study (N = 3004, data collection: 17.05.-09.06.2021) were used to define the population percentage willing to be vaccinated.

Results:

The COVIMO study indicates an achievable vaccination compliance rate of 83.9% among 12-59-year-olds and 94.8% among those $\geq$ 60-year-olds. Maximum incidence or ICU utilization during observation period decreases from 385 to 61 and 6220 to 2800, respectively, with an increase in vaccination coverage from 65% to 95% of 12-59-year-olds, 90% vaccination rate among $\geq$ 60-year-olds, compared to pre-pandemic reduced contact behaviour in summer and reduction of contacts as case numbers increase.

Conclusions:

The vaccination campaign should be continued at high intensity until at least 85% of 12-59-year-olds or 90% of $\geq$ 60-year-olds are fully vaccinated against COVID-19. Based on the population's willingness to be vaccinated, this goal seemed feasible.

Key messages:

- Mathematical modeling was used to determine an evidence-based target vaccination coverage of $\geq$ 85%.
- Expertise in modeling should be further strengthened.

Abstract citation ID: ckac129.668
Case-case study on comparative vaccine effectiveness against Delta and Omicron SARS-CoV-2 infections

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Introduction:

Vaccination is the primary pharmacological measure to reduce SARS-CoV-2 transmission and its complications. Timely information on vaccines effectiveness in a context of novel variants of concern (VOC) emergence is essential for public health policies. This study aimed to provide a measure of comparative vaccine effectiveness between Omicron (BA.1) and Delta (B.1.627.2) VOC according to vaccination exposure (complete primary regimen or booster dose) for Portuguese population aged 12 or more years old using routinely collected data from electronic health records.

Methods:

We used a case-case study design linking national electronic vaccination registry and surveillance data on 13,134 SARS-CoV-2 RT-PCR laboratory-confirmed cases notified in Portugal during weeks 49-51 of 2021. Notified cases were classified as Omicron or Delta based on whole-genome sequencing or S-gene Target Failure (SGTF) status using the RT-PCR TaqPath^{TM} Covid 19 CE IVD Kit (Thermo Scientific^{TM}) assay. The odds of vaccination was compared between Omicron cases and Delta cases using logistic regression adjusted for age group, sex, region and week of diagnosis and laboratory of origin.

Results:

The odds of vaccination were higher in laboratory-confirmed cases infected by Omicron (BA.1) VOC compared to Delta (B.1.627.2) VOC for both complete primary vaccination (Odds ratio (OR) = 2.1; 95% Confidence Interval (95%CI): 1.8 - 2.4) and booster dose (OR = 5.2; 95%CI: 3.1 - 8.8), indicating vaccine effectiveness reduction against Omicron.

Conclusions:

We found significantly higher odds of vaccination in Omicron cases compared to Delta, suggesting lower effectiveness of the primary vaccination and the booster dose in preventing infections by Omicron. Case-case study design has proven to be feasible approach to rapidly compare vaccine effectiveness between VOC in context of novel VOC emergence to timely inform public health stakeholders.

Key messages:

- Reduction of vaccine-induced protection against SARS-COV-2 infection with the Omicron compared to Delta after primary and booster vaccination.
- Continuous monitoring of COVID-19 vaccine effectiveness is essential to support public health policies in context of novel VOC emergence.

10.N. Pitch presentations: Family planning and early childhood

Abstract citation ID: ckac129.669
Smoking during pregnancy and children's emotional and behavioural trajectories

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Background:
The nature of the relationship between maternal tobacco smoking during pregnancy and the occurrence of children's behavioural problems is still a matter of controversy. We tested this association using data collected among a sample of children followed from pregnancy to early adolescence (age 11.5 years), accounting for multiple parents', children's and family characteristics.

Methods:
Data come from 1424 mother-child pairs participating in the EDEN mother-child cohort set up in France. Using repeated measures (3, 5.5, 8 and 11.5 years) of the mother-reported Strengths and Difficulties Questionnaire, we estimated trajectories of children's emotional and behavioural difficulties. Two aspects of maternal smoking were studied: the timing and the level of use (cigarettes/day) during the first trimester of pregnancy. Multinomial regression models controlled for confounding factors including maternal mental health and socioeconomic characteristics using propensity scores with the overlap weighting technique.

Results:
Contrary to bivariate analyses, in propensity score-controlled regression models, maternal smoking throughout pregnancy was no longer significantly associated with offspring emotional or behavioural difficulties. Maternal heavy smoking ($\geq$10cigarettes/day) remained significantly associated with intermediate levels of overall emotional and behavioural difficulties (OR 1.64, 95%CI 1.04-2.58) and conduct problems (OR 3.05 95%CI 1.22-7.61), as well as with high levels of conduct problems symptoms (OR 2.82 95%CI 0.88-9.06) - although the latter did not reach statistical significance.

Conclusions:
The association between maternal smoking in pregnancy and offspring emotional and behavioural difficulties appears to be largely explained by women's other characteristics. However, maternal heavy smoking appears to be related to offspring behavioural difficulties beyond the role of confounding characteristics.

Key messages:
- The association between maternal smoking in pregnancy and offspring emotional and behavioural difficulties seem largely explained by the family's socio-demographic and behavioural characteristics.
- Maternal heavy smoking appears to be related to offspring behavioural difficulties beyond the role of confounding characteristics.

Abstract citation ID: ckac129.670
The impact of conscientious objection on voluntary abortion in Italy in the last two decades

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Background:
Italian Law 194/1978 legalized voluntary abortion during the first 90 days of pregnancy. Healthcare professionals can claim conscientious objection (CO), but regional governments must guarantee women's rights. In recent years, international human rights authorities argued that access to safe abortion was limited in Italy due to widespread CO.

Methods:
An ecological study was conducted using 1997-2019 ministerial data on the number of gynecologists registered as conscientious objectors, the proportion of abortions performed timely (within 14 days of the request), and within 8-10 weeks of pregnancy. The extra workload for non-objecting gynecologists was calculated as the ratio between the workload for non-objectors and the (theoretical) workload for each gynecologist on duty. The correlation between the extra workload for non-objectors and the proportion of abortions performed within 14 days of the request or beyond 21, as well as the correlation between waiting time and gestational age at the time of the procedure. Data were analyzed for Italy and stratified for its 21 Regions.

Results:
CO among gynecologists turned out to be stable around an average of 70% (median 69%, IQR 64-71%) in the last decades, with 62% of abortions performed within 14 days and 82% of procedures performed by the 10th week of pregnancy. In 13 regions (statistically significant in 5) the increase in workload for non-objectors was inversely correlated with abortions performed within 14 days, and directly correlated with those performed later than 21 days. In all regions (statistically significant in 18) a direct correlation was found between procedures performed timely and those performed within 8 weeks of pregnancy.

Conclusions:
Data from the last 20 years confirm previous findings and CO still seems to have a strong impact on women's right to access safe and timely abortion in Italy. More efforts are needed to narrow the gap between the provisions of the law and its implementation.

Key messages:
- A high proportion of objecting staff makes it difficult to guarantee women's rights to access timely and safe abortion.
- Effective organizational strategies and a proper legal framework are needed to cope with the high percentage of conscientious objectors among health professionals.

Abstract citation ID: ckac129.671
Factors influencing the first thousand days of life

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Background:

The first 1000 days are crucial for the health of the baby and the well-being of the mother-baby dyad, which forms a single complex organism with its co-metabolism expressed through sophisticated neurobiological, epigenetic and microbiome development mechanisms. This study aims to investigate how much social support can influence the path of pregnancy and motherhood.

Methods:

The retrospective observational study was conducted on a sample of mothers enrolled through social networks who were administered a questionnaire from July to September 2021. The questionnaire consisted of 37 questions: 11 analyzed sociodemographic variables, 20 were on current / any previous pregnancies and breastfeeding, and 6 were used to calculate the Maternity Social Support Scale (MSSS-Webster et al.). STATA 14 was used for statistical analysis.

Results:

Our sample consisted of 3447 women. 88.0% wanted the pregnancy, and 63.5% planned it. The average of the Maternity Social Support Scale (MSSS) was 23.91 points. A low MSSS score correlates with a higher risk of cessation of breastfeeding before 6 months of age, a higher risk of not having spontaneous labour, a higher risk of cesarean section and a higher risk of not having a spontaneous birth. On the other hand, a higher MSSS total score is a protective factor concerning breastfeeding duration, which is more likely to be longer-lasting (>6 months), to have spontaneous onset labour with a higher probability of spontaneous delivery.

Conclusions:

The results showed that most of our sample have good friends who support them, can often count on their family, and receive help from their partner/husband. The outcomes of pregnancy, childbirth and motherhood are strongly influenced and conditioned by the social context in which they occur and the support the woman can receive. The presence or lack of this support can affect the health of newborns.

Key messages:

- The first 1,000 days is a vulnerable phase in which parents, institutions and health professionals should create early interventions for the proper development and promotion of good health.
- the outcomes of pregnancy, birth and motherhood are strongly influenced and conditioned by the social context, but especially by the presence or lack of support that can affect the health of newborns.

Abstract citation ID: ckac129.672
Future in Pediatrics: prevention in maternal child chronic diseases in the first 1000 days

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Introduction:

The screening and management of obesity, metabolic chronic conditions conditions and genetic predisposition, before and during pregnancy, improve the effects of therapies and reduce the rate congenital diseases, metabolic fetal disorders and early chronic diseases during first 1000days. The maternal child health promotion program 'Future in Pediatrics' is dedicated to women in preconception and in early pregnancy, with three steps: 1) a specific survey, 2) a personalisated plan 3) the management of chronic conditions (diabetes, hypertension, overweight, metabolic disorders) and surveillance during the first maternal child 1000 days. Encouraged results

Methods:

In 2019-2021, FUTURA project involved 460 women (before,during and after pregnancy) into 2 groups: group 1 of 280 women, with overweight/ obesity, metabolic conditions, malnutrition, and hypovitaminosis, group 2 of 180 women without chronic conditions, but physical inactivity, high level of homocysteine (60 to 100 µmol/L) and with predisposition for cardiovascular diseases. We have involved the patients in a survey of 100 questions about health, lifestyle, habits, sleep and in a daily diary. In the second time we have realized a personalised and educational program for diet, supplementations sleep, physical activities, health routine.

Results:

The 2 groups of women improved the quality of their health and the management of weight, chronic and metabolic conditions, with impact on reproductive and perinatal health, reduction of inflammatory status and metabolic parameters.We have observed a great influence on cardiovascular health in both groups and decreased of homocysteine levels in the 2nd group. During first 1000 days 393 women, involved into the program, continued with the healthy and preventive routine with zero cases of weight and metabolic chronic disorder in their children.

Conclusions:

This research that the prevention in perinatal health influences the children's health.

Key messages:

- The origins of chronic and metabolic conditions are in uterine life before the conception. The unhealthy lifestyle influenced fertility, cardiovascular health and child health.
- The cardiovascular health and metabolic chronic conditions are influenced by first 1000 days health and habits.

Abstract citation ID: ckac129.673
Household deprivation, comorbidities and COVID-19 hospitalization in 690,115 children/adolescents

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Background:

Studies document that adults in disadvantaged socio-economic positions have elevated risks of a severe course of COVID-19, but it is unclear if this holds true for children. We investigate in this population-based study whether young people from socio-economically disadvantaged households in Germany had a higher risk of COVID-19 hospitalization compared with more affluent counterparts. We also examined if differences were related to comorbidities that predict severe courses in children.

Methods:

We included data from all 690,115 children and adolescents (0-18 years) enrolled in a statutory health insurance carrier. Daily hospital diagnoses of COVID-19 were recorded from 1.1.2020 to 13.7.2021. Logistic regressions were used to compare children from households with an indication of poverty (e.g. long- or short-term unemployed) with children from households with insurance holders in regular employment. We also assessed socio-economic characteristics of the area of residence. We controlled for age, sex, days under observation, nationality, and comorbidities (e.g. obesity).

Findings:

A COVID-19 hospital diagnosis was a rare event (n = 1637). Children of long-term unemployed parents had a 1·36 times (95% CI 1·21-1·51) higher adjusted odds of hospitalization compared with those of employed parents. Elevated odds were also found for short-term unemployed or low-wage employment. Those living in poor areas had a 3·02 (1·81-5·22) higher odds of hospitalization than those in less deprived areas. Comorbidities were strongly related to hospitalization, but their adjustment did not change main estimates for household deprivation.

Discussion:

Results suggest that children from poor households are at higher risk of severe courses of COVID-19 than their affluent counterparts. This underlies the need to implement effective Public Health strategies to protect deprived children from COVID-19 and other infectious disease even in high income countries such as Germany.

Key messages:

- Children and adolescents from poor families seem to be at higer risk for sever courses of COVID-19.
- Comorbidities were no key mediating factor in this study.

10.O. Workshop: Developmental and School-Based Factors Shaping Sexual and Gender Minority Youth Mental Health

Abstract citation ID: ckac129.674

Organised by: EUPHA-SGMH, EUPHA-CAPH
Chair persons: Arjan van der Star (EUPHA-SGMH), Richard Ma (UK)
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Research from across the globe has consistently shown that young sexual and gender minority individuals (e.g., those identifying as lesbian, gay, bisexual, and/or transgender [LGBT+]) are at a higher risk for depression, anxiety, and suicidal thoughts and behaviors when compared to heterosexual youth, including during early childhood and later adolescence. A sizeable body of research has attributed the elevated risk to increased exposure to specific social stressors related to navigating a stigmatized minority identity, including stressors such as victimization and other interpersonal and social difficulties in, for example, the school environment. Yet, relatively less is known about the early developmental timing of such disparities in childhood and how LGBT+ youth navigate school climates. As a sensitive developmental period, childhood and adolescence may be a particularly challenging time for sexual and gender minority youth to navigate cisnormative and heteronormative school contexts. Exposure to oppressive norms, particularly in school environments, has only recently become the subject of research. Additionally, research has been limited on how supportive school climates may be protective but stigmatizing school environments may drive LGBT+ trajectories towards suicidal behaviors and shape how they may navigate self-disclosure of cooccurring identities and mental health status in school settings, particularly when such stigmas may prevalently intersect. This workshop aims to further explore these novel aspects around developmental and school-based risk and protective factors shaping the mental health of sexual and gender minority children and adolescents. This workshop includes five empirical presentations that span from examining the developmental timing of mental health disparities, the role school-based experiences play in shaping and driving these disparities, to how sexual and gender minority youth may navigate their school context and how supportive climates may be protective for mental health. First, Arjan van der Star will present longitudinal evidence on how sexual identity formation precedes the onset of sexual orientation-based mental health disparities and the role that peer difficulties play in driving these as early as pre-teen years. Next, Niolyne Jasmin Bomolo will present findings from a qualitative study that unravel how school-based experiences shape individual trajectories toward suicidal attempts among LGBT+ adolescents. Third, Wouter Kiekens will explore how normative cultures in school environments may drive sexual attraction-based mental health disparities among a large sample of adolescents. Fourth, Lourdes Cantarero Arévalo will present findings on how LGBT+ adolescents living with mental conditions navigate self-disclosure in school environments. Finally, Sandra Sevic will present results on how supportive school environments may be protective for gender minority mental health.

Key messages:

- Negative school-based experiences put sexual and gender minority youth at elevated risk for adverse mental health as early as middle childhood.
- Intersecting stigmas around minority identities and mental health problems may further complicate how sexual and gender minority children and adolescents navigate their school environments.

Abstract citation ID: ckac129.675

Sexual orientation and mental health disparities in US pre-teens: A longitudinal mediation study

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Background:

Sexual minority children are at increased risk for psychopathology compared to their heterosexual peers, but longitudinal studies are needed to determine whether sexual minority identification precedes (rather than co-occurs with) mental health disparities and what may drive these disparities during childhood. The current study examined the longitudinal associations between sexual orientation and mental health over two years in a cohort of U.S. pre-teens with two potential mediators (increased social problems and decreased perceived school safety).

Methods:

We used data from Waves 1-3 (2016-2020) of the U.S. Adolescent Brain Cognitive Development study. Multiple linear regression and auto-regressive cross-lagged mediation models were used to examine longitudinal associations and mediation. Analyses accounted for customized sampling weights to correct for attrition and missing data.

Results:

The analytic sample included 5,574 children (46.0% assigned female at birth, 55.1% non-Hispanic White). Across waves, beginning to identify as gay/bisexual (0.6-2.7% of sample) was associated with increased internalizing and externalizing problems, and consistently identifying as gay/bisexual (3.4-5.0% of sample) with increased internalizing problems, compared to consistently identifying as heterosexual. For those who consistently identified as gay/bisexual, the widening disparities in internalizing problems were partially explained by increased social problems and decreased perceived school safety.

Conclusions:

The health disparities affecting sexual minority children include internalizing and externalizing problems, and are partially explained by increased social problems and decreased perceived school safety. These findings demonstrate that sexual minority identification precedes increases in mental health problems relative to heterosexual children, driven by peer difficulties and feelings of unsafety at school experienced by sexual minority children.

Abstract citation ID: ckac129.676
Suicide attempts in LGBTQ+ youth in Switzerland: Qualitative insights in school-based risk factors

Niolyne Jasmin Bomolo

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Background:

Studies show that the LGBTQ+ population is particularly vulnerable to suicidal thoughts and behavior. This vulnerability is even more pronounced in the younger population. However, in Switzerland, qualitative studies on this topic are missing. Our study investigates the processual dynamics and background of suicide attempts of LGBTQ+ youths while looking into their subjective meaning. Here, behaviors of help-seeking are also from interest. In addition, the burdens and resources associated with being LGBTQ+ are explored. By better understanding the process of suicide attempts, we can identify relevant contexts of the respondents' experiences and illustrate how to enhance suicide prevention strategies. We are referring here to the school context.

Methods:

From 2021 until 2024, we interview LGBTQ+ youths in the German- and French-speaking parts of Switzerland who have tried to end their lives between the ages of 14 to 25 (max. three attempts). Applying a multi-perspective approach, we interview persons from their social environment if agreed. Recruitment is based on 'theoretical sampling'. Data collection and analysis follow the grounded theory methodology. As of July 2022, the sample consists of 18 persons: 3 bisexual women, 1 lesbian woman, 2 gay men, 7 transgender persons, and 5 persons with fluid identities.

Results:

Through preliminary analysis, the school context could be identified as one relevant burdening context in the respondents' experience and suicide attempt process. In this respect, respondents experienced complicated social relationships: e.g., bullying, social exclusion, and pressure to conform. Moreover, the school environment was experienced by some as LGBTQ+ hostile.

Conclusions:

Our current findings support the necessity to integrate schools as important stakeholders in suicide prevention but highlight a need for LGBTQ-specific and LGBTQ-sensitive orientations to suicide prevention strategies.

Abstract citation ID: ckac129.677
Sexual attraction-based disparities in adolescent mental health: The role of school norms

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Purpose:

Few researchers have explained disparities in mental health between sexual minority and heterosexual adolescents by focusing on structural forms of stigma as, for instance, heterosexist school or classroom norms. Addressing this gap, our paper aimed to study disparities in life satisfaction, psychosomatic complaints, and emotional problems between sexual minority and heterosexual adolescents and examine the moderating role of heterosexist norms in the classroom and school.

Methods:

We used data from the 2013 and 2017 Dutch Health and Behaviour in School-Aged Children (HBSC) study (N = 12,756; M age = 14.02; SD = 1.54). Separate multi-level analyses for life satisfaction, psychosomatic complaints, and emotional problems were conducted in which cross-level interaction effects between sexual attraction and school and classroom-level heterosexist norms were estimated.

Results:

Same-sex attracted, both-sex attracted, and adolescents unsure about their sexual attraction reported lower life satisfaction, more psychosomatic complaints (not for unsure adolescents), and more emotional problems than their other-sex attracted peers. Stronger school-level heterosexist norms were associated with higher life satisfaction and fewer psychosomatic complaints and fewer emotional problems. Stronger classroom-level heterosexist norms were associated with less emotional problems. Few moderating effects of classroom and school-level heterosexist norms were found. Contrary to expectations, disparities in life satisfaction between same-sex attracted and other-sex attracted adolescents decreased when classroom-level heterosexist norms were stronger.

Conclusions:

Although our findings suggest pressing health disparities between heterosexual and sexual minority adolescents, heterosexist norms at the school- and classroom-level hardly contributed to these health disparities.

Abstract citation ID: ckac129.678
Envisioning supportive and safe learning environments: A dialogical study with LGBTQ+ adolescents living with chronic conditions or diagnoses

Lourdes Cantarero Arevalo

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Background:

LGBTQ+ adolescents living with mental conditions are affected by stigma based on their health status, sexual orientation, and/or gender identity/expression (SOGIE), especially when navigating their learning environments. Our aim is to gain detailed insights into how LGBTQ+ adolescents living with mental conditions vision their learning environments so that they can feel safe and supported enough to freely disclose their SOGIE and health status, and hence thrive.

Methods:

Aware of the participants' vulnerabilities, a dialogical narrative-based approach was used to gather thick descriptions and deep insight, while applying the "seven C's": conversation, curiosity, context, complexity, challenge, caution, and care (Frank, 2019). Recruitment was done through LGBTQ+ Denmark and via networks of networks. Two LGBTQ+ young adults living with chronic conditions held the dialogues. Mode of communication was chosen by the participants (either face-to-face, via internet or via telephone). Data analysis was conducted via the "analysis grid" (Roest et al. 2021).

Results:

Nine dialogues lasting from 20 to 50 minutes were held with youth from 14 to 24 years old during spring 2022. According to their narratives, supportive and safe learning environments would: respect for change of names and pronouns, update learning materials, allow for flipped classrooms (hybrid teaching tested under COVID lockdowns), have separate neutral change rooms/bathrooms and create safe private spaces to take medications. They would also permit higher absenteeism rates for those living with chronic conditions or getting hormonal treatments, allow for more breaks/slower version of the pensum, and show proactive healthy curiosity and respect for "invisible diseases", fluid SOGIEs and neurodiversity/neurodivergent profiles.

Conclusions:

The differing participants' narratives provide innovative ways to create safe and supportive inclusive learning environment that embrace and enhance diversity.

Abstract citation ID: ckac129.679
Structural and school factors, affirmation and well-being among gender minority youth across Europe

Sandra Sevic

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Background:

Previous research has shown that structural-level factors (discriminatory laws and policies) result in impaired health and well-being for transgender and gender diverse (TGD) adults. This study aims to assess if structural stigma is associated with school bullying/victimization and well-being among TGD youth and if more LGBTI supportive school environments, as well as social, physical, and legal gender identity affirmation ameliorate the effects of both structural stigma and experiencing violence.

Methods:

The study was conducted online in 2019 in 27 EU Member States and in the UK. We analyzed data from TGD students, aged 15 to 24 years, who at most had completed lower secondary education (n = 2,714). Well-being indicators used in the analyses included one-item measures of life satisfaction, depression, and considering leaving or changing school.

Results:

School environment, but not structural-level stigma, was associated with school bullying/victimization. Similarly, the effects of structural-level stigma, along with physical and legal gender identity affirmation were inconsistently related to students' well-being across the multilevel models, whereas a more positive school environment and especially experiences of social identity affirmation were related to greater life satisfaction, better mental health, and lower odds of considering leaving or changing school; even though the negative effects of school bullying/victimization remained statistically significant across all models.

Conclusions:

This study's results suggest that compared with distal factors, more proximal factors - better school environment and social identity affirmation - have a greater impact on TGD students' well-being. Given the inconsistency of our findings, more research is needed to understand the role of structural stigma and legal and physical gender identity affirmation in TGD students' well-being.

10.P. Round table: Public health of the future: innovations in surveillance, communication and knowledge translation

Abstract citation ID: ckac129.680

Organised by: SESPAS, EUPHA-PHPP, ASPHER
Chair persons: Enrique Bernal-Delgado (Spain), Gabriela Barbaglia (Spain)
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The social, ecological, economic and health crises exacerbated by COVID-19 pandemic are challenges of extraordinary magnitude and complexity for global public health. Moreover, the context in which the pandemic emerged was characterized by underinvestment in public health and growing distrust in institutions. Public health responses were often fragmented and failed to make use of existing resources and expertise. Nearly 3 years after the start of the COVID-19 pandemic much has been learned and much is still to be learned. Accordingly, European national public health agencies have been pushed to their limits and currently face an urgent need to be renovated incorporating innovations in surveillance, communication and knowledge translation. National agencies should network and collaborate at the EU level. EUPHA may play an important role in this effort.

On the one hand, there is the need of improving surveillance of harmful effects of the pandemic, specifically the health inequalities aggravated at local, national and global levels; and, on the other, to improve the availability of this knowledge to policymakers. Public Health communication needs to be further developed as it has been a crucial piece of national and international efforts to protect and promote health in the pandemic and so will be in the future. With this workshop proposal, we would like to bring up for discussion how could we further improve surveillance, communication and knowledge translation to policy makers and citizens in our European national public health agencies. Innovative and updated public health agencies will help regaining trust and strengthening public health institutions. National and European Public

Health further development is essential and should be strengthened to protect and promote European populationś health.

The objectives of the workshop are:

– To discuss key innovations to implement in national public health agencies to improve surveillance, communication and knowledge transfer to policy makers and citizens.

– To reflect on supranational European coordination mechanisms that would allow for efficient surveillance and a rapid and adequate response to different public health challenges, including social inequalities in health.

– To manage public health intelligence in the European Health Data Space and the role of public health in this data lake design.

Key messages:

- COVID19 pandemic has revealed the challenges of creating strong trustworthy national public health institutions to ensure the integrity of public health science and information dissemination.
- Structures to facilitate timely and efficient monitoring requires national and supranational coordination mechanisms, including data and experience sharing.

Speakers/Panellists:

Robert Otok
ASPHER, Brussels, Belgium

Sofia Ribeiro
EUPHA-PHPP

Manuel Franco
University of Alcalá, Madrid, Spain

10.Q. Workshop: Imbalance in use and impact of public psychotherapy – A Finnish working-age population register study

Abstract citation ID: ckac129.681

Organised by: Finnish Institute of Occupational Health
Chair persons: Ari Väänänen (Finland), Sanna Selinheimo (Finland)
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Mental disorders are globally among the leading causes of disability in the working-age population. Psychotherapies have proven to be effective in the improvement of mental health. The current evidence on the benefits of psychotherapies is mainly based on randomized control trials and patient-reported outcomes, whereas the potential impact of long-term psychological therapy on work disability and income is not so well known. This emphasizes the need for longitudinal studies on the effects of psychological therapies in a 'real-world study setting', and on the distribution of the availability and the use of psychological therapies in different populations. In Finland, rehabilitative psychotherapy is the major single form of publicly provided psychological therapy. It is targeted at those aged 16 to 67 who are at risk of disability or not being able to study because of mental health problems. It is granted an annual period (maximum three years), a maximum of 80 sessions per year and 200 sessions per 3 years. From 2011 on this psychotherapy has been statutorily granted to all at risk of work disability due mental health disorders. The number of annual users has increased from 15 757 (2010) to 56 682 (2020). This workshop presents the results from a research project investigating the use and real-world effects of long-term psychotherapy in the Finnish working-age population in the 2010s. It shows 1) whether the use of psychotherapy is associated with subsequent work disability and labour market outcomes (income, employment), 2) how the use of long-term psychotherapy differed between socio-demographic groups in the 2010s in Finland, and 3) the extent to which state-subsidized psychotherapy is linked to the distinctive profiles of mental health problems in the population. The five presentations offer new results from the Rise of Mental Vulnerability in Work Life Study drawn from the national registers. The presentations are mostly based on three randomly selected population cohorts which each included 33% of the 18-64-year-old permanent Finnish residents at the baseline. These data were sampled (sampling years: 2010, 2013, 2016) by and derived from the Population Register maintained by Statistics Finland and included information on various socio-demographic characteristics (e.g., gender, occupation class, region, income). These were linked to the national health registers. Information on reimbursed psychotherapy and mental health indicators (sickness absence, psychotropic drugs, disability benefits) were obtained from the Social Insurance Institution of Finland and complemented by the disability pension data from the Finnish Centre for Pensions. The data provide a unique opportunity to observe how the use of state-subsidized long-term psychotherapy was distributed across population groups in the 2010s, and to the extent to which disability trajectories and economic outcomes have developed in different groups during and after psychotherapeutic treatment.

Key messages:

- Psychotherapy is likely to decrease the risk of work disability and improve labour market outcomes.
- The provision of long-term psychotherapy is related to social inequality in the working population.

Abstract citation ID: ckac129.682

Psychotherapy and change in mental health-related work disability - A prospective population level register-based study in Finland

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Introduction:

Mental disorders are a major cause of work disability among working age population. Psychotherapy has been shown to be an effective treatment for mental disorders, but the evidence mainly comes from small scale randomised trials with a relatively short follow-up.

Objectives:

We used population-based register data to examine the association between statutory rehabilitative psychotherapy and change in depression or anxiety related work disability using a quasi-experimental interrupted time series analysis.

Methods:

All those who started rehabilitative psychotherapy in 2011-2014 comprised the study group. The study group included

10436 participants who were followed from three years prior to four years after the onset of rehabilitative psychotherapy, resulting in 83488 observations. Annual total number of mental health related work disability months was calculated based on total number of annual compensated sickness absence and disability pension days.

Results:

The onset of rehabilitative psychotherapy marked a decline in depression or anxiety related work disability as compared to the counterfactual trend. Specifically, a 20% decrease in the level (incidence rate ratio, IRR 0.80; 95% CI 0.76-0.85) as well as a 48% decrease in the slope (IRR 0.52; 95% CI 0.50-0.54) of work disability was detected. The decline was steepest in the oldest age-group

Conclusions:

Providing statutory psychotherapy may decrease work disability at the population level. Further evidence for causal inference and the potential heterogeneity of the association is required.

Abstract citation ID: ckac129.683
Psychotherapy – A Sound Investments In (Mental) Health Capital?

Jarno Turunen

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Introduction:

The concept of health capital views health as a form of capital that produces healthy time to individual. This stock of capital - health that is - can decrease or increase. The potential of psychotherapy as individual's investment to (mental) health capital has been rarely studied in population level.

Objectives:

The aim of our study is to shed light on the returns on individual-level investments in health capital. We consider the use of psychotherapy as an investment in health capital. This investment offers potential returns for individual as a higher level of subsequent income. However, these returns are potentially heterogenous: we aim to show to whom the use of psychotherapy is a sound investment in health capital.

Methods:

We model the effects of mental health, and subsequent treatments such as the use of psychotropics and psychotherapy on income using two-way fixed effects regression.

Results:

Preliminary results show that different parts of working-age population seem to have different potential returns related to the use of psychotherapy. These heterogenous effects are related to previously reported socioeconomic status related disparities: the level of human capital i.e. income and education play a role in the profitability of the individual level investment made in the health capital by the use of psychotherapy.

Conclusions:

The use of psychotherapy has heterogenous effects on the income of individuals. The potential of this investment to produce health capital varies with education, the level of income prior to the use of psychotherapy.

Abstract citation ID: ckac129.684
Socioeconomic factors affecting psychotherapy use rates

Sanna Selinheimo

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Objectives:

Previous studies indicate socioeconomic inequalities in psychotherapy utilization. The aim of this study was to assess the associations of individual annual incomes with the utilization of long-term rehabilitative psychotherapy during nine-year follow-up in men and women. As secondary analyses we assessed the association of main activity with the utilization of psychotherapy.

Methods:

For this study, we selected those from a random sample of the working-age population (18-55 years) with information about income at each time point during the follow-up from 2011 to 2019 (N = 736 613). Psychotherapy usa during the follow-up period served as dependent variable and sosiodemographic variables, annual incomes and main activity (employed, unemployed, studying, other) were used as independent variables. To examine change in the psychotherapy use rates over time, we used sex-stratified generalized estimating equations logistic regression models with predicted marginal probabilities.

Results:

Psychotherapy use rate was constantly higher among women than in men (in 2011 0.8% and 0.2%) and increased from 2011 to 2019 among both genders and income quartiles (among women 174% - 231% and among men 213% - 248% increase between quartiles). Among men, psychotherapy use rate was highest among lowest income quartile throughout the study interval. Among women such difference was not observed. Among women, studentś psychotherapy use increased significantly when compared to other groups from 2011 to 2019 (299% increase vs 89% - 210% increase among other groups). A similar pattern was seen among studying men versus other groups.

Conclusions:

Between 2011 and 2019 the probability of having psychotherapy increased among both genders. Unexpectedly, pro-rich psychotherapy use rate was not observed. The highest probability to use psychotherapy in lowest income quartile might be linked with differences in health care systems for students and for other.

Abstract citation ID: ckac129.685
Occupational class, gender, mental distress and use of psychotherapy

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Introduction:

Previous studies have shown the effects of occupational class and gender on mental distress and use of psychotherapy. However, less is known about the mental distress-based use of psychotherapy in different occupational classes.

Objectives:

The aim of our study is to show how the prevalence of mental distress and the use of long-term psychotherapy correlates in different occupational classes by gender.

Methods:

Data were drawn from the Rise of Mental Vulnerability Study (psychotherapy) and FinHealth 2017 Study (mental distress). Adjusting for age, we calculated GHQ caseness, psychotherapy use rate, and the ratio between GHQ caseness and psychotherapy use rate in three occupational classes (upper non-manual employees, lower non-manual employees, and manual workers) separately for men and women. Age-adjustment was performed through regression analysis by using model generated predicted values of GHQ caseness and psychotherapy use rate at the average sample age of 40.

Results:

In the group of upper non-manual men there were 10 persons with severe mental distress for every single person having used psychotherapy. For lower non-manual men and manual male workers the numbers were 14 and 31, respectively. In the group of upper non-manual women there were six persons with severe mental distress for every person having used psychotherapy. For lower non-manual women and manual female workers these numbers were nine and 18, respectively.

Conclusions:

We found differences in the mental distress-based use of state-subsidized long-term psychotherapy between occupational classes. For upper non-manual workers, the use of therapy best meets their mental distress. The opposite is true for manual workers. We also found differences between men and women, but these findings should be confirmed with larger datasets.

Abstract citation ID: ckac129.686
Distinctive mental health profiles in the working population: A nation-wide study from Finland

Ari Väänänen

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Introduction:

Studies on mental health inequalities are usually based on limited sets of mental health indicators.

Objectives:

Using a large number of mental health indicators, we explored whether it is possible to identify similar hierarchical rankings regardless of mental health indicators (incl. psychotherapy) among employees representing different socio-demographic statuses, and which groups of employees have the highest mismatch between mental health symptom and treatment.

Methods:

Employees representing different occupational classes and employees from four different areas of Finland were studied and compared. We used national register data to define psychotropic medication (purchases), sickness absence for mood disorders, and the use of psychotherapy between 2017 and 2019 and national survey data from the FinHealth 2017 Study to define the level of psychological symptoms (BDI, GHQ). We assessed the risk of each outcome by population group separately for men and women, and estimated the mismatch between symptoms (BDI/GHQ caseness) and treatment (psychotropic drugs/therapy).

Results:

In all the studied groups, the prevalence of mental health indicators was mostly considerably higher among women than men. The risk of register-based mental health indicators was typically higher among lower non-manual employees. In the case of some mental health indicators, we observed significant interactions between occupation class and region. Some stark mismatches were detected between symptoms and treatment in some populations, whereas at the other end of the spectrum, the correspondence between symptoms and the mobilization of care was rather high.

Conclusions:

Although gender is strongly linked to mental health indicators, occupational class and region influence mental health profiles in the population. There are considerable inequalities between populations in the level of professional care associated with mental health problems.

11.A. Workshop: Leveraging meso-level data to advance population health in Europe: further directions

Abstract citation ID: ckac129.687

Organised by: Montpellier University Hospital (France)
Chair persons: Gregoire Mercier (France)
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Health services and public health researchers provide timely and critical evidence to answer real-world policy questions and work extensively with policymakers at the macro, meso and micro levels of government. One goal shared by researchers and policymakers is to foster evidence-informed policy and program development to ensure that policy initiatives provide the greatest benefit possible to individuals and society. Among other sources of data, meso-level datasets are usually comprising contextual data aggregated at various geographical areas such as cities, counties, and regions. Although meso-level data are sometimes used as proxies for individual level data, they can also be used to explore complex questions at the population level. This workshop aims to provide a unique, interprofessional, European conversation about how to translate meso-level research evidence into meaningful insights or recommendations. It brings together a group of high-level people from academia, think tanks, and companies who are involved in generating, transferring, or using meso-level evidence to inform public health and health care policy in Germany and France. In the first presentation, Schüttig et al. use district-level data from Germany to suggest that increased spending and improved continuity of care may be effective ways to reduce the rate of potentially avoidable hospitalizations among patients with type 2 diabetes. Then, Mercier et al. analyze department (district)-level data from France to quantify the impact of the population-based prevalence of diabetes and psychiatric conditions, of air pollution, of socio-economic variables, and of meteorological factors on the spread of COVID-19 during the first lockdown. Rodts et al, in a collaboration between a think tank and a small company, use a broad set of district-level variables to classify French 'departements' into homogeneous clusters in terms in needs and explore the discrepancies between total health care spending and needs at the population level. Finally, Mâlatre-Lansac et al. build on these studies to discuss how data can be used to inform public health and health care policy making in Europe. In addition, they suggest future directions to improve meso-level data-driven policy at the local, national, and European levels. Beyond methodological points, the discussion will address ethical issues in the use of meso-level data, and how to improve the availability of data, and the ability of local, regional, and national policymakers to use research evidence efficiently. It is designed as a regular workshop with 4 presentations (10 minutes each), ample audience interaction through Q&A after each presentation and one freehand poll in the introduction of each presentation.

Key messages:

- Meso-level data can be efficiently leveraged to inform health care policy.

- Further efforts need to be taken to address the information needs of policymakers.

Abstract citation ID: ckac129.688
Meso-level ambulatory care and ambulatory care sensitive hospitalizations in Germany

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Ambulatory care sensitive hospitalizations are widely considered as important measures of access to as well as quality and performance of primary care. In our study, we investigate the impact of spending, process quality and continuity of care in the ambulatory care sector on ambulatory care sensitive hospitalizations in patients with type 2 diabetes. We used observational data from Germany's major association of insurance companies from 2012 to 2014 with 55,924 patients, as well as data from additional regional data sources. We conducted negative binomial regression analyses with random effects at the district level. To control for potential endogeneity of spending and physician density in the ambulatory care sector, we used an instrumental variable approach. In doing so, we adjust for a number of known risk factors for hospitalizations among this patient group. We undertook a Shorrocks-Shapley decomposition to investigate the relative contribution of groups of regressors to the pseudo R2. The results of our analysis suggest that spending in the ambulatory care sector has weak negative effects on ambulatory care sensitive hospitalizations. We also found that continuity of care was negatively associated with hospital admissions. Patients with type 2 diabetes are at increased risk of hospitalization resulting from ambulatory care sensitive conditions. The results of the decomposition analysis for groups of variables indicate that ambulatory care characteristics account for 9.8% of the pseudo R2, morbidity of patients (including gender and age groups) for about 85.5%, and system-related factors of health provision for 4.7%. Our study provides some evidence that meso-level factors such as increased spending and improved continuity of care while controlling for process quality in the ambulatory care sector may be effective ways to reduce the rate of potentially avoidable hospitalizations among patients with type 2 diabetes.

Abstract citation ID: ckac129.689
Geographic variation in COVID-19 hospital admissions in France: a population-based study

Gregoire Mercier

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The impact of various environmental, socio-economic, and epidemiological factors on COVID-19 transmission and severity is well-known. However, there is little evidence about the respective role of these factors at the population-level at a national scale. The objective was to identify the environmental and contextual factors that influenced the spread and the severity of COVID-19 at the French department level during the first national lockdown. We performed a national, population-based, retrospective analysis. The cumulative rate of patients admitted for COVID-19 to any public or private acute care hospital from March 31st, 2020 to May 25, 2020 was modelled at the 'departement' (hereafter county) level. We used spatial regression models to quantify the aggregated effect of population health status, air pollution, meteorological, and socioeconomic factors. 57,356 patients were admitted to an acute care facility for COVID-19 over the period of interest. At the county level, the age and sex-standardized rate of admission ranged from 0.07 to 3.24 admissions per 1,000 people. After adjustment on the pre-lockdown COVID-19 hospital admission rate, the standardized cumulative rate hospital admission for COVID-19 during the period of interest was significantly and positively associated with the prevalence of diabetes, with the prevalence of mental conditions, and with high cumulative exposure to atmospheric ozone values. It was significantly and negatively associated with high cumulative exposure to ultraviolet radiation. These results suggest that several population-based epidemiological and meteorological factors could have played a role in COVID-19 spread in France. They provide potentially useful insights to design and implement geographically differentiated public health policies.

Abstract citation ID: ckac129.690
Characterizing population-based health care needs at the departement level in France

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Aligning health care spending with population needs is a goal shared by many public health and health care systems. However, most modelling approaches have proven deceptive and ineffective. We propose a novel data-driven, population-based approach to help policymakers explore the discrepancies between spending and needs in France. We leveraged several national open data sources covering demographics, social deprivation, epidemiology, environment, health-related behaviors, and all-payer health care spending (hospital inpatient, prescription medicines, ambulatory events, and dental care). We classified the French "departements" (hereafter counties) into clusters that are homogeneous in terms of health care needs, based on a multidimensional framework. Then, we calculated all-payer per capita health care spending to analyze its within- and between-cluster variation. Based on these findings, we designed a web-based, interactive mapping tool dedicated to French policymakers and payers. The analysis shows 7 clusters of French counties differing in terms of health care needs and spending. The higher-needs/lower-spending and lower-needs/higher spending clusters suggest considerable room for improvement through a regional distribution of spending at least partially based on needs. Most interestingly, the data we used is publicly available, but policymakers lack expertise and time to undergo such analyses themselves. We plan to develop a dynamic and more granular version of the tool to allow policymakers to accurately design and evaluate health care policies.

Abstract citation ID: ckac129.691
Data-driven policy making: a key step for the healthcare system

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The work presented in this workshop suggest important room for improvement in data-driven health policy making in France and in Germany. We identify data generated by healthcare systems can be mobilized to inform four different aspects of public health and health care policy making:

1. Supporting patient-centered evaluation of healthcare services: micro-level data collection is key to developing evaluation tools which can be used to improve quality of care and patient experience, as evidenced by the development of PROMS and PREMS.
2. Adapting care supply to population needs: meso-level data collection enables local and national policy makers to design and implement healthcare programs and investments which fit population needs.
3. Developing targeted prevention policies: meso-level data collection can also be used to identify health hazards, improve population safety and limit health impact of exposure to sanitary and environmental risks, allowing local and national policy makers to articulate prevention strategies.
4. Informing healthcare research: patient and meso-level data are invaluable resources for health and life-sciences research, supporting identification of biomarkers and development of diagnostic tools and treatment.

Additionally, we identify that all four of these aspects of data-driven policy have implications at a local, national, and European level. In light of this, Institut Montaigne strongly advocates for a population-based approach, as implemented in Canada, relying on multiple datasets as well as individual and collective responsibility. We also stress the need for coordination at a European level, aware the current implementation of the European Health Data Space is an opportunity to leverage information from EU-wide databases. Data-driven public health and health care policy is a tool of public value and its use is critical to ensuring resilience of current health systems and addressing future crises.

11.B. Round table: From Science to Policy Making: Lessons learned from ASPHER's COVID-19 Task Force

Abstract citation ID: ckac129.692

Organised by: ASPHER
Chair persons: Nadav Davidovitch (Israel), Ines Siepmann (Belgium)
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ASPHER, the Association of Public Health Schools in the European Region, convened a COVID-19 Task Force (TF) at the start of the pandemic. The TF has involved over 60 experts, 30 member schools, more than 20 countries across four continents, supported by young professionals (YPs). The COVID-19 TF became a unique expert forum for mutual support, sharing, reviewing, and presenting evidence on epidemiological, technical, societal, and political dimensions of the COVID-19 pandemic across Europe. Working with European and national health authorities and non-governmental organisations (NGOs), it also prompted and supported the coordination of policy responses across the WHO European Region. Drawing on members' collective knowledge and expertise, the TF produced a significant body of work that speaks to different public health aspects of the pandemic and gaps in responses. Since its inception in early 2020, the TF has produced more than 30 peer-reviewed publications, regular position statements and reports on topics from personal to planetary protection including: face masks, testing, tracking, vaccination, health inequalities, protecting vulnerable groups, safe schools, advocacy for wider social protection and global vaccine equity. The panel will reflect on key lessons learned over two years of TF work. First, that effective cross-country comparative work was made possible by the group's independence, interdisciplinarity, and high trust between its members. This mix of characteristics allowed for unencumbered weekly sharing of ideas, utilisation of data, insights available in local languages, and unique access to the front-line experience of members, those with positions in health authorities or advising national or regional governments. The second lesson is the importance of a flexible, bottom-up organisation, which allows the members to pursue individual research, education, and advocacy agendas while acting in concert. Cooperation between ASPHER Schools of Public Health existed before the pandemic, but the TF strengthened these relationships and made inter-school collaborations more frequent. Lesson three is a successful combination of policy advocacy, with shaping public health education and providing training opportunities for YPs. Thirteen YPs have been involved in the work of the COVID-19 TF since its inception, playing a critical role by preparing weekly situation reports, a horizon scanning exercise, surveys of ASPHER members, and contributing an early-career perspective to the groups' outputs. Involving young public health professionals effectively in expert forums provides crucial training opportunities in knowledge transfer and leadership that should be more widely available. The panel will also reflect on how to set-up, build, scale-up, and sustain collaborations with wide geographic, cultural, linguistic, and political-administrative coverage to support the capacity and preparedness of public health institutions during future challenges.

Key messages:

- The panel will recount key lessons from ASPHER's COVID-19 Task Force: fostering independence, interdisciplinarity, and trust; a flexible, bottom-up organisation; and involving young professionals.
- The panel will reflect on setting up collaborations across cultural and political-administrative boundaries to strengthen the advisory capacity of public health institutions during future challenges.

Speakers/Panellists:

Alison Mc Callum
University of Edinburgh, Edinburgh, UK

John Reid
Chester University, Chester, UK

Rok Hrzic
Maastricht University, Maastricht, Netherlands

11.C. Pitch presentations: Food, nutrition and children

Abstract citation ID: ckac129.693
Preschool children's temperament and its associations with energy intake

Riikka Pajulahti

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Background and objectives:
Child's temperament dimensions have been linked with different weight outcomes as well as dietary factors such as consumption of fruit and vegetables, sugar-rich foods and drinks and an overall dietary quality. Links between temperament dimensions and energy intake, however, remain underexamined. This study expands the literature by investigating associations between child's temperament dimensions and energy intake.

Methods:
Altogether 505 Finnish children aged 3-6 years provided data for the analyses. The data is a part of the DAGIS (Increased Health and Wellbeing in Preschools) study conducted in 2015-2016. Child's energy intake was measured with 3-day food records. To be included, children had to 1) have food record for two preschool days and one weekend day and 2) to have consumed both lunch and an afternoon snack in the preschool on the two preschool days. The very short form of Children's Behavior Questionnaire was used to measure child's temperament dimensions. Concurrent associations between three temperament dimensions (surgency, negative affectivity, and effortful control) and energy intake were examined using linear regression models adjusted for child's age, sex, mother's highest education, and moderate-to-vigorous physical activity.

Results:
Surgency, temperament dimension referring to characteristics such as impulsivity, high activity level and high approach, was positively associated with energy intake. Effortful control or negative affectivity were not associated with energy intake.

Conclusions:
The findings imply that temperamental surgency may be one relevant determinant of energy intake among preschool children. The result is in line with previous studies linking child's surgency as well as its specific facets, such as impulsivity, with weight outcomes and food approach behaviors. Considering child's individual temperament dimensions when counselling families in eating issues could be beneficial.

Key messages:
- Surgency, a temperament dimension referring to characteristics such as impulsivity, high activity level and high approach, was positively associated with energy intake.
- When promoting children's balanced eating, tailored support for parents acknowledging child's temperament could be beneficial.

Abstract citation ID: ckac129.694
Trans fatty acid intake and risk of type 2 diabetes in the NutriNet-Santé prospective cohort

Gaëlle Wendeu-Foyet

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Type 2 diabetes (T2D) is one of the most common noncommunicable diseases worldwide, with an increasing prevalence and a considerable global health burden. Substantial evidence has linked consumption of trans fatty acids (TFAs) to an increased risk of cardiovascular disease. However, the effects of T2D remain unclear. We aimed to investigate the associations between different types of TFAs (total, ruminant, industrial and corresponding specific isomers) and risk of T2D in the NutriNet-Santé prospective cohort. Overall, 105,551 participants aged 18 years or older from the French NutriNet-Santé cohort (2009-2021) were included (mean age at baseline = 42.7y (SD = 14.6y), 79.2% women). Dietary intake data, including usual TFA intake, were collected using repeated 24-hour dietary records (n = 5.7 [SD = 3.1]). Associations between sex-specific quartiles of dietary intake of TFAs and type 2 diabetes risk were assessed using multivariable Cox proportional hazard models adjusted for known risk factors. A total of 969 incident type 2 diabetes cases occured during follow-up. Total TFAs was associated with higher T2D risk (HRfor quartile 4 versus 1 = 1.38; 95% CI = 1.11-1.73; Ptrend<0.001). This association, specifically observed for industrial TFAs (HR = 1.45; 95% CI = 1.15-1.83; Ptrend<0.001), was mainly driven by elaidic acid (HR = 1.37; 95% CI = 1.09-1.72; Ptrend<0.001) and linolelaidic acid (HR = 1.29; 95% CI = 1.04-1.58; Ptrend = 0.07). In contrast, ruminant trans fatty acids were not significantly associated with the risk of T2D. In this large prospective cohort, higher dietary intakes of total and industrial TFAs were associated with increased T2D risk. These findings support WHO's recommendation to eliminate industrially-produced TFAs from the food supply worldwide. As such, consumers should be advised to limit the consumption of food products containing partially hydrogenated oils (main vector of iTFAs) as this, specifically, may contribute to lower the substantial global burden of T2D.

Key messages:
- Higher dietary intakes of total and industrial trans fatty acids were associated with increased type 2 diabetes risk.
- Our findings support WHO's recommendation to eliminate industrially-produced TFAs from the food supply worldwide.

Abstract citation ID: ckac129.695
The path to evidence-based guidelines for food insecurity during pregnancy

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Background:

Food insecurity has negative health implications during and after pregnancy, however, identifying and then assisting women who are food insecure is complex. Successful screening programs are often embedded in practice guidelines that include referral and treatment guidance. Screening for food insecurity is vital to address food insecurity, however, it is not present in Australia, nor are there any guidelines for healthcare settings. This presentation will describe the steps taken to gather evidence to inform the development of practice guidelines.

Methods:

The creation of practice guidelines for screening and responding to the needs of food insecure pregnant women was informed by 1) qualitative interviews with food insecure pregnant women, and 2) qualitative interviews with clinicians about their experiences of assisting hungry and food insecure pregnant women, 3) quantitative research with a cross-section of pregnant women about their experiences managing their food supply, 4) a systematic review describing the existing interventions addressing food insecurity during pregnancy, and 5) a modified Delphi to gather the opinions of experts on the best ways to address food insecurity in pregnancy.

Results:

This work highlight the potential effectiveness of a food insecurity screening tool in the antenatal setting, the readiness of clinicians to respond to this need, the breadth and depth of current interventions to address food insecurity, and the opinions of experts on how this issue needs to be addressed. The combined impact of these 5 studies is the identification of a number of responces to food insecurity and hunger during pregnancy.

Conclusions:

Given the lack of screening, standard care, and treatment of food insecurity in a clinical setting in Australia, it is essentail that guidelines are created that standardise patient care and control costs through efficient use of health care resources.

Key messages:

- Food insecurity during pregnancy has significant implications for both mother and baby.
- Creating supportive evidence-based mechanisms to address food insecurity will lead to positive outcomes.

Abstract citation ID: ckac129.696
The bidirectional relationship between growth and appetite regulation in the first year of life

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Childhood obesity is a public health crisis. Even though appetite traits in infancy were associated with childhood adiposity, whether early weight gain can influence later appetite has not been researched. Our aim was to prospectively examine the bidirectional association between growth and appetite traits during the first year of life. We followed up 450 healthy term infants for 12 months (m). Appetite traits at 4 weeks (wk), 6m and 12m were assessed using the Baby and Child Eating Behaviour Questionnaires. Infant feeding, anthropometric, socioeconomic and demographic data were also collected. Infant weight-for-age z-scores (WFAZ) were calculated using the WHO 2006 growth reference. Growth was assessed as conditional WFAZ change (cWFAZc) by saving the residuals from linear regression models of WFAZ at each successive time point versus WFAZ at the earlier time point. Multivariable linear regression was used to analyse bidirectional associations between cWFAZc (0-4wk, 4wk-6m, 6-12m) and appetite traits Enjoyment of Food (EF), Food Responsiveness (FR), Satiety Responsiveness (SR) and Slowness in Eating (SE) at 4wk, 6m and 12m. All models were adjusted for relevant confounders. At 4wk, SR score was associated with lower (β:-0.16; 95% CI:-0.28,-0.03), and FR score with higher (β:0.10; 95% CI:0.01,0.19) cWFAZc from 4wk to 12m. SR score at 6m was inversely associated with cWFAZc from 6-12m (β:-0.09; 95% CI:-0.16,-0.01). Conversely, higher cWFAZc between 4wk-6m was associated with higher EF (β:0.10; 95% CI:0.01,0.19) and FR (β:0.16; 95% CI:0.04,0.29) scores at 12m. cWFAZc between 6m-12m was inversely associated with SR at 12m (β:-0.18; 95% CI:-0.35,-0.01). Our results suggest that the growth acceleration hypothesis, where faster growth in infancy leads to later obesity, may be mediated by an up-regulation of appetite traits at 12m. This highlights the public health importance of avoiding growth acceleration in infancy as a way to curb the childhood obesity epidemic.

Key messages:

- Weight gain in early infancy impacts appetite regulation in the first year of life and up-regulation of appetite traits at 12 months predisposes to childhood obesity.
- Avoiding growth acceleration in infancy can decrease the risk for childhood obesity.

Abstract citation ID: ckac129.697
Anemia in children aged 6 to 59 months attending a quaternary health facility in Maputo, Mozambique

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Background:

Globally, anemia prevails as a public health issue, being also a concern in Mozambique, where about two-thirds of children 6-59 months of age are affected by anemia. We carried out this study to estimate anemia prevalence and evaluate structural determinants and hematological parameters association among children aged 6 to 59 months attending pediatric inpatient and outpatient services in a Quaternary Health Facility in Maputo City Province, Mozambique.

Methods:

From August 2021 to January 2022, we conducted a cross-sectional study at the 'Maputo Central Hospital' where we collected data from 397 inpatients or outpatients who attended pediatric consultations. The cut-off values for anemia were: mild (10g/dL≤Hb≤10.9g/dL), moderate (7g/dL≤Hb≤9.9g/dL), severe ($Hb < 7.0g/dL$). We used SPSS 28.0 software to perform descriptive analyses and Chi-Square tests.

Results:

Our preliminary findings show that the total rate of positive cases was 30.0% moderate anemia (119/397), 23.9% mild anemia (95/397), and 7.3% severe anemia (29/397). Anemia frequencies were higher in male patients unregarding the type (54.2% moderate, 62.1% mild, 67.9% severe). Anemia prevalence was higher among children aged 24-59 months (41.2% moderate, 47.4% mild, 51.7% severe; $p < 0.05$). The rate of all anemia types was higher in children from rural areas and Maputo City province relative to those from urban areas and other country provinces. The level of education of the child's companion to the consultations was associated with anemia ($p \leq 0{,}05$), with higher rates observed in secondary level education. We observed no association between iron or serum ferritin values to anemia.

Key messages:

- Children aged 24-59 months, children from rural areas, and who are male are more vulnerable to suffering anemia than their peers, thus needing more monitoring during their growth.
- Nutritional-anemia-specific interventions targeting the first 1000 days of life may be helpful to its reduction in children.

Abstract citation ID: ckac129.698

Understanding eating-related health outcomes: connections between anxiety and eating behavior

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Background:

Research shows that anxiety is connected to a variety of mental health outcomes, and that it is widespread among the population. In the light of the great personal and societal costs of obesity and eating disorders, we want to understand the connection between anxiety and different dimensions of eating behaviors that have a strong empirical link with negative eating-related health outcomes.

Methods:

We used data from the population- based LIFE-Adult-Study (n = 5019) to analyze the connection between anxiety (GAD-7) and the three dimensions of eating behaviors: Cognitive Restraint, Disinhibition, and Hunger (FEV, German version of the Three-Factor-Eating-Questionnaire). We controlled for sociodemographic variables, smoking, physical activity, personality, and social support.

Results:

Multivariate regression analyses showed significant positive associations between anxiety and Disinhibition ($\beta = 0.23$, $p \leq 0.001$), Hunger ($\beta = 0.21$, $p \leq 0.001$) and Cognitive Restraint ($\beta = 0.04$, $p \leq 0.01$). After adding control variables, analyses revealed significant positive associations between anxiety and Disinhibition ($\beta = 0.15$, $p \leq 0.001$) as well as Hunger ($\beta = 0.14$, $p \leq 0.001$), but not between anxiety and Cognitive Restraint ($\beta = 0.03$, $p = 0.076$).

Conclusions:

There is an empirical connection between anxiety and two factors of eating behavior, i.e., Disinhibition and Hunger. If future research strengthens the assumption of a causal direction from anxiety to those factors, interventions that help individuals to better regulate and cope with anxiety, could be one potential pathway to reducing eating disorders and obesity in the population.

Key messages:

- There is a significant connection between anxiety and eating behavior.
- Interventions that address anxiety could reduce problematic eating-related health outcomes like eating disorders and obesity.

11.D. Workshop: Depression comorbidity in prediabetes and diabetes: evaluating risk factors and outcomes

Abstract citation ID: ckac129.699

Organised by: Tuebingen University (Germany)
Chair persons: Norbert Schmitz (Germany)
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Depression is a common comorbidity in prediabetes and diabetes. Evidence for the interaction of depression and behavioural and biological risk factors for (pre-) diabetes and diabetes-related outcomes will be presented and discussed using longitudinal data from the Lifelines Cohort, the Canadian Longitudinal Study on Aging, and the Cartagene study. In addition, digital phenotyping will be discussed as an alternative approach for the assessment of mobility and behaviour in people with diabetes.

Key messages:

- Behavioural, psychosocial and biological risk factors might increase the risk of poor diabetes outcomes in a synergistic way.
- Prevention program for diabetes and diabetes realted outcomes should focus on behavioural, psychosocial and biological risk factors simultaneously.

Abstract citation ID: ckac129.700

Childhood trauma, depression, and the risk of incident prediabetes in young adults: findings from the Lifelines Cohort Study

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Background:

Childhood trauma and depression have been shown to increase the risk of type 2 diabetes. However, many studies have focused on middle-age and older adults, with less known on the role of these variables in early glucose dysregulation. The goal of the study was to examine childhood trauma, depression, and their interactions, as risk factors for the onset of prediabetes in young adults.

Methods:

Data were from the Dutch Lifelines Cohort Study. N = 8,650 adults (61% female) between 18-35 years without prediabetes/diabetes at baseline (2007-2014) were included. Childhood trauma was assessed using the Childhood Trauma Questionnaire. Depression was assessed using the Mini International Neuropsychiatric Interview. Prediabetes at follow-up (2014-2017) was considered by haemoglobin A1c levels between 5.7%-6.4%. Logistic regressions examined associations between depression and childhood trauma with the risk of incident prediabetes. Odds ratios (OR) and 95% confidence intervals (CI) for unadjusted analyses and analyses adjusted for age, sex, education, ethnicity, body mass index, smoking, and alcohol use (reduced adjusted sample size; n = 7,186) are presented.

Results:

244 participants (2.8%) developed prediabetes. In univariate analyses, childhood trauma (OR = 1.02, CI = 1.01-1.03, p = .006) and depression (OR = 2.08, CI = 1.01-4.29, p = .048) predicted incident prediabetes. When childhood trauma subscales were examined, only sexual abuse significantly predicted incident prediabetes. In adjusted analyses, only childhood trauma, specifically sexual abuse, significantly predicted incident prediabetes (OR = 1.06, CI = 1.01-1.12, p = .021). No multiplicative interaction between depression and childhood trauma was found.

Conclusions:

Young adults who have experienced childhood trauma, particularly sexual abuse, may be at risk of glucose dysregulation in early adulthood. Early targeted preventive care may help attenuate or halt glucose dysregulation and the development of type 2 diabetes.

Abstract citation ID: ckac129.701
Systemic inflammation and the risk of depression in people with type 2 diabetes

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Background:

Depression is a common co-morbidity in diabetes. The mechanisms underlying the association between depression and diabetes are poorly understood. Although risk factors, such as poor lifestyle behaviours, obesity, and stress have been identified, emerging evidence suggests that systemic inflammation may play an important role in the pathogenesis and recurrence of depression in people with diabetes. The aim of the present study was to evaluate if the inflammatory marker C-reactive protein (CRP) is associated with an increased risk of major depression episodes in people with type 2 diabetes.

Methods:

A prospective, community-based study was conducted in Quebec, Canada. Individuals were recruited from the CARTaGENE (CaG) cohort, a population-based survey of Quebec residents aged 40 to 69 years. Our sample included 719 individuals with type 2 diabetes and 1423 individuals without diabetes. Individuals were assessed at baseline and 5 years after baseline. Major depression disorders were assessed using a clinical interview (CIDI). Inflammatory markers were assessed from blood samples. Elevated CRP levels were defined as ≥ 3 mg/L.

Results:

Participants with both diabetes and elevated CRP levels had the highest risk of major depressive episodes (adjusted OR = 1.90, 95% CI 1.45, 2.50), compared to those without diabetes and without elevated CRP levels. The risk of major depressive episodes in individuals with diabetes without elevated CRP episodes was lower (adjusted OR = 1.21, 95% CI 0.85, 1.73) and similar to the risk of those without diabetes and elevated CRP levels (adjusted OR = 1.15, 95% CI 0.94, 1.39).

Discussion:

The study highlights the interaction between diabetes, inflammatory makers, and depression in a community sample. Early identification, monitoring, and management of elevated inflammation levels might be an important depression prevention strategy in people with type 2 diabetes.

Abstract citation ID: ckac129.702
Depression, diabetes and change in cognitive functioning: results from the Canadian Longitudinal study on Aging

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Background:

Individuals who ultimately receive a diagnosis of dementia typically have an observable accelerated cognitive decline (ACD) many years prior to diagnosis. Depression in combination with diabetes is an emerging risk factor that is associated with cognitive problems. Using data from the Canadian Longitudinal Study on Aging, the objective of the present study was to investigate the longitudinal association between depression, diabetes, and cognitive decline in an elderly cohort.

Methods:

Baseline and follow-up data from a population-based study in Canada were used. The sample consisted of 18161 adults between 45 and 85 years of age without diabetes. Cognitive functioning was assessed at baseline and after 4 years using six measures: the Rey Auditory Verbal Learning Test (RAVLT), the Mental Alternation Test (MAT), the Animal Fluency Test (AF), the Controlled Oral Word Association Test (COWAT), the Stroop Test, and the Prospective Memory Test. Depression was assessed using the CES-D10. Regression analysis was conducted to evaluate interactions between depression, diabetes and cognitive decline.

Results:

The mean age of participants was 61 years. Participants with a comorbidity of depression and diabetes had an accelerated cognitive decline (g-factor) compared to those with depression without diabetes and those with diabetes without depression (regression coefficients ß = -0.145 (0.036), ß = -0.076 (0.011), and ß = -0.053 (0.021), respectively).

Conclusions:

This study suggests that depression and diabetes might increase the risk of cognitive decline in a synergistic way.

Abstract citation ID: ckac129.703
Time at home during the COVID-19 pandemic: a prospective examination of psychosocial health in people with and without type 2 diabetes using digital phenotyping

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Introduction:

Societal restrictions due to COVID-19 have had a profound effect on our ability to connect with one another and limited our personal mobility. There is evidence that loneliness, social isolation, and psychological distress increased during restrictions for people with diabetes. Fluctuating restrictions provide a unique opportunity to utilise continuous GPS data from personal smartphones (digital phenotypes) to explore the relationship between time-at-home and psychosocial health for people with diabetes. This study aims to (1) describe the digital phenotypes of time-at-home during varying societal COVID-19 restrictions for people with and without type 2 diabetes and

(2) to explore associations between these digital phenotypes and loneliness, social support, and other psychosocial factors and compare for people with and without type 2 diabetes.

Methods:

Data come from a longitudinal observational study in the Republic of Ireland that ran between March and August 2021. Participants are seventy-four adults (64.8% female; median age-group = 50-54) with (N = 40) and without (N = 34) diabetes. Continuous GPS data were recorded for 2 months through the Beiwe smartphone application. Loneliness (UCLA-3), social support (MSPSS), diabetes stigma (DSAS-2; diabetes cohort only) as well as other demographic, psychosocial, and lifestyle questionnaires were assessed at baseline, 1 month, and 2 months follow-up.

Analysis:

GPS data are being processed. The GPS-derived features of time-at-home, overall movement, and location variance will be computed. Associations between these digital phenotypes and psychosocial factors will be explored and changes over time examined using multilevel modeling.

Conclusions:

We expect this study to be the first to describe and compare the digital phenotypes of people with and without diabetes during varying societal COVID-19 restrictions, providing new insights into the effects of such policies on the psychosocial health of people with diabetes.

11.E. Workshop: Urban Green Spaces, Built Environment and Urban - Mental - Environmental Health outcomes

Abstract citation ID: ckac129.704

Organised by: EUPHA-URB, EUPHA-PMH, EUPHA-ENV
Chair persons: Stefano Capolongo (EUPHA-URB), Marija Jevtic (EUPHA-ENV)
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Environmental sustainability, especially in an era of growth health inequality, is one of the most important challenges facing Public Health systems around the World. Environmental sustainability is responsibly interacting with the planet to maintain natural resources and not jeopardize the ability for future generations to meet their needs. The SDGs put environmental sustainability at the center of sustainable development. Environmental Health is the branch of Public Health concerning all aspects of the natural and built environment affecting human health. It is targeted towards preventing disease and creating health-supportive environments. It encompasses the assessment and control of those environmental factors that can potentially affect health, such as pollution, poverty and inadequate energy solutions. Urban Health is an intersectoral arena that links both the public health and the urban planning sectors, mainly captured by SDG3 (including Mental health) and SDG11. Both during the first waves of the Covid-19 pandemic period and in contemporary cities, urban environments were stressed; the resilience of our cities were tested, highlighting the strengths and weaknesses of the urban contexts, not always capable to pro-mote and protect the population health status. Urban Green Spaces (UGS) have proved essential role as ‘‘tools’’ to improve Urban Public and Mental Health. Unfortunately, the heterogeneous distribution of UGS inside the contemporary cities, together with the disparity in quality of such spaces, led to some exclusion phenomena. Evidence/experience-based research strongly demonstrated the positive effects on Public Health of the UGS, and for this reason, they are now becoming the strategic and challenging issue of many urban regeneration programs. The importance of UGS as a key infrastructure has generated the necessity of developing new health-centered design criteria able to conform to their new role in urban environments. The augmentation of UGS surface alone, does not necessarily make cities more livable. An increase in area and surfaces does not translate in ease of accessibility from all social groups or from all the cities' neighborhoods, or not does it give data on the qualities of such areas, like potential for social engagement or Physical Activity.

Aim of the Workshop - organized by the three EUPHA Section URB+MEN+ENV - it would like to be to build the capacity and knowledge between participants about the main topics and urban features capable to have relevant Urban Public, Mental and Environmental Health outcomes. Additional scope is to collected case studies and research experiences considered virtuous at the international level, analyzed in detail to highlight the main urban and architectural features of those healthy experiences and the related health outcomes, such as sedentary lifestyle reduction, increase of the attractiveness of places, reduction of air and noise pollution.

Key messages:

- Promotion of healthy places - with particular reference to the green spaces - that enhance the experience and Mental Health needs to be part of green and inclusive recovery at all levels.
- Policy Makers, Public Health experts, civil societies & citizens are driving forces to implement the development equation, allowing cities to become greener, inclusive, safer, resilient & sustainable.

Abstract citation ID: ckac129.705

Bridging Epidemiological Data with Features of the Urban Context: An experience of Urban Public Health within the City of Milan, Italy

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Referring to the Research Project ‘‘Enhancing Healthcare and Well-Being Through the Potential of Big Data: An Integration of Survey, Administrative, and Open Data to Assess Health Risk in the City of Milan with Data Science’’ the Authors present preliminary results regarding a survey distributed to a sample of citizens across all neighborhoods of Milano city. This survey sought to collect data regarding health risk factors of this population, including both individual (e.g. socio-demographic characteristics, behaviors, etc.) and community (e.g. environmental/morphological features, available social services, etc.) data. A digital survey was designed to collect information on the health conditions, risk factors, and lifestyle characteristics of a representative sample of the Milanese population at the neighborhood level, with reference to the census tracts and Local Identity Units (NIL). Collected survey data are entered into a system containing corresponding individual health information acquired from the Local Health Authority databases, creating a synthesized information profile with each respondent's state of health, including existing conditions, health services used, and drug therapies. The disseminated survey was developed from comparisons with similar experiences at the national/international level and divided into 60 multiple choice questions (6 for Sociodemographic profile; 8 for Context of residence; 12 for Functional limitations; 25 for Behaviors and lifestyles; 9 for Access to health services). The data from urban analysis conducted on the NIL of the City of Milan are assessed with particular reference to the theme of bicycle-pedestrian accessibility (Walkability) in the urban context and repercussions on the adoption of Healthy Lifestyles. The models developed through this research are expected to provide critical insight for designing health promotion, health protection, and disease prevention interventions aimed both at individual and community level.

Abstract citation ID: ckac129.706
Urban places and Mental Health challenges (lessons learned from Covid-19 crisis)

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Nature deprivation under COVID-19 lead to reduced well-being. Urban design interventions were also identified as an important contributor to the restoration of community confidence, choice, and safety. Factors related to sociodemographic, housing and lockdown were linked to changes in exposure to nature during the pandemic lockdown. Changes in exposure to nature and mental health outcomes during the COVID-19 lockdown were strongly linked. Especially young people had an increased number of mental health problems. Children and youth were more bored and worried in comparison with the pre-pandemic period. The educational institutions worldwide were closed or changed to online education during the pandemic, leading to great disturbance in students' education and outdoor events. All ''green infrastructure'' (GI) resources (including parks, gardens etc.) received great attention as ''essential infrastructure'' supporting well-being. But, the quality, functionality and position of GI in urban areas showed inequality in distribution. Frequently, societies with greater ethnic diversity, lower income and larger health inequality suffered from unsatisfactory or lack of access. GI is important in decision-making to address inequality. This work will also present an open-air activity for all generations: A reflective walk through the oldest part of Novi Sad (EU Capital of Culture 2022), as a part of Project Reflective citizens in Novi Sad. This walking tour was led by pupils from primary school - where all generations spend useful time in open space and a safe atmosphere walking tour, learning and listening about the cultural history of the oldest part of the city. It is vital to enhance urban planning and design practices in making healthier and more resilient communities. It is necessary to underline the importance of planning green spaces that need time to form in urban areas, and which have proven to be very important for mental health in the midst of the pandemic crisis.

Abstract citation ID: ckac129.707
Green space availability and mental health – results from a cross-sectional study in Northwestern Germany

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Background:
A relationship between green space and health has been shown in several epidemiological studies. The impact of different types of green space is still relatively unknown. To start filling this gap, we looked at associations between different green space types and health outcomes (depression and mental health).
Methods:
Data are obtained from a cross-sectional study (n = 479). Depression (assessed with PHQ-9) and mental health (assessed with GHQ-28) are dependent variables. Availability of green space in the surrounding neighborhood was assessed as independent variable by the percentage of green space (> = 1ha) within a 250m radius participants residence. Survey data were analyzed using IBM SPSS 26 and Geo data using QGIS 3.18.0.
Results:
N = 479 participants of a cross-sectional study in 2018 provided data (49.4%, n = 240 women; 49.6%, n = 239 men). Participants had a mean age of 57.55 years (SD: 18.80, min-max:18-95), majority (75.2%, n = 360) were married or partnered, had a lower educational qualification than A-levels equivalent (56.8%, n = 272), were not employed (53%, n = 254), had a net household income of at least 3. 000€ per month (40.1%, n = 192) and at least sometimes financial worries (51.4%, n = 246). Green areas without agricultural areas show an association with frequency of depression (B(SE) = 0.056(0.024), p = 0.018). This contrasts with green spaces including agricultural areas, where there is no statistically significant association (B(SE) = 0.007(0.012), p = 0.564).
Discussion:
We found an association between type of green space and depression. Further studies are needed to establish a grid for assessing characteristics and quality criteria of green spaces. However, it can already be assumed that there is an association between quality of green spaces and psychosocial outcomes.

Abstract citation ID: ckac129.708
How breaks in nature can affect the users' wellbeing: an experience based survey during the lockdown

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Background:
In the occasion of COVID-19 pandemic in Italy, the life of citizens was greatly disrupted - from healthcare professionals to the smart workers - and consequently also the state of mood. On the basis of the scientific evidences in relation to the relationship between the built environment and health, a research group has promoted an investigation on the benefits that greenery can have on the psychophysical state of the users, especially healthcare staff and users at home.
Objectives:
The methodology adopted is the Profile of Mood States, which provides experiential activity in nature - without any technological distraction- to evaluate the benefits on mood. The methodology adopted refer to the shorter version

(34 items) designed by prof. Grove at the University of Western Australia. In relation to the COVID-19 pandemic, the experience based questionnaire is differentiated for healthcare staff and general users. The questionnaire is composed of a few questions, to be completed before and after an experience in nature of 20/30 minutes. The investigation requires to be carried out in private gardens, balcony and/or terrace with greenery, public green areas, etc.

Results:

300 participants (subdivided into 225 general users and 75 healthcare professionals) took part in the investigations. Data analysis highlighted the higher performances in anxiety, depression, anger, force, fatigue and confusion, in particular for users who had the experience in garden (-50/70%), and among the healthcare staff the best outcomes are related to who did the investigation during or after the workshift (-60/-90%).

Conclusions:

Although it is well-known the benefits that nature affects positively on well-being and stress level of users, the investigation underlines that brief breaks in the nature - especially in period of great stress such as pandemic - can influence the well-being and mental health of users.

11.F. Workshop: Can digital health literacy act as a protective factor for students in times of crisis?

Abstract citation ID: ckac129.709

Organised by: University of Graz (Austria), EUPHA Working Group on Health Literacy
Chair persons: Barbara Gasteiger-Klicpera (Austria), Michaela Wright (Austria)
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As mental health related issues become more and more prevalent across all ages and social groups around the globe, the identification of protective factors related to well-being is of high importance. In times of the COVID-19-pandemic, this proves to be even more crucial. Young adults and especially students were particularly burdened by social isolation and missing opportunities for personal exchange and supporting relationships during the pandemic. Within this workshop we will discuss the significance of a possible protective factor for the promotion and strengthening of well-being: digital health literacy (DHL). It involves the ability to search for health-related information, to add self-generated content, to evaluate the reliability of health information, to determine the relevance of health information and to protect one's privacy. Findings suggest that it plays a vital part as a protective resource when it comes to maintaining or promoting well-being. This might be particularly the case when the possibility of accessing health-related information is restricted due to reduced social contact. Since important sources for health information are available within the digital space, digital competencies are becoming important to access such information and to conduct a successful and healthy life. The competence of adequately dealing with digital health information, in particular, became more relevant during the COVID-19-pandemic. DHL can be seen as a two-dimensional construct. On the one hand, it refers to the ability to use digital resources to gather health information and, on the other hand, it refers to critical information literacy. Critical information literacy is the ability to collect, understand, evaluate and apply information. Within the proposed workshop, findings of a university survey, conducted within the global COVID-HL network, will be presented. Presentation 1 seeks to address the role of individual factors for the interaction between well-being and DHL. It will further examine the importance of being able to properly assess the relevance of health information. Presentation 2 sheds light on actions, such as adding self-generated health content, when it comes to mental health promotion. It will also take up the relevant individual factors that mediate the relationship between DHL and well-being. Presentation 3 highlights the ability of students to search for health-related information and to use it as a factor to improve their well-being. Presentation 4 provides insight into the importance of DHL for future health professionals in a health sector that is under digital transformation. Lastly, presentation 5 argues for the necessary enhancement of DHL and sense of coherence of students and stresses the need for health promoting and target group specific interventions. In a second step, the audience will be encouraged to ask questions and to engage in a discussion about the suggested conclusions and implications.

Key messages:

- It has been shown internationally that there is a strong relationship between digital health literacy and students' well-being.
- Individual factors are relevant mediators in the relationship between well-being and digital health literacy.

Abstract citation ID: ckac129.710
Digital health literacy and well-being of university students in Austria during the pandemic

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Background:

Previous findings suggest that depressive and anxiety-related symptoms have doubled among students since the beginning of the pandemic. Digital health literacy can act as a protective resource to strengthen well-being.

Objectives:

This paper analyzes the relationship between digital health literacy, socioeconomic status and well-being and future-anxiety among students in Austria.

Methods:

480 students from Austrian higher education institutions were surveyed via online questionnaire during the second wave of the Corona pandemic. Sociodemographic data, students' self-assessments of well-being, fears regarding future development and perspectives, and digital health literacy were collected. Variance and regression analyses were used for the evaluation.

Results:

About 50% of the students reported low scores in well-being and distinct fears about the future. A higher socioeconomic status correlated with higher well-being as well as lower fears about the future.Regarding digital health literacy, the ability to assess the relevance of information showed the highest correlation with well-being.

Conclusions:

Individual factors such as gender or the study-program are relevant for the interaction between well-being and digital health literacy. The assessment of the relevance of information and its connection with one's own life reality seems to be important factors in promoting well-being.

Abstract citation ID: ckac129.711
The relationship between well-being and digital health literacy in university students from Romania

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Background:

Digital Health Literacy (DHL) gained traction in recent years in the health promotion and well-being field as a possible protective factor.

Methods:

A cross-sectional survey was conducted using a self-reported web-based questionnaire on students enrolled at a university from Romania between December 2020 and February 2021. Descriptive statistics, correlation tests, and logistics regressions were employed to analyze the relationship between DHL, well-being, subjective social status (SSS), and future anxiety among students.

Results:

The data set included 1381 valid surveys (out of 1877 total surveys) completed by students aged between 18 and 39 years (mean = 21.9, SD = 3.701), the majority (69%) being males. Most of the students were studying at Bachelor level (83%), while the rest were Master or PhD students. Responses showed that 49% of the students expressed low well-being, 48% expressed a high level of future-anxiety and 59% considered they have a low SSS. For the DHL subscale of evaluating the reliability of the information, 56% of students had limited DHL, while for the subscale of determining the relevance of information, 64% of students presented limited DHL. The DHL subscale of adding self-generated content showed the highest correlation with well-being, followed by the determining relevance of the information subscale. Sufficient DHL was associated with higher levels of well-being when controlling for age, gender, and study program.

Conclusions:

Well-being is influenced by actions such as adding self-generated health content, determining the relevance of health information, and anxiety for the future, all being important actions in health promotion. Individual factors such as age and gender are also relevant in mediating the relationship between DHL and well-being.

Abstract citation ID: ckac129.712
Digital health literacy and well-being of students at Sofia University – Bulgaria

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Background:

During the Covid-19 pandemic the students in the Faculty of Mathematics and Informatics at Sofia University 'St. Kliment Ohridski' applied their abilities for searching health-related information and use it as a factor to improve their well-being.

Methods:

The study used the Questionnaire developed by Dadaczynski, K., Okan, O. & Rathmann, K. in 2020 as COVID-19 Health Literacy Survey: University Students (COVID-HL Survey), and the respective Scale Documentation under the Public Health Centre Fulda (PHZF) at the Fulda University of Applied Sciences & Interdisciplinary Centre for Health Literacy Research at Bielefeld University. 216 students, almost 13% (12.78%) of 1.690 students approached, participated.

Results:

There is a correlation as our students reported Very easy or easy to the question how easy they deal with the coronavirus information on the Internet - with 71% choosing from all the information they find, 91% using the proper words to find the information, and 71% finding the exact information. Those results were achieved as our students reported feeling over the last two weeks 27.12% very low, 18.08% low, and only 54.80% high (>50) well-being, measuring the dimensions of psychological general well-being by the WHO-5.

Conclusions:

Our students reported they can search and retrieve the appropriate information on the coronavirus or related topics, and they are satisfied with the information found. Our students' abilities to search and retrieve health-related information are applicable even under the pandemic pressure, where they contribute to the improvement of their well-being feelings. [This research is supported by the National Scientific Program ''eHealth'' in Bulgaria.]

Abstract citation ID: ckac129.713
Digital health literacy and well-being of health sciences students from MU-Sofia during the pandemic

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Background:

The aim of the study is to demonstrate the Digital health literacy and the well-being of the students from different faculties in Medical University - Sofia during the pandemic.

Methods:

To achieve the purpose of the study a web-based questionnaire was distributed among health sciences students from the Faculty of Public Health and the Medical College -Sofia, as well as medical students from the Faculty of Medicine all from Medical University -Sofia in Bulgaria. Data was collected between February and April 2022, and all respondents participated anonymously and voluntarily. Established statistical methods were used in data analysis.

Results:

Completed questionnaires were received from 239 students. Data collected show that among participants the majority (81,4%) were females, and 73,3% were studying in a Bachelor's programme. Among the respondents 87.7% found it easy, or very easy to use the proper words or search query to find the information they were looking for about coronavirus or related topics. Finally 29,3% of health sciences students expressed low to very low well-being during the last two weeks and the rest 70,7% expressed high well-being.

Conclusions:

The presented results draw attention to the fact that during the pandemic health sciences students demonstrate the appropriate skills in searching and acquiring the information about coronavirus or related topics. In addition, translating and applying the information could contribute to benefit the psychological well-being of the students. In a digitally transformed health sector it is significant for future health professionals to obtain competencies including digital health literacy to promote health and well-being of the patients and provide better outcomes for them. The necessity of digital competences was underlined and thus we need further more, and in depth education in ICT, and digital technologies to all students, starting from the beginning of their studies.

Abstract citation ID: ckac129.714
Digital health literacy and well-being in university students in Germany

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Background:
Digital communication technologies had a crucial role during the COVID-19 pandemic, with the internet and Social Media as highly frequented sources for retrieving health information. University student's health and well-being were highly affected and most interaction with peers and professionals migrated to the digital realm, which made digital health literacy (DHL) a key competence to navigate digital health environments. The main goal of the study was to explore DHL of students in Germany.

Methods:
A cross-sectional online survey among students (N = 14916) from 130 universities in Germany was implemented as part of the global Covid-HL Network, collecting data on DHL, physical and mental health, SoC and sociodemographics. Data was analyzed using univariate, bivariate and regression analyses.

Results:
Assessing the reliability of information (5964/14,103, 42.3%) and determining commercial interest of information posed the most difficult tasks (5489/14,097, 38.9%). Difficulties were revealed for finding information (4282/14,098, 30.4%). Female students reported lower DHL and social media use was associated with lower judgment skills. 38% of all students reported low and very low well-being and 29% reported at least two health complaints weekly, while health outcomes follow a social gradient (lower SES and gender). Regression analysis showed significant association between SoC and well-being (OR: 1.2-2.03) and health complaints (OR: 1.58-1.71). Higher future worries were with low well-being (OR: 2.83) and multiple health complaints (OR: 2.84).

Conclusions:
There is an urgent need to enhance DHL and SoC of students and implement health promotion strategies, using target group specific intervention. Gender and socioeconomic differences must be taken into account and interventions could be delivered within the university. Measures should also address student mental health.

11.G. Round table: Resilient health systems: harnessing health information to improve population health

Abstract citation ID: ckac129.715

Organised by: EUPHA-PHMR, EUPHA-HSR, EUPHA-ECO, Sciensano (Belgium), PHIRI
Chair persons: Petronille Bogaert (EUPHA-PHMR), Johan Hansen (EUPHA-HSR)
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Health systems are built to improve the health of the population. When the COVID-19 crisis hit Europe, the sustained performance of these health systems was challenged. The resilience of these health systems, defined as the ability to absorb, adapt, and transform to cope with shocks (Observatory, 2021), was found to be different in the many European countries, leaving some important lessons to be learned and best practices to be showcased to help countries assess their own response to the COVID-19 pandemic and support efforts to strengthen health systems in Europe. A common denominator is health information; the data and information that is needed to monitor the health of patients as well as the general population. Especially in times of crisis, the availability and trustworthiness of these data is of utmost importance. The COVID-19 pandemic showed that within a substantial number of European countries, health information systems were not always equipped to accommodate the data and information flows that were needed in order for researchers to provide the best available evidence to underpin health policy decisions. Ad-hoc surveillance and monitoring systems were set up (under emergency legislation) and clear governance of health information was lacking. In addition, sharing data and information across European borders and ensuring comparability of data and indicators proved to be difficult in a timely manner during the COVID-19 crisis. This resulted in a European landscape with different national and federal health policies, based on sometimes poor scientific findings. However, when the crisis progressed, numerous national and international initiatives were set up aiming to harmonize the available health information and as of now, many of these initiatives are forming a solid foundation of the health systems, rendering their performance sustainable for the future. In this workshop, which is organized as a round table discussion, we will discuss the resilience of health information systems in European countries, with regards to lessons learned from the COVID-19 crisis, barriers to sharing health information within and across borders, best practices and future perspectives. The topic will be highlighted from multiple perspectives, bringing together experts from different backgrounds, including the European level (European Commission and European Observatory on Health Systems and Policies), the country level, and the perspective of European projects. The audience will be able to provide their view on the different topics through an interactive voting poll during the session. Throughout the session, the exchange of knowledge, experiences and opinions with the audience will be facilitated by the chairs.

Key messages:
- Population health information plays a key role in times of crisis, with trustworthy information flows facilitating evidence-informed policies and decision-making.

- Sharing and harmonising health information is key to building resilient healthcare systems that are prepared for the future.

Speakers/Panellists:
Ebba Barany
European Commission, Luxembourg, Luxembourg

Cianrán Nicholl
European Commission, JRC, Ispra, Italy

Kenneth Grech
Public Health Medicine, Mater Dei Hospital, L-Imsida, Malta

Miriam Saso
Sciensano, Brussels, Belgium

Anna Sagan
European Observatory on Health Systems and Policies, London, UK

11.H. Round table: Timely access to quality-assured medicines worldwide

Abstract citation ID: ckac129.716

Organised by: EUPHA-HTA, EMA, WHO
Chair persons: Elena Petelos (EUPHA-HTA), Dineke Zeegers Paget (EUPHA)
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A key aspect of achieving UHC and reducing health inequity is ensuring the timely access to high-quality, safe and effective medicines across the world. The regulatory approval of such products in countries with limited regulatory resources can be lengthy, often compromising patients' timely access to much-needed medicines. This resource-demanding process extends well beyond marketing authorisation, incl. for post-approval changes. The WHO Collaborative Registration Procedure uses the Stringent Regulatory Authorities' medicines evaluations (SRA CRP), a procedure that allows National Regulatory Authorities (NRAs) to leverage the work performed by Stringent Regulatory Authorities (SRAs) on scientific evaluations to decide on medical products approvals within their jurisdiction, through the concept of reliance. Reliance allows an authority to leverage the work performed by other authorities, such as scientific evaluations, to decide on medical products approval within their jurisdiction. This reduces duplication of regulatory efforts, resources and time, while maintaining national sovereignty. In the context of these processes, multi-agency partnerships and cross-border collaboration the role of European bodies, and specifically that of the European Medicines Agency (EMA) as a Stringent Regulatory Authority will be explored. The SRA CRP and its pilot has been evaluated, based on data and stakeholders' perceptions. The evaluation indicates that the procedure delivers on expected objectives and benefits, including shortened timelines (from submission to approval), reduced duplication of efforts and resources (human and financial). It also shows significant and long-term positive impact for the LMICs involved. Additional benefits include greater application of international harmonized standards, an added capacity-building component and an informed and high-quality decision-making at the NRA. The impact of the procedure can be seen through 59 approvals for 16 medicines in 23 countries. The key areas for improvement and recommendations include greater collaboration, communication and transparency between NRAs, applicants, SRAs and WHO, to facilitate interactions and regular sharing of information between stakeholders. It is key to optimise resource utilisation and to leverage synergies, and to this end, a centralized, live platform could be developed to share the status, progress and challenges of applications in real time including information related to post-approval changes. This panel will present the SRA CRP pilots and its evaluation, bringing together experts from regulatory agencies and multilateral bodies to elucidate the current degree and extent of collaboration, whilst attempting to role of the EU and of the EMA in these processes. The panelists will also have an opportunity to take questions from the audience and to discuss the contribution of the EU to global health, incl., timely access for people across the world.

Key messages:

- The SRA CRP facilitates and accelerates the regulatory approval of quality-assured, safe and effective medicines by reliance on SRAs, while maintaining decision-making national sovereignty.
- The EU, via the EMA and the EUM4all and SRA CRP mechanisms, promotes international collaboration and reliance pathways for earlier access to medicines and contributing to global public health and UHC.

Speakers/Panellists:
Victoria Palmi
European Medicines Agency, Amsterdam, Netherlands

Mariana Roldão Santos
WHO, Geneve, Switzerland

Richard Pilsudski
Sanofi, Paris, France

11.J. Workshop: Enabling participation of vulnerable groups in primary health and long-term care

Abstract citation ID: ckac129.717

Organised by: Bielefeld University (Germany)
Chair persons: Kerstin Haemel (Germany), Anja Dieterich (Germany)
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Enabling individual and collective participation or vulnerable people in health and social care is fundamental to achieving equitable, people-centered care. However, for vulnerable groups and clients, unfolding opportunities for participation in their care is closely related with experiences of empowerment and disempowerment. The workshop focuses on primary health and long-term care, as those are the pillars of resilient health care systems able to meet the complex care needs of vulnerable people. From a public health perspective, the facets of participation range from providing access to comprehensive services for people in need, to developing a shared understanding between clients and health professionals regarding clients' everyday and care preferences, to sharing decision-making on health and care matters. In this workshop, we will discuss how helpful public health interventions between individual, professional and systemic-structural approaches should or could be designed, to (better) enable participation of vulnerable groups in primary and long-term care. The workshop presentations draw on empirical research with members of vulnerable groups, health professionals and key informants in care policy and practice conducted in Brazil, Germany, India, and Spain. By focusing on different primary and long-term care settings as well as vulnerable groups (undocumented persons, older people in need of care, people living with chronic illnesses) we will address and discuss the following questions:

- What ideas can we find to strengthen participation of vulnerable groups in primary and long-term care settings?
- Which opportunities and barriers are involved?
- How can individual, professional, and structural approaches 'fit together' to enable greater participation of vulnerable groups in their (self-)care?

Key messages:

- Practitioners' efforts to enable participation have to be accompanied by qualification- and governance-oriented public health approaches to achieve patient oriented health and social care systems.
- Present barriers and opportunities for vulnerable groups are instructive indicators for broader challenges towards comprehensive people-centered care.

Abstract citation ID: ckac129.718
Relevance and limits of patient surveys within humanitarian primary health care in Germany

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Background:

In Germany, distinct parts of the population, such as undocumented persons, uninsured German nationals, EU citizens without employment and asylum seekers, do not have adequate access to health care. Civil society organisations provide humanitarian medical aid for these individuals. However, the offered care is not comprehensive, but depends on volunteers and is restricted to acute conditions. The local initiatives are often underfinanced. To receive funding, they experience increasing pressure to provide evidence of the impact of their work.

Methods:

The applied research project was conducted in cooperation with a German medical Non-Government Organization. A routine patient survey, including items on patient satisfaction and patient reported outcomes, was developed and implemented. The NGO aimed to use it as an instrument for patient participation as well as to strengthen their impact assessment.

Results:

Survey results show high satisfaction levels and a reported increase in health status and system competence. They provide valuable answers for organisational development and fundraising but do not correlate with the extent of care provided.

Conclusions:

Patient surveys are particularly helpful in humanitarian care to legitimize the efforts of compensatory initiatives. Since the affected persons still suffer from undersupply, results are not a valid measure of care standards but rather demonstrate appreciation for the mere existence of volunteer help. For an effective participation, one should not confound involvement in surveys with access to care. To illuminate existing barriers, alternative methodical approaches such as qualitative multi-level case studies are promising, as they allow data on local support settings to be linked with individual care histories and underlying institutional frameworks.

Abstract citation ID: ckac129.719
Primary mental health care in India for older people: stigmatization and community-orientation

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Background:

In India, older persons are among the fastest growing population groups that are particularly vulnerable to an impaired mental health. Strengthening public primary mental health care (PMHC) has been one of the political priorities in recent years, including efforts to provide more old age-inclusive care. Many factors play a role in shaping equitable access to PMHC. In this study, we focus on how social norms and perceptions of mental health in old age on the community-level facilitate or hamper access to inclusive PMHC.

Methods:

Semi-structured interviews with key informants ($n = 14$) from the fields of mental health and old age policy and practice have been conducted and analyzed.

Results:

The interviewees describe barriers and opportunities towards old-age inclusive and community-oriented PMHC that go beyond the availability of services. The stigmatization of mental health - especially in old age - is a major barrier that is deeply rooted within the family and community care system. While experts stress the relevance of relatives in fostering mental health of older people, a lack of awareness of facets of mental health and a fear of stigmatization within communities prevents older persons and their family caregivers to seek formal mental healthcare. Moreover, experts describe an increasing disintegration of family support systems in rural and urban areas. Therefore, a more prominent role for outreach-support provided by community health workers (CHWs) is suggested. However, according to experts, transforming the scope of practice of CHWs to include mental healthcare for older persons is still predicted to be a major challenge.

Conclusions:

To improve equitable access to and participation of older persons and their families in PMHC, the perceptions and attitudes towards mental health and old age need to be considered.

Abstract citation ID: ckac129.720
Participation in vulnerable old age? Barriers and opportunities in nursing homes in Germany

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Background:

Nursing homes in Germany are still often associated with the idea of a daily routine determined by the institution, linked to losses of self-determination and participation. Residents, as well as carers and caregivers, perceive chances for co-determination and co-creation as limited.

Methods:

The research project PaStA (Participation in Inpatient Care for Older People) examined and analyzed opportunities and limits of improved participation in nursing homes in Germany with the help of a participatory action research design. Experiences and findings with participatory research processes in two nursing homes are presented.

Results:

Access to people both living and working in nursing homes is demanding and time-consuming. Building a trusting cooperation requires commitment and resources. However, if a research team - including residents - is successfully installed, the participatory process enables all those involved to explore, try out and shape participation possibilities. The reflection that takes place in the process leads to learning processes that (can) result in empowerment.

Discussion:

However, there is a danger that participatory research may primarily reach people better provided with resources for participation based on life-long circumstances (participation dilemma), highlighting the need for responsibly designed access. Likewise, the question of impact must be critically discussed. Sustainability must be considered from the beginning.

Conclusions:

Participatory action research is a worthwhile endeavor, even in settings that are rather unfamiliar with participation, such as residential care for older people. However, researchers should not underestimate the time and commitment required, because preconditions and resistance of people and structures can compromise progress.

Abstract citation ID: ckac129.721
Participation and chronic illness: Nurses' perceptions in primary care in Brazil, Germany, and Spain

Marcus Heumann

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Background:

Many chronically ill persons are challenged by integrating the illness in everyday life and making 'competent' decisions on their life and care. In multiprofessional primary care, promoting clients' self-management and strengthening their abilities to participate in everyday life is increasingly recognized as a nursing task. This study investigates facilitating and inhibiting conditions that nurses experience when exercising this task.

Methods:

Drawing upon a phenomenological approach, we conducted guided interviews with 34 practicing nurses and 23 key informants with advanced knowledge of primary health care nursing practice in Brazil, Germany, and Spain. The interviews were analysed using structuring content analysis.

Results:

The interviewees see competencies of nurses to establish trusting relationships with chronically ill clients as key to greater client participation. Nurses, however, state that bonding with clients can be time-consuming and exhausting. They consider it fundamental that physicians and other professionals value nurses' efforts towards stronger client participation as a way forward to reach for person-oriented primary care. They criticize that especially physicians value biomedical tasks more than enabling participation. Referring to primary health care organisation, nurses experience that pressure of time through a growing number of routine and administrative tasks inhibits their efforts to strengthen clients' participation.

Conclusions:

To promote the participation of clients with chronic illnesses in their everyday life and in care, relationship building with clients and self-management support needs to be acknowledged as an important scope of practice approached by nurses. To be able to unfold the potentials nurses need to be equipped with sufficient time and skills.

11.K. Pitch presentations: Barriers and enablers in health promotion behaviours

Abstract citation ID: ckac129.722
Health literacy time trends in Germany

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Background:
Health literacy (HL) is becoming increasingly important in the European public health sector. Since the Health information landscape is changing constantly there is a need for monitoring HL regularly in order to observe the influence of these changes, to enable trend statements and to obtain precise information on the societal and individual factors. For the first time, this has been done for the population in Germany.

Methods:
Cross-sectional data collected in the adult population in Germany in 2014 (n = 1.940) and 2020 (n = 504) was used. The instrument HLS-EU-Q47 was used to measure HL in the domains of health care, disease prevention and health promotion. Changes between time points were analysed on the population level as well as in several population groups.

Results:
The HL of the German population has become lower within the observed six years. This is evident in all three domains but is most pronounced in health promotion literacy. This trend is particularly visible among people with low social status and financial deprivation. Single health information tasks that are precepted as more difficult involve the evaluation of information and handling information from the media.

Conclusions:
Over time, dealing with health and disease-related information has become more difficult. As this development is mainly driven by socioeconomically disadvantaged population groups, it has apparently increased social inequality in the health sector. Due to more complex and demanding health information, which lately result in an ‘infodemic’, it seems that these groups in particular are overburdened and cannot raise the resources and skills to adequately engage with health information.

Key messages:
- HL interventions should focus on socioeconomically disadvantaged population groups to counteract the increasing health inequality.
- Monitoring HL should be included in public health surveillance to determine needs and challenges for health policies as well as achievements of interventions.

Abstract citation ID: ckac129.723
Health literacy among migrants in Germany – results of the quantitative cross-sectional HLS-MIG study

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Background:
Health literacy (HL) is considered an important prerequisite for health. HL research often identifies migrants as vulnerable for low HL. However, in-depth data on HL among migrants and its determinants are still scarce, especially in Germany. Therefore, the analysis presents first time data on HL among migrants in Germany, specifically in the domains of health care, disease prevention and health promotion, considering migrant-specific and universal factors, such as social and psychological aspects.

Methods:
Around 1.000 first- and second-generation adult migrants from two of the largest migrant groups in Germany, from Turkey and former Soviet Union (FSU), were interviewed face-to-face in German, Turkish or Russian in late summer 2020. HL was measured using the HLS19-Q47 instrument. Bi- and multivariate statistical analyses were conducted.

Results:
More than half of the migrants have limited general HL on average. HL in disease prevention and health promotion was lower than in health care. Low social status, financial deprivation, low literacy skills and low self-efficacy were negatively correlated with each HL domain. Social integration, by contrast, goes along with a higher HL. Duration of stay in Germany and country of origin were only partly associated with HL.

Conclusions:
Our study goes beyond existing studies by analyzing HL in its domains and including the explanatory power of self-efficacy and social integration for migrants’ HL. Moreover, we reveal that migrants can’t generally be considered as vulnerable, as oftentimes outlined. There is need for targeted interventions, e.g. enhancing usability of health information, for the above-mentioned subgroups regarding differences in domains.

Key messages:
- HL among migrants varies across domains and is only partly linked to migrant-specific features but mainly associated with universal aspects.
- Measures to increase HL should consider differences in domains and address vulnerable subgroups including targeted interventions, respectively.

Abstract citation ID: ckac129.724
Language barriers for primary care access in Europe: a systematic review

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Background:
A recent increase in migration both inside Europe and from non-European countries has expanded the language profile of many European countries. As a result, there has been a significant increase in barriers to healthcare access experienced by linguistic minority migrants. This systematic review aims to explore language barriers in primary care, focusing on the experiences of linguistic minority migrants living in Europe.

Methods:
PubMed, Embase, Scopus and Global Health were searched to identify studies published in English until May 2021. Qualitative and mixed methods studies on either linguistic minority migrants or healthcare workers working with linguistic minority migrants, exploring the impacts of language barriers in a primary care setting published were eligible. The studies were analysed using a Braun and Clarke’s thematic analysis approach. Quality of the studies were assessed using the Mixed Methods Appraisal Tool.

Results:
16 studies from 14 different European countries were eligible. Participants in the studies included four groups: linguistic minority migrants (n = 11), healthcare workers (n = 10), interpreters (n = 1) and administrative staff (n = 1). Barriers identified included a lack of interpreters, limited cultural competence of practitioners, a lack of practitioner training and knowledge, a lack of accessible information for migrants, difficulties expressing emotions and building patient-practitioner relationships, and risks to women's bodily autonomy resulting from language barriers.

Conclusions:
Linguistic minority migrants living in Europe face a number of barriers when accessing primary care. These barriers can risk patient safety, reduce the likelihood of seeking healthcare services, and impact patient experiences of healthcare services. There is a need for improved interpreter services, practitioner training, and information accessibility for both migrants and healthcare staff.

Key messages:
- Linguistic minority migrants experience significant barriers to primary healthcare access across Europe.
- There is a need for improved interpreter services, practitioner training, and information accessibility for both migrants and healthcare staff.

Abstract citation ID: ckac129.725
Exploring the involvement of representatives of migrant groups in health research

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Background:
Public involvement in research is increasingly utilised, but has been problematised for lack of diversity. Involving representatives from seldom-heard groups, such as the migrant population, has the potential to transform health research for some of Europe's most disadvantaged groups.

Methods:
We have explored involvement of migrants in health research projects in Sweden, through a three-year longitudinal qualitative study with migrant contributors involved in a child mental health trial, and a series of behavioural observations of research meetings in several projects with migrant contributors.

Results:
The migrant contributors were initially hesitant to trust the researchers. However, through relationship-building and time, mutual trust was established. The contributors gained a social network in each other and the researchers, and their motivation for involvement changed over time, from focussing on individual benefits to societal change. They viewed their role as sharing their experiences, but saw researchers as in control of the final research decisions. Behavioural observations identified barriers to contributors' access to information in the meetings, such as academic terminology and difficulties in language interpretation. Enabling factors included balancing the presence of experts in the meeting as well as flexibility towards contributors' needs and initiatives. Additionally, transparency around the research process and providing feedback to the contributors functioned as enablers for involvement.

Conclusions:
This longitudinal qualitative inquiry paired with behavioural observations, revealed that when involving migrants as public contributors in research, time and resources should be focused on relationship building, to increase mutual trust and understanding, and careful planning undertaken to make the research process transparent and accessible for the contributors.

Key messages:
- Involving migrants in research has great potential – but requires careful planning and consideration.
- Awareness of barriers and enablers can assist researchers in attaining meaningful involvement.

Abstract citation ID: ckac129.726
Public knowledge of chronic kidney disease in Portugal: a quantitative approach

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Background:
Chronic kidney disease (CKD) has increased progressively worldwide, however evidence on public awareness highlights gaps for a comprehensive public health strategy. This study aims to evaluate public knowledge and possible lack of awareness about CKD in Portugal.

Methods:
Cross-sectional study conducted through community based online survey (n = 1209). It was applied the CKD Knowledge Questionnaire and a score was calculated from 24 items categorized in 5 dimensions. Bivariate analyses was performed using one-way ANOVA and independent T-tests, at a 5% significance level, to compare the effect of independent variable and score.

Results:
A total of 1209 respondents with mean age 50 years (±15.1), 74.1% of female, 62.6% married or living with a partner, 55,7% at least university level. The mean (SD) public knowledge of CKD score was 14.30 (±3.4). The dimension "Functions of kidneys perform in the body" presented the lowest percentage of correct answers (48.9±19.5) while "Following are commonly used to determine health of the kidney" the highest percentage (71.3±22.4). Results of the bivariate analysis showed significant associations with gender ($p < 0{,}001$), marital status ($p = 0{,}019$), education ($p < 0{,}001$), high blood pressure ($p = 0{,}020$), personal history of kidney disease ($p < 0{,}001$), familiar history of kidney disease ($p < 0{,}001$), access to healthcare ($p = 0{,}049$), follow-up with a healthcare professional ($p = 0{,}023$), use of urgent care or hospital urgency ($p = 0{,}020$) and use of medical specialty appointments ($p < 0{,}001$).

Conclusions:
People living in Portugal revealed a middle knowledge level. Knowledge higher scores were observed in female, people with higher level of education, with experience imposed by health condition (e.g., risk factors or history disease), and access to health services. Future health education focused on 'Functions of kidneys perform in the body' might be an important contribution to increase health literacy about CKD.

Key messages:
- Social vulnerabilities may be associated with lower levels of public knowledge of Chronic Kidney Disease.
- The evaluation of population's knowledge about CKD is an important instrument for public health policy-making.

Abstract citation ID: ckac129.727
Evaluation of pediatric dentists' approaches to oral health literacy

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Aim:

In the study;it is aimed to determine the knowledge,attitudes,behaviors and educational needs of pediatric dentists about oral health literacy(OHL).

Methods:

The study was carried out with 100 pediatric dentists across Turkey between 20/06/2021-20/07/2021 on the online platform.In the questionnaire form;there are 14 descriptive,25 approaches to OHL in a 5-point Likert format and 8 questions about communication barriers in individuals with insufficient OHL.

Results:

The mean age of the participants was 34.4±7.9 years.92.0%(n = 92) of the participants did not receive OHL training.63%(n = 63) of the participants stated that it is necessary to carry out studies to improve OHL and to develop programs.The mean OHL approach scores of the participants were 3.81±0.61;the mean score of evaluating communication barriers in individuals with insufficient OHL level was 4.06±0.62.60%(n = 54) of the participants think that the health information in the media is very effective in misleading patients.As the age of the participants increased,the OHL approach score increased($r = 0.204$;$p = 0.042$).As the number of daily outpatient clinics of the individuals participating in the research increases,the evaluation scores of communication barriers decrease($r = -0.304$;$p = 0.004$).Among the participants,those who work in private institutions,those who know their rights while providing oral health services and those who are satisfied with the profession have higher scores for evaluating the OHL approach,the difference is statistically significant($p < 0.05$).

Conclusions:

As a result,positive benefits will be provided to the professional satisfaction of pediatric dentists and the quality of oral health services with in-service trainings to be organized before and after graduation on the evaluation of communication barriers in individuals with inadequate OHL approach and level.

Key messages:

- Oral health literacy is a new concept and is becoming increasingly important in dentistry.
- The importance of oral health literacy in pediatric dentistry is that both children and parents are affected.

Abstract citation ID: ckac129.728
An update on national recommendations for the use of the adjuvanted recombinant zoster vaccine

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Background:

The adjuvanted recombinant zoster vaccine (RZV), first approved in 2017, has high, long-lasting efficacy against herpes zoster (HZ) and a clinically acceptable safety profile. In addition to the prevention of HZ in adults aged $\geq$50 years, the non-live RZV can be used from age 18 years in individuals with immunocompromised (IC) conditions. We reviewed the evolving landscape of national recommendations for RZV use.

Methods:

National health authority and vaccination committee websites of countries where RZV is approved were searched in March 2022.

Results:

Of 41 countries where RZV is licensed, 14 (Australia, Austria, Canada, Czech Republic, Germany, Ireland, Italy, Netherlands, New Zealand, Saudi Arabia, Spain, Switzerland, UK, US) provide national recommendations related to RZV; the majority are preferential to RZV or only recommend RZV. Overall, seven and seven countries recommend immunisation from age 50 years or 60/65 years, respectively. Of the seven countries that recommend immunisation from age 60/65 years, five recommend immunisation in individuals from age 50 years with comorbidities/IC conditions. Five countries recommend immunisation from age 18/19 years in individuals at increased risk of HZ due to immunosuppressive disease/treatment. In addition, six national recommendations refer to RZV safety and nine address prior HZ vaccination and/or infection. All recommendations outlined the RZV administration schedule.

Conclusions:

Although national recommendations can inform decision making in clinical practice, RZV recommendations are not available in all licensed countries. The recommendations highlight a trend in favour of the use of RZV for the prevention of HZ in older individuals and those with IC conditions.

Main messages: An increasing number of countries are providing recommendations for the use of RZV for the prevention of HZ in older individuals and those with IC conditions.

Key messages:

- An increasing number of countries are providing recommendations for the use of RZV for the prevention of HZ in older individuals.
- An increasing number of countries are providing recommendations for the use of RZV for the prevention of HZ in IC conditions.

11.L. Pitch presentations: Providing services to diverse populations

Abstract citation ID: ckac129.729
Ethnicity and paediatric healthcare utilisation: Improving the quality of quantitative research

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Background:

The COVID-19 pandemic highlighted the stark health inequities affecting minority ethnic populations in Europe.

However, research on ethnic inequities and healthcare utilisation in children has seldom entered the policy discourse. A scoping review was conducted in the UK, summarising and appraising the quantitative evidence on ethnic differences (unequal) and inequities (unequal and unfair or disproportionate to healthcare needs) in paediatric healthcare utilisation.

Methods:

Embase, Medline and grey literature sources were searched for studies published 2001-2021. Studies that found differences and inequities were mapped by ethnic group and healthcare utilisation outcome. They were appraised using the National Institute for Health and Care Excellence appraisal checklists. The distribution of studies was described across various methodological parameters.

Results:

Of the 61 included studies, most found evidence of ethnic variations in healthcare utilisation (n = 54, 89%). Less than half attempted to distinguish between ethnic differences and inequities (n = 27, 44%). Studies were concentrated on primary and preventive care and hospitalisation, with minimal evidence on emergency and outpatient care. The quality of studies was often limited by a lack of theory underpinning analytical decisions, resulting in conflation of difference and inequity, and heterogeneity in ethnic classification. The majority of studies examined children's ethnicity but overlooked parent/caregiver ethnicity, and also didn't investigate patterns across age, year or location.

Conclusions:

To improve the validity, generalisability and comparability of research on ethnicity and paediatric healthcare utilisation, findings from this scoping review were used to develop recommendations for future research. These lessons could be applied more broadly across the European context to improve evidence generation and evidence-based policy-making to reduce inequities in healthcare.

Key messages:

- Quantitative studies of ethnicity and paediatric healthcare utilisation in the UK lack the use of sound theoretical frameworks, and often do not distinguish between ethnic differences and inequities.
- The quality of future studies can be improved with greater attention to how ethnicity is classified and analysed, alongside specific considerations for examining healthcare utilisation in children.

Abstract citation ID: ckac129.730
Racially discriminatory experiences among older chronically ill people of Turkish origin in Germany

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Background:

Racism in health care is rarely clearly identified as such in Germany. Barriers to access are more often addressed, but people's experiences of discrimination rarely receive attention (Schellenberg & Tusch 2021, Kristiansen 2016). Internationally, racism is recognized as a determinant of health and there is a discourse that it must be addressed in order to achieve health equity (Weil 2022). This qualitative secondary data analysis focuses on racially discriminatory experiences among older chronically ill people of Turkish origin in the context of medical and drug care in Germany.

Methods:

11 expert interviews and 11 problem-centred interviews with chronically ill people of Turkish origin and their relatives in Germany were conducted in the MedikaMig-Project with regard to care practices, continuity of drug care and polypharmacy and analysed with structuring qualitative content analysis (Mayring 2015).

Results:

The analysis yielded 7 superordinate categories and 27 subcategories, identifying racial discrimination in access to care, the treatment situation and communication, and in the consideration of transnational lifestyles. Patients are often helpless, sometimes trying to put their experiences into perspective or to be treated by Turkish doctors in order to avoid these discriminatory experiences.

Conclusions:

Racial discrimination is pervasive in health care and should not be hidden behind other terms that mask discrimination. An intersectional approach allows us to understand which individuals are particularly affected and what they need to be protected from racism in health care.

Key messages:

- Structural racism in health care needs to be clearly named and examined from an intersectional perspective in further research projects.
- Elderly patients with Turkish origin need empowerment and contact persons after racist experiences to find ways to deal with discriminating experiences that are sometimes perceived as traumatic.

Abstract citation ID: ckac129.731
Diversity competence: what should be prioritised in an online course? An adapted delphi study

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Background:

Population diversity is a reality in our societies and requires health systems and health professionals to adapt to the needs of diverse patient groups, including migrants and ethnic minorities. This study aims to investigate topics and methods that should be prioritised in an online course on diversity competence in healthcare delivery to improve health care encounters and provide health services that meet the unique needs of all patients in order to reduce health disparities.

Methods:

The study uses an adapted Delphi method including two rounds, combining some open-ended questions with predefined items, asking 31 European academic experts and health professionals within the field of migrant health to rate training content and teaching methods. Consensus for training topics was set to 80% and for teaching methods 70%.

Results:

The only item reaching 100% consensus as being important or very important to include was 'health effects of migration (pre-, mid- and post-migration risk factors)'. Other high-scoring items were 'social determinants of health' (97%) and 'discrimination within the healthcare sector' (also 97%). A general trend was to focus more on reflective practice since almost all items in the reflection section reached consensus. 'Reflection on own stereotypes and prejudices' reached the highest consensus in this section (97%).

Conclusions:

Experts' prioritisations of teaching content and methods for diversity training can help the design of short online trainings for health professionals and reduce extensive course content, thereby fostering professional development and enabling diversity competence trainings to be implemented in cases of scarce resources.

Key messages:

- Trend toward more focus on 'diversity' and less focus on 'culture, and the inclusion of social determinants of health and awareness of stereotypes and bias in training of health professionals.
- Diversity competence training should use reflective exercises and activities as teaching methods in online training.

Abstract citation ID: ckac129.732
Foreign-born people and covid-19 in Sweden - the effect of co-morbidity

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Foreign-born people who live in Sweden, especially those who were born in low- and middle-income countries, were at higher risk of developing severe covid-19. It has previously been found that morbidity and mortality in covid-19 were associated with country of birth, level of education, income and type of housing. The aim of this study was to map differences between foreign and Swedish-born (18 years and older) with severe covid-19 regarding co-morbidity. This was a register -base study. Register data were gathered from the Patient Register, the Swedish Intensive Care Register, the Cause of Death Register and information on socio-economic variables from Statistics Sweden. Results shows that co-morbidity with severe covid-19 was generally higher for Swedish-born than foreign-born. On the other hand, co-morbidity with diabe-tes and obesity was slightly higher for foreign-born than for Swedish-born. The results also indicate that a higher risk of developing severe covid-19 remains despite the fact that we have controlled a number of factors that affect the relationships such as residential region, demography and socioeconomics. The conclusion of this study is that there is a need for strengthening public health surveillance systems for information such as diagnoses from primary care, the stage at which a person who has become infected has sought care, how the possible differences were in care seekers between foreign and Swedish-born and what the care chain looked like from the time the patient received first symptoms until she/he ended up in inpatient or intensive care.

Key messages:

- Co-morbidity with severe covid-19 was generally higher for Swedish-born than foreign-born.
- There is a need for strengthening public health surveillance systems in primary health care for explaining the reasons of higher risk of developing severe covid-19 among foreign-born people in Sweden.

Abstract citation ID: ckac129.733
Health Service Experiences of Transgender Individuals from Foreign Backgrounds in Finland

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Background:

Internationally, an increasing body of scholarship has focused on the experiences of transgender individuals when accessing gender-affirming healthcare. However, the experiences of transgender individuals who belong to the foreign background population in Finland have rarely been studied. This study aims to fill the gap in research and contribute to the understanding of the experiences of acquiring gender-affirming healthcare among those, who fall into the intersections of transness and also identify of foreign origin in Finland.

Methods:

Fourteen semi-structured qualitative interviews were conducted and analyzed with reflexive thematic analysis (RTA), through the framework of intersectionality. The interviews were part of a broader sample of qualitative data, collected about the experiences of sexual and gender minorities among the foreign origin populations in Finland.

Results:

The analysis showed two main interconnected themes. Firstly, perceived barriers when accessing gender-affirming care. In this theme, the intersections of transgender identity, foreign background, class, and age affected the experiences of the individuals. Secondly, the necessity of "performing identities:" the intersections of class, transgender identity, and race affected those.

Conclusions:

The findings of the current study suggest that the intersectional aspects of individual identities create structural inequalities in the Finnish gender-affirmation healthcare system. To tackle these inequalities, further research is needed on the healthcare experiences of gender minorities in Finland both within and outside the scope of transgender-specific healthcare.

Key messages:

- Intersectional aspects of individual identities create structural inequalities in accessing gender-affirming healthcare.
- Further research is needed on the healthcare experiences of gender minorities that examines health and wellbeing using an intersectional lens.

11.M. Workshop: Vaccination hesitancy in the Western Balkans and inclusive governance

Abstract citation ID: ckac129.734

Organised by: EURO HEALTH GROUP (Denmark), School of Public Health & Health Management (Serbia)
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Vaccine hesitancy has been identified as one of the crucial contributors to the global decline in vaccination coverage for several well-established vaccines in previous decades and is listed by the World Health Organization as one of the top ten threats to global health. In developing countries, the leading reasons for under-vaccination appear to be the lack of access, low education and socio-economic status. In developed countries psychological, social, and contextual factors are defined as main drivers of vaccine hesitancy. With the COVID-19 pandemic the threat of vaccine hesitancy has become more evident and is now in the focus of strategies and efforts to improve and strengthen the interventions to combat vaccine hesitancy and increase vaccination coverage. Despite the availability of multiple effective vaccines against COVID-19, only 40% of population of Wester Balkans in average has been completely vaccinated (with a complete initial protocol), which is far below the world average (56%). Vaccine hesitancy largely jeopardizes the achievement of heard immunity, postponing the end of the pandemic. To explore reasons of vaccine hesitancy, the cross-sectional and quasi-experimental studies were performed from July to September 2021 in five countries of the Western Balkans: Albania, Bosnia-Herzegovina, Montenegro, North Macedonia, and Serbia. The results will be presented and discussed from a policy perspective. The first presentation will introduce to the actual debate around vaccination hesitancy; the second presentation describes the survey design and key results related to societal factors (confidence in political and health authorities, science, and pharmaceutical companies), social responsibility (personal sense of responsibility in achieving collective immunity and contagion prevention) and the credibility of information sources about COVID-19 vaccines; the third presentation will discuss components of credibility (expertise, trustworthiness, and caring/goodwill) after respondents' exposure to messages with narratives on COVID-19 vaccine decisions. The fourth presentation is going to identify promising policy options. The objective of the workshop is to present and discuss the results of the Western Balkans study, relate them to corresponding studies in Europe and beyond, and propose effective interventions. The audience is invited to discuss the findings and the practicability of strategies to improve the acceptance of qualified information in the population, how to enhance trustworthy, how to improve vaccination rates. The discussion will focus on the following questions: a) What are the main drivers of vaccination hesitancy? b) Which messaging format is most convincing and trustworthy? c) Why is the global dimension essential?

Key messages:

- Vaccine hesitancy is a serious threat and reason for the insufficient vaccination coverage and suboptimal herd immunity in the Western Balkans.
- Vaccination policy has to enhance information trustworthy and source credibility at the national level and argue for fair resource distribution in the global dimension.

Abstract citation ID: ckac129.735
Global decline in vaccine coverage; COVID-19 Vaccine Hesitancy

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Vaccine hesitancy is a relatively new concept, developed by WHO's Strategic Advisory Group of Experts (SAGE) on Immunization in 2014 as a response to the growing awareness of the decline in global confidence in vaccination. Vaccine hesitancy is a context-specific behavioural phenomenon whose occurrence ranges between full acceptance and complete refusal of vaccines. Several studies have explored factors that influence people's decision to get vaccinated and in 2018 WHO and UNICEF conducted a joint study to explore the reasons for vaccine hesitancy. The study aimed to determine the reported rate of vaccine hesitancy across the globe and the reasons for hesitancy. In most studies three top reasons were identified. 1) vaccine safety concerns, 2) lack of knowledge and awareness of vaccine importance, and 3) religion, culture, gender and socio-economic issues regarding vaccines. Other factors contributing are negative perception of vaccine efficacy, safety, convenience, and price. Some of the consistent socio-demographic groups that were identified to be associated with increased hesitancy included: women, younger participants, and people who were less educated, had lower income, had no insurance, lived in a rural area, and self-identified as a racial/ethnic minority. Vaccine hesitancy is associated with the global crisis of trust in science and institutions, namely lack of political trust, which can be defined as public judgment that the system and its representatives are responsive and reliable. Furthermore, distrust in one institution is related to distrust in other, indicating the unidimensional phenomenon. This kind of distrust is exemplified by the appearance of infodemic - an overabundance of information. In addition, support for conspiracy theories related to COVID-19 which correlates with the scepticism towards vaccination has significantly higher rates among Balkans' populations.

Abstract citation ID: ckac129.736
COVID-19 vaccine hesitancy in five Western Balkan countries

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Background:

The vaccine hesitancy is a matter of global concern with inadequate global uptake postponing the moment of reaching herd immunity and bringing the COVID-19 pandemics under control. Countries in the Western Balkans struggle with vaccine hesitancy, trying to bring vaccine acceptance and ways to improve it into the focus.

Methods:

A cross-sectional study on vaccine hesitancy was conducted from July to September 2021 and included adult population from Albania, Bosnia and Herzegovina, North Macedonia, Montenegro and Serbia (1605 individuals). Convenience sampling was applied using anonymized online questionnaire (shared through social media) measuring, among others, trust in societal factors, social responsibility and, the credibility of information sources about COVID-19 vaccines.

Results:

The highest degree of trust in societal factors was found in North Macedonia (M = 3.65, SD = 1.06), followed by Montenegro (M = 3.50, SD = 1.19) and Serbia (M = 3.24, SD = 1.26). In Albania 44.7% respondents believed in reluctance of pharmaceutical companies to publish detailed research reports on the risks of adverse reactions to COVID-19 vaccines. The view that the health authorities when they encourage vaccination do so with the best intentions supported 66,3% respondents in North Macedonia and 49% in Albania and Serbia. The highest level of social responsibility (M = 4.12, SD = 1.09) was revealed in North Macedonia. Primary care physicians, health professionals in media, webpages of public health institutions, and scientific literature are the most trusted sources of information about COVID-19 in all countries.

Conclusions:

The study demonstrated moderate trust in societal factors and moderately high level of social responsibility in all countries. The health professionals enjoy the greatest trust, which implies that medical doctors, especially physicians in primary health care should have a pivotal role in promoting vaccination and educating the general public in the Western Balkans.

Abstract citation ID: ckac129.737
Does it matter who addresses whom in vaccination promotion campaign?

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Background:
A vaccine promotion campaign is primarily grounded on the selected message features, namely, a carefully chosen information source. People holding diverse views towards vaccination could experience the same information source differently, and it is the comprehension of these diversities that is important to tailor effective interventions. The aim of this study was to determine differences in perceived source credibility between the vaccinated and unvaccinated.
Methods:
Overall 172 adults aged 18 and older from Western Balkans both vaccinated and unvaccinated, voluntarily after obtaining informed consent, were randomly assigned to one of four message interventions. The messages were developed combining two prototypical COVID-19 vaccine decision narratives (determined vs. hesitant) with two communication sources (physician vs. lay peer), resulting in four conditions: determined physician, hesitant physician, determined peer, hesitant peer. After the message exposure, participants evaluated three components of source credibility - expertise, trustworthiness and, goodwill. Two-way ANOVA was applied.
Results:
Compared to the vaccinated, the unvaccinated judged the source as less trustworthy ($p < 0.01$), regardless of the message they have been exposed to. Although not statistically significant ($p = 0.064$), the unvaccinated evaluated all sources with the exception of hesitant physician as having a lower level of good intentions. Vaccinated perceived the determined physician as a source with most expertise, while unvaccinated attributed highest expertise to the hesitant physician (without significant difference ($p = 0.719$)).
Conclusions:
The unvaccinated are generally less likely to experience the information sources as goodwill and trustworthy. In order to perceive the source as more competent the focus should be on the objective characteristics of the communicator, as well as on the congruency in attitudes between the communicator and the audience.

Abstract citation ID: ckac129.738
Inclusive governance: Enhance health literacy to reduce vaccine hesitancy

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Background:
The COVID-19 pandemic placed a call for action worldwide. Based on scientific investigation, governments need to assess strategic priorities. Health system capacity constraints and failures in response to the pandemic have social, medical, productivity, and economic implications. It compounds health equity issues and confronts with excess mortality, higher chronic disease prevalence, and risk factors. Despite initial progress in vaccination against COVID-19 and attempts to speed up vaccination, the Western Balkan lags behind. Infodemic and low trust in institutions are among the main factors associated with low success and adverse effects on other vaccination programs. This presentation aims to shed light on the importance of health literacy in resilient communities supported by inclusive governance.
Methods:
A narrative review based on literature on inclusive governance, health literacy, and resilient communities during COVID-19 and other emergencies. Primary sources are databases, scientific articles, Health System Response Monitor, and observations by ECDC and OECD.
Results:
Results show that characteristics of resilient communities in possessing knowledge and ability to assess risk, manage an emergency, monitor change, and address threats stand out. Many studies highlight the interconnectedness of community members with the wider external environment and their participation in decision-making to improve health services. Examples include interventions for developing future vaccination programs in program planning, conducting sound evaluations, transferring results to those who need to know, and receiving feedback. The key to this success is enhancing digital and health literacy.
Conclusions:
COVID-19 requires cross-sectional strategies to reinforce collaborative gains and build resilient communities, ready to apply population strategies for prevention. Inclusive governance and a bottom-up approach will be essential to optimize the response to future challenges.

11.N. Workshop: School-based sexual health education: from evidence to implementation and evaluation

Abstract citation ID: ckac129.739

Organised by: University of Pisa (Italy), Federal Centre for Health Education - WHO Collaborating Centre for Sexual and Reproductive Health, EUPHA-IDC
Chair persons: Lara Tavoschi (Italy), Johanna Marquardt (Germany)
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Sexual and reproductive health (SRH) is a key dimension of health and well-being of individuals. Sexuality Education (SE) is one of the most important means of promoting sexual well-being of youth and a key component of HIV and sexually transmitted infections (STIs) prevention. International treaties and global health organisations explicitly urge governments to take the necessary measures to ensure the provision of SE, that should: be age-appropriate, start as soon as possible, promote mature decision-making, be directed towards improving gender inequalities and engage young people in all phases of activities. It is widely recognised that school plays a central role in learning about health and health promotion skills, including sexuality and sexual health. Although school-based SE (SBSE) alone may not be enough to ensure the rights of young people to SRH and prevent STIs, school programs are a very cost-effective way to contribute to these goals. Moreover, addressing these topics in schools is a thematic indicator for monitoring the UN Education Agenda 2030. Existing evidence indicates a great variability in the offer of school-based SE throughout the world. GEM report (2016) reveals that basic school curricula and educational standards rarely include SE programs, and multi-country reviews show limited progress in developing national strategies for the implementation of SE or in developing high-quality programs implemented on a large scale. Theoretical and research evidence indicate that SE, and in particular Comprehensive Sexuality Education (CSE), positively impacts the behaviour of young people, improving SRH outcomes by reducing risk-taking. UNESCO in 2018 defined CSE as ''a curriculum-based process of teaching and learning about the cognitive, emotional, physical and social aspects of sexuality. It aims to equip children and young people with knowledge, skills, attitudes and values that will empower them to: realize their health, well-being and dignity; develop respectful social and sexual relationships; consider how their choices affect their own well-being and that of others; and, understand and ensure the protection of their rights throughout their lives''. In 2022, Italy is one of a few European countries that still lacks a comprehensive approach to SE that is coherently and equally implemented across the country and SE is not yet included in Italian schools' curricula. As a consequence, several studies conducted on Italian young people report that they have poor sexual health knowledge, a low and inconsistent use of condoms and contraception, very little access to SRH services such as youth sexual health clinics and high levels of gender-based violence and homotransphobia. Moreover, 20% of all STIs detected in Italy affect young people. Yet, according to Italian students, school has clearly been pinpointed as the most appropriate place to receive information about SE.

Key messages:

- Some European countries, including Italy, do not include SE in national school curricula. Often, available SBSE programs lack a comprehensive approach, with limited coverage across the countries.
- Including CSE in national school curricula is an action urgently needed in order to provide young people with evidence-based, age-appropriate and accurate information on SRH and wellbeing.

Abstract citation ID: ckac129.740
School-based sexuality Education in Europe and Central Asia

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Introduction:

In 2016, the BZgA and the European Network of the International Planned Parenthood Federation initiated an extensive survey regarding the development and current status of sexuality education (SE) in Europe and Central Asia, which included 25 selected countries of the European WHO Region. Since 2000, remarkable progress has been made in the region in developing and integrating SE curricula in school settings. The majority of the surveyed countries teach basic elements of SE in schools. Yet, in about half of the countries, there is still some reticence in understanding the benefits of SE for the health and well-being of young people. In countries with fully developed comprehensive SE programmes, the school is the main source of information on sexuality for young people. In the other countries young people tend to rely on information from friends or peers and the internet. The findings also showed a gap in teacher training on sexuality education.

Methods:

The Survey included a detailed questionnaire, among member associations of IPPF EN and government agencies responsible for SE. A random sample was drawn from the 50 states of the region which is considered representative for the entire region. All 25 IPPF EN members and 16 of the 25 government agencies responded.

Results and discussion:

Remarkable progress has been made in developing and integrating SE in formal school curricula. In 11 of the 21 countries, SE is a mandatory teaching subject, and in six additional countries it is partly mandatory. In four additional countries it is optional. Despite the progress, there are still shortcomings and gaps in providing the full spectrum of SE.

Conclusions:

If provided, SE tends to focus primarily on the biological aspects and prevention of HIV/STIs and unwanted pregnancy. There is a need to broaden the spectrum of topics that are addressed to include gender equality, sexuality, violence and sexual abuse, human rights and empowerment.

Abstract citation ID: ckac129.741
Co-creation of a school-based sexual health education intervention in Italy

Alice Chinelli

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Introduction:

School-based sexuality education (SBSE) is the most effective way to positively impact young people's behaviour and attitude towards sexuality. This study describes the development of a SBSE pilot activity targeting lower secondary schools (LSS) within the context of EduforIST project funded by the Italian Ministry of Health.

Methods:

A desk review was carried out to collect information about national policies, international literature and guidelines on SE and STIs prevention. An online survey was developed to collect information on SBSE activities implemented in Italy during 2016-2020. Focus groups among project partners and open consultations with a multisectorial expert advisory board were organised. SBSE pilot activity was developed by an interdisciplinary team of pedagogists, public health and SE experts, educators.

Results and discussion:

The SBSE was structured in: a) 5 interactive interventions of 2 hours each with students (4 theoretical and practical modules; 1 final intervention for students-led discussion and evaluation); b) introductory and closing meetings with teachers and with parents. The modules addressed the following dimensions: changes in adolescence; emotions and relationships; sexual identities and diversity; sexual consent, STIs/pregnancy prevention, sexual health services. Additional materials were developed: a. pre/post evaluation tools for educators and students; b. pre-implementation checklist for schools; c. materials for teachers' and parents' engagement before/after the SBSE activity.

Conclusions:

This pilot activity represented a first step towards the development of a standardised, evidence-based and comprehensive approach to SBSE, for future implementation across the country.

Abstract citation ID: ckac129.742
Implementing a school-based comprehensive sexual health education intervention in Italy: experiences from the field

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Introduction:
This study describes the preliminary results of a School-based sexuality education (SBSE) pilot activity developed and implemented within EduForIST project, funded by the Italian Ministry of Health.

Methods:
The pilot activity (5 modules of 2 hours each delivered per classroom) targeted lower secondary schools students. A total of 20 schools located in 4 different Italian regions participated. The educators were staff of several HIV/AIDS civil society organisations operating in Italy. A 2-days intensive workshop for educators was performed. Pre and post tests were conducted.

Results:
At the time of submission, pre-test results were available from 14 classrooms of 5 schools within 2 Italian Regions, for a total of 266 students. Among these, 37,4% were unsure that personal identity is built through social comparison; 21,8% reported that emotions don't get more intense during adolescence, while 18,1% were unsure about the response; 42,1% reported a higher level of uncertainty concerning the definitions of gender identity, sexual orientation and stereotype. The highest level of uncertainty were reported for STIs symptoms (58,7%), impact of treatment on HIV+ people (61,9%) and efficacy of contraceptive pills in preventing STIs (43,4%). The post-test results were available for 153 students. Pre/post analysis showed an increase of correct answers ($p < 0.05$) for 12 of 15 items investigated. A total of 102 students responded to the satisfaction questionnaire, with preliminary positive results.

Conclusions:
Since activities are ongoing, further data will be soon available for more exhaustive analyses. Early pre/post evaluations suggested that the pilot experience was effective in enhancing knowledge and decreasing uncertainty in the different domains addressed in the pilot. Evidence collected through this study shall raise awareness among decision makers on the urgency of introducing CSE in Italian school curricula and inform future policy options.

Abstract citation ID: ckac129.743
How to evaluate a sexual health education intervention: experience from an Italian pilot project

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Introduction:
Evaluation is an essential dimension of every educational activity, however it is a very crucial and problematic aspect to be considered. It is necessary to focus on some fundamental concepts: the idea of 'measurement', the definition of expected goals for the educational activity, whether they are measurable, and if not, how they can be evaluated. Finally, effectiveness may be assessed only after longer periods of time and by adopting coherent instruments. Outcomes of educational activities on sensitive themes such as sexuality education, are challenging to evaluate through causal relationships. So a fundamental question is: what is really possible to evaluate in the field of sexuality education (SE)?

Methods:
A desk review was carried out to collect information about national policies, international literature and guidelines on SE evaluation. A literature review was performed to collect and collate reported field experience and evaluation data.

Results and discussion:
In literature it is possible to find a consistent number of studies aimed at evaluating SE programs (in particular inspired by the models 'abstinence-only' and 'abstinence-plus'), whose goal is to understand their impact on adolescents sexual health. Most of the studies reported limited evidences on SE efficacy on sexual health-related outcomes. This may be attributed to two different causes: methodological - evaluation instruments are epistemologically difficult to develop; and theoretical - the underlying philosophical frameworks they refer to may not fully reflect the complexity of sexuality education for adolescents.

Conclusions:
Based on the findings, evaluation instruments were developed to collect experiences from educators performing school-based sexuality education within the context of EduforIST project funded by the Italian Ministry of Health. Analysis of the collected data were still ongoing at the time of submission.

11.O. Pitch presentations: Effects of COVID-19 on mental health

Abstract citation ID: ckac129.744
Anxiety and depression symptoms during the COVID-19 pandemic in European countries and Australia

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Background:
Studies on mental health changes during the COVID-19 pandemic report no change or increasing prevalence of mental

health problems in general, but less is known on changes in potentially disadvantaged groups over time. We investigated changes in anxiety and depression symptoms during the first year of the pandemic in France, Germany, Italy, the Netherlands, Spain, Sweden, and Australia by prior mental disorders and migration status.

Methods:

Overall, 4,674 adults answered a web-based survey in May-June 2020 and were followed by three repeated surveys up to February 2021 in these countries. Information on socio-demographic, living conditions, psychosocial factors, diagnosis of mental disorders before, depression and anxiety symptoms during the pandemic and migration status (being a resident or not) was collected. Weighted general estimation equations modelling was used to investigate the association between prior mental disorders, migration status, and symptoms over time.

Results:

Most participants were <40 years old (48%), women (78%), and highly educated (62%) with some variations across countries. The baseline prevalence of depressive and anxiety symptoms ranged between 19%-45% and 13%-35% respectively. In most countries, prevalence remained unchanged throughout the pandemic and was higher among people with prior mental disorder than without even after adjustment for socioeconomic, psychosocial, living and health factors. We observed interactions between previous mental disorders and symptoms of anxiety or depression over time in Germany (p = 0.01) and in Spain (p = 0.04). No prevalence difference was noted by migration status.

Conclusions:

Depression and anxiety symptoms were worse among individuals with prior mental disorders than without, but there was no clear trend of mental health worsening in the observed groups during the first year of the pandemic. Still, monitoring mental health should be continued in the long-term, with special focus on vulnerable groups.

Key messages:

- Depression and anxiety symptoms were higher in individuals with prior mental disorders during the first year of the pandemic in an international sample of six European countries and Australia.
- There were no clear trends of mental health worsening in any of the observed groups in neither of the countries between May-June 2020 and February 2021.

Abstract citation ID: ckac129.745
Inequalities in psychological distress before and during the COVID-19 pandemic among UK adults

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Background:

Evidence about how population mental health has evolved from before and over the COVID-19 pandemic remains mixed, with impacts on mental health inequalities being unclear. We investigated changes in mental health and sociodemographic inequalities from before and across the first year of the pandemic.

Methods:

Data from 11 UK longitudinal population-based studies with pre-pandemic measures of psychological distress were analysed, estimates pooled, and stratified by age, sex, ethnicity, country and lone household status. Trends in the prevalence of poor mental health were assessed before the pandemic (TP0) and across the pandemic at three time periods (initial lockdown (TP1), easing of restrictions (TP2), and a subsequent lockdown (TP3)).

Results:

In total, 49,993 adult participants were analysed across the 11 cohort studies. There was an overall worsening in mental health from pre-pandemic scores across all three pandemic timepoints, (TP1 Standardised Mean Difference: 0.15 (95% CI: 0.06 - 0.25); TP2 SMD: 0.18 (0.09 - 0.27); TP3 SMD: 0.21 (0.10 - 0.32)) with no evidence of improvement during the period of eased lockdown restrictions in summer 2020. Changes from pre-pandemic psychological distress were higher in females during the pandemic (TP3 SMD: 0.23 (0.11 - 0.35)), amongst those with degree-level education (TP3 SMD: 0.26 (0.14 - 0.38)), and adults aged 25-44 years. We did not find evidence of changes in distress differing by ethnicity, lone household status or UK nation.

Conclusions:

The substantial deterioration in mental health seen in the UK during the first lockdown did not reverse when lockdown lifted and a sustained worsening was observed across the pandemic. Mental health declines have been unequal across the population and these results have implications for policy, including the need for specific investment for support for those most affected to mitigate the effects of the pandemic and measures to reduce inequalities within these specific groups.

Key messages:

- A sustained deterioration in mental health was observed from before the start of the COVID-19 pandemic, and did not recover when social restrictions were eased.
- Deterioration in mental health varied by sociodemographic factors, namely age, sex, and education, and highlights a need for improved mental health care provision to minimise widening inequalities.

Abstract citation ID: ckac129.746
The effect of financial support on depression among young adults during the COVID-19 pandemic

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Background:

To mitigate the adverse effects of the COVID-19 pandemic on financial resources, governments provided financial support (e.g., emergency aid funds) as well as family via personal assistance. This study aims to assess the moderating effect of financial support from the government or from family on the association between income loss and depression among young adults.

Methods:

Two online cross-sectional surveys among young adults (18-29) living in Canada and France were conducted in October-December 2020 (n = 4511) and July-December 2021 (n = 3329). Depressive symptoms were measured using PHQ-9 score+10. Two logistic regression models were performed for each survey with an interaction term between income loss and financial support (government or family modeled separately), controlling for demographics (e.g., country, age, gender, income, living conditions).

Results:

In the total sample, half reported depressive symptoms (2020/2021: 53%/46%), and over a third lost income (2020/2021: 10%/12% all income, 38%/22% some income). In 2020, 41% received government financial support (2021: 18%) while family/friends support was constant (12%). In both surveys, among those who received government support, income loss was associated with depression, whether participants lost all income (2020: AOR 1.75 [1.29-2.44]; 2021: AOR 2.17 [1.36-3.44]), or some income (2020: AOR 1.31 [1.17-1.81]; 2021: AOR 1.46 [0.99-2.16]). However, among those who received family support, income loss was no longer significantly associated with depression, whether participants lost all income (2020: AOR 1.37 [0.78-2.40]; 2021: AOR 1.51 [0.88-2.56]), or some income (2020: AOR 1.31 [0.86-1.99]; 2021: AOR 1.10 [0.67-1.81]).

Conclusions:

Association between income loss and depression was moderated by receipt of family financial support but not by receipt of government support. Financial support may help to mitigate the negative effects of income loss on young adults mental health during public health crisis.

Key messages:

- Financial support may help to minimize risk of depressive symptoms among youth who lost income related to the COVID-19 pandemic.
- Financial support through personal assistance (e.g., family, friends) appears to have a greater impact on youth mental health than COVID-specific government assistance funds.

Abstract citation ID: ckac129.747
The effects of the Covid-19 pandemic on the stress and depression levels of new mothers

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Background:

New mothers are a particularly vulnerable group during the COVID-19 pandemic, due both to the higher depression and stress levels associated with early child care and to the risk of a COVID-19 infection. We investigated the effects of the pandemic on the childbirth experience, stress and depression levels in this population.

Methods:

This cross-sectional, explorative study included 1964 Austrian and German mothers who gave birth between 16.03.2020 and 01.07.2021 and completed an online survey between 18.05.2021 and 01.07.2021. This contained the Childbirth Experience Questionnaire (CEQ2), the Edinburgh Postnatal Depression Scale (EPDS), and the Perceived Stress Scale (PSS), as well as three custom-made scales: a birth risk score (risk factors for a poor birth outcome), a pandemic repercussions score (perceived effects on different aspects of personal life), and a social support score (how emotionally supported they feel). We computed post-hoc multilinear regression models to evaluate which factors can predict the CEQ2, PSS and EPDS scores.

Results:

Mothers had a worse birth experience, perceived less stress and had more depressive symptoms during the pandemic than previously reported cohorts. The CEQ2 was predicted by the birth risk (negatively), the access to a midwife (positively) and the perception of sufficient access of the visitors in the hospital (positively) (adjusted R2 = 0.26, F(4, 1738) = 155.64, $p < 0.001$). The PSS was predicted by the pandemic repercussions (positively), the social support (negatively), and the presence of a coping mechanism (negatively) (adjusted R2 = 0.28, F(4, 1959) = 195.1, $p < 0.001$). The EPDS was similarly predicted by the same factors as the PSS (adjusted R2 = 0.28, F(4, 1959) = 189.59, $p < 0.001$).

Conclusions:

Social support and strong coping mechanisms can lower the stress and depression scores. Instructing the population about how to improve these factors might be a target for future social policies.

Key messages:

- Compared to historical cohorts, mothers who gave birth during the pandemic had a worse birth experience, and, postnatally, perceived less stress but had more depressive symptoms.
- The visitors' access to the hospital and the mother's access to a midwife impacted the birth experience, while the social support and the coping mechanisms affected the stress and depression scores.

Abstract citation ID: ckac129.748
Reactive surveillance of suicides during the COVID-19 epidemic in France, 2020- March 2022

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Background:

Mitigation actions during the COVID-19 pandemic, in particular lockdowns and curfews, may impact mental health and suicide in general populations. We aimed to analyse the evolution in suicide deaths from January 2020 to March 2022 in France.

Methods:

Using free-text medical causes in death certificates, we built an algorithm, which aimed to identify suicide deaths. We measured its retrospective performances by comparing suicide deaths identified using the algorithm with deaths which had either an ICD10 code for 'intentional self-harm' or for 'external cause of undetermined intent' as underlying cause. The number of suicide deaths from January 2020 to November 2021 was then compared with the expected number estimated using a generalized additive model. The analysis was stratified by age group and gender. Analysis from December 2021 to March 2022 was conducted using electronic death certificates only.

Results:

The free-text algorithm demonstrated high performances. From January 2020 to November 2021, suicide mortality declined during France's three lockdowns, particularly in men, and remained quite comparable with expected values between and after both of the country's lockdowns. Provisional results based on electronic death certificates suggest that suicide mortality remained stable until March 2022.

Conclusions:

Monitoring suicide mortality is possible in France with a 4-month delay; this will be reduced to two days when electronic death certification is fully deployed. This study highlighted the absence of an increase in suicide mortality during France's COVID-19 pandemic, and a substantial decline during lockdowns periods, something already observed in other countries. Further studies are required to explain the factors for this decline.

Key messages:

- In the absence of reactive coding of medical causes of deaths, the study proposed an approach to reactively identify suicide based on free-text medical causes from death certificates.

- Our findings provide reassurance that the COVID-19 pandemic has not had a negative impact on the general population in terms of suicide in France from March 2020 to September 2021.

Abstract citation ID: ckac129.749
Self-reported anxiety and depression among COVID-19 patients: A prospective cohort study from Turkey

Öykü Turunç

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Background:
It has been shown that COVID-19 can cause symptoms and diseases such as insomnia, depression, and anxiety. This study aimed to describe prevalence of feeling anxious or depressive among COVID-19 patients in six months of follow-up time and its association with baseline independent factors.

Methods:
This prospective cohort study included patients aged ≥18 years who tested positive for SARS-CoV-2 at Dokuz Eylul University Hospital, Turkey between November 1, 2020 and May 31, 2021. Participants were interviewed by telephone calls on the 1st, 3rd and 6th months after diagnosis. The dependent variable of the study was self-reported moderate or severe anxiety or depression based on EQ-5D-3L general quality of life scale. Generalized estimating equations were used to identify the factors associated with feeling anxious and depressive after SARS-CoV-2 infection.

Results:
In total 5446 patients agreed to participate in the study. Frequency of feeling anxious or depressive at the 1st, 3rd and 6th months after diagnosis were 18.5%, 17.9% and 15.4%, respectively. Older age (≥65 years; odds ratio-OR:1.17, 95% confidence interval-CI: 0.95-1.44), female gender (OR:1.76 (1.58-1.96)), bad economic status (OR: 1.62 (1.34-1.97)), having more symptoms (4-5, OR:1.48 (1.21-1.81); ≥5, OR:1.65 (1.35-2.01)), having more underlying health conditions (1-2, OR:1.35 (1.19-1.54); ≥3: OR:1.50 (1.13-1.99)), intensive care unit admission (OR: 2.58 (1.70-3.90)) were associated with self-reported anxiety and depression.

Conclusions:
Feelings of anxiety and depression are common in COVID-19 patients and may persist in the long term. Anxiety and depression were associated with gender, economic status and disease severity. Determination of vulnerable groups for anxiety and depression after COVID-19 can be helpful for early diagnosis and initiation of mental care services.

Key messages:
- As a consequence of Covid-19, anxiety and depression in Covid-19 survivors are common generally. It shouldn't be overlooked or underestimated for the public mental well-being.
- Covid-19 mental effects on the population have a correlation with social determinants of health. Therefore, determining vulnerable groups is a key to planning mental care services.

Abstract citation ID: ckac129.750
Longitudinal rate of change in depression symptoms from pre- to post-COVID-19 onset among US mothers

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Background:
The extent of the psychological impact of the pandemic is still unfolding. Despite existing literature, most studies lack rigor. We assessed the longitudinal rate of intra-individual change in maternal depression symptoms from before to after COVID-19 onset among US mothers enrolled in a home visiting program with robust adjustment for family contextual factors. We hypothesize that the rate of change in maternal depression symptoms increased after the pandemic onset.

Methods:
Eligibility included mothers with ≥1 depression assessment both prior to and after March 16, 2020; thresholds of ≥ 13 on the Edinburgh Postnatal Depression Scale and ≥10 on the Patient Health Questionnaire-9 identified probable depression. We used a generalized linear mixed effects longitudinal model with a random intercept and random slope for time (years) to analyze probable depression (event='Yes') pre- and post-COVID. Covariates for model estimation were based on the literature and theory.

Results:
Our cohort of 3,431 mothers included 43% non-Hispanic White, 21% non-Hispanic Black, and 31% Hispanic races/ethnicities; 58% from rural/small towns, 18% Spanish-speaking, 63% with one child, median age of 29 and median 2 years follow-up. Households included: 82% low income, 24% low education, 10% insecure housing, 29% single parents, 21% mental illness, 10% substance abuse, and 8% domestic violence. Fourteen percent screened positive for depression pre-COVID, and 10% post-COVID. Depression was significantly higher pre- versus post-COVID, with no significant difference in the rate of change over time. Significant variables ($p < 0.05$) associated with depression included race/ethnicity, region of the country, number of home visits, mental illness, substance abuse, and domestic violence.

Conclusions:
After controlling for family contextual factors, we did not find a significant increase in maternal depression post-COVID-19. Additional research is needed to examine subgroups and the timing of events.

Key messages:
- The extent of the psychological impact from the pandemic is still unfolding.
- It is difficult to fully articulate its effects without rigorous, longitudinal research designs.

Abstract citation ID: ckac129.751
Establishing Covid-19 Research in UK Care Homes – Infrastructure Challenges for Trial Design

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Background:
The Covid-19 pandemic brought into sharp relief the role that long-term care facilities play in health and social care of an aging population. It also cast a spotlight upon the need for high-quality research to assess the effectiveness of any care home interventions. The Prophylactic Therapies in Care Homes (PROTECT-CH) trial was one such study (funded by the UK National Institute for Health and Care Research). PROTECT-CH was designed to collect data in 200 care homes (approximately 6,400 residents), and whilst the changing epidemiology of Covid-19 in the UK (due to vaccination take-up) made this unfeasible other insights were gained about establishing large-scale research in care homes.

Methods:
An iterative process evaluation of the set-up phase of a large, platform trial testing prophylactic measures in long-term care facilities. Including a documentary review of the PROTECT-

CH working groups and an online survey of working group members.

Results:

Documents were reviewed from 24 working groups, which in a hub and spoke model represented the PROTECT-CH trial infrastructure; representative of 20 of these groups completed an online survey about their organisation and working. Data demonstrated the number and organisation of individuals required to set up a large-scale care-home trial - 91 individuals representing a mix of academic, clinical, and methodological contributions from 25 organisations. Data demonstrated working groups specific to care home research, and activities designed to address the specific challenges of researching in care homes. PROTECT-CH produced dedicated training materials and reporting templates for care home research. PROTECT-CH established novel mechanisms for prescribing and clinical oversight in care home research.

Conclusions:

PROTECT-CH has highlighted the complexity of establishing large, scale RCT research in long-term care facilities. It has produced resources which might be of use in subsequent care home research.

Key messages:

- Infrastructure is required to support high quality research in long-term care facilities.
- RCTs in long-term care facilities pose specific challenged to researchers.

11.P. Workshop: Tobacco control policy strategies to contribute to the EU's tobacco-free generation goal

Abstract citation ID: ckac129.752

Organised by: Tilburg University, Amsterdam UMC, University of Amsterdam (Netherlands)
Chair persons: Andrea Rozema (Netherlands), Mirte Kuipers (Netherlands)
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In 2021, the European Union's (EU) 'Europe's Beating Cancer Plan' set the goal to achieve a tobacco-free generation in Europe by 2040, which means that less than 5% of people will use tobacco. The EU proposed policies to address internationally relevant issues such as tobacco taxation, cross-border purchases, packaging, flavours, and online advertising. However, many tobacco control policies need to be adopted and implemented at the national or local level. It is therefore important to exchange research findings and insights on national tobacco control policies. In this workshop we present results mainly from the Netherlands. With a 21% smoking prevalence and scores 53 out of 100 points on the Tobacco Control Scale, it may therefore be considered an average European country in terms of its tobacco control. However, the Netherlands has progressed its tobacco control policies in recent years, in part due to the 2018 National Prevention Agreement. This Agreement included the same goal as the European tobacco-free generation goal. Achieving a tobacco-free generation requires the prevention of smoking initiation among young people, but also smoking cessation among those who already smoke. This is especially important among lower socioeconomic groups, as the smoking prevalence in these groups is higher both in adults and adolescents. Therefore, smoking and tobacco products need to be less visible and available in the environment, and easily accessible smoking cessation support needs to be provided. With this workshop, we cluster very recent evidence on the EU's tobacco-free generation goal. We will present evidence on four policy strategies for the smoke-free generation, in which their potential impact and challenges in implementation will be discussed. These presentations will be followed by a plenary discussion on the implications and the relevance of the four strategies taking into account differences between international settings.

The presentations will focus on four policy areas:

- Policies to reduce smoke-exposure in and around sport clubs
- Policies to reduce availability of tobacco products in the retail environment
- Policies to reduce smoke-exposure in hospitality venues and homes
- Policies to increase access to smoking cessation

The objectives of the workshop are:

1. Present evidence of four tobacco control policies strategies
2. Discussion of the international relevance and implications of the results

Key messages:

- We present on multiple settings that can be further capitalised on to achieve a non-smoking norm, including sports clubs, retail outlets, hospitality venues, and the home environment.
- The majority of European countries currently does not have strong tobacco control policies in the presented settings, and the potential of such policies throughout Europe will be discussed.

Abstract citation ID: ckac129.753

Diffusion of smoke-free policies at outdoor sports clubs in the Netherlands

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Background:

Although outdoor smoke-free policies (SFPs) at sports clubs represent an important new area of tobacco control, the majority of sports clubs are not smoke-free. This study aims to assess diffusion patterns of outdoor SFPs at sports clubs in the Netherlands, which may inform national strategies aimed at making all outdoor sports clubs smoke-free.

Methods:

Using a retrospective, registry-based design, an inventory was made of football, field hockey, tennis, and korfball clubs that became smoke-free between 2016-2020. We determined the type of sports, number of members, and proportion of youth members. The degree of urbanization and density of smoke-free sports clubs were measured at the municipality level. The association between sports clubs' characteristics, degree of urbanization, and SFP adoption was analysed using multilevel regression analysis. Horizontal diffusion was tested by analysing the association between the density and annual incidence of smoke-free sports clubs.

Results:

Since 2016, the number of sports clubs with an outdoor SFP increased from 0.3% to 26.4%. Field hockey [OR compared to football 6.00 95% CI 4.46-8.07] and korfball clubs [OR 6.65 95% CI 4.98-8.87] and clubs with many (youth) members [OR 8.75 95% CI 6.20-2.35] were more likely to be smoke-free. SFPs spread from the most urbanized to less urbanized municipalities, which could mostly be attributed to sports clubs' characteristics. A higher density of smoke-free sports clubs within municipalities was associated with an increased incidence of new SFPs in the following year.

Conclusions:

Outdoor SFPs at sports clubs in the Netherlands diffused across horizontal and hierarchical lines. National strategies for smoke-free sports should monitor clubs that are more likely to stay behind, such as football and tennis clubs, smaller clubs, and clubs in less urbanized areas.

Abstract citation ID: ckac129.754

Policies to reduce availability of tobacco products in the retail environment

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Background:

After implementation of a tobacco vending machine ban in 2022 and a supermarket sales ban in 2024, the Dutch government intends to further phase out tobacco sales after 2030 by prohibiting sales in petrol stations and small outlets. This study aims to understand 1) the impact of these policies on tobacco outlet availability, and 2) differences in tobacco outlet availability by area socioeconomic status (SES) in the Netherlands.

Methods:

Between September 2019 and June 2020, all potential tobacco retailers in four Dutch cities (Amsterdam, Eindhoven, Haarlem, and Zwolle) were visited and mapped using Global Positioning System (GPS). Expected reductions in tobacco outlet availability were calculated per policy measure. Tobacco outlet density was calculated using ESRI ArcMap version 10.4.1. The association between neighbourhood SES and tobacco outlet availability was estimated with linear and logistic regression model.

Results:

We identified 870 tobacco outlets and an outlet density of 6.2/10.000 capita. The potential sales bans in petrol stations and small outlets would reduce the number of outlets (resp. -7% and -43%) and the outlet density (resp. -0.4 and -2.7). In Eindhoven, Haarlem, and Zwolle, neighbourhoods with high-SES compared to low-SES were less likely to contain a tobacco outlet (OR:0.71, 95%CI:0.59-0.85) and had a lower outlet density (ß:-1.20, 95%CI:-2.20;-0.20). In Amsterdam, the associations were inverse (OR:1.22, 95%CI:1.05-1.40; ß:3.50, 95%CI:0.81;6.20).

Conclusions:

The availability of tobacco outlets varies within and between cities depending on the distribution of the built environment. Future tobacco control policies targeting the retail environment should focus on limiting the overall number tobacco outlets and especially small outlets, which may benefit low SES neighbourhoods in mid-sized cities most.

Abstract citation ID: ckac129.755

Impact of smoke-free policies in hospitality venues and the home environment on smoking behaviour and exposure to second-hand smoke: results of two systematic reviews

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Background:

Smoke-free policies (SFPs) have proven to be effective in protecting people from exposure to second-hand smoke (SHS) and lowering smoking rates. Our aims were to assess the impact of SFPs in hospitality venues (e.g. bars) on smoking behaviour of young people and to assess the impact of SFPs in the home environment on smoking behaviour and exposure to SHS.

Methods:

Two reviews were conducted. The first was conducted in June 2020. We searched PubMed, Embase, and Scopus for studies that assessed the association between any form of SFPs in hospitality venues and a measure of smoking behaviour among young people (aged 10-24 years). The second review will be conducted in June 2022. Searches will be conducted in PubMed, Embase, Web of Science, PsycINFO and CENTRAL. We will search for studies that assess the association between any form of SFPs in the home environment (e.g. multi-unit housing) and a measure of smoking behaviour (e.g. initiation) or SHS exposure.

Results:

Nine studies (publication years 2005-2016) were included in the first review, of which the majority used a quasi-experimental design. Four studies evaluated SFPs in hospitality venues specifically. Two studies reported that strict, but not weaker, SFPs decrease progression to established smoking. Two other studies provided mixed results. Five studies also included other workplaces, of which three studies found significant decreases in current smoking, smoking frequency, and/or smoking quantity. The results of the second review will be presented in detail during the workshop, however an exploration suggests that SFPs in the home environment may prevent smoking and SHS exposure.

Conclusions:

Most studies of the first review found that SFPs in hospitality venues are associated with a decrease in smoking behaviour among young people. Their results indicate the need for strict smoke-free legislation without exemptions. The conclusions of the second review will be presented during the workshop.

Abstract citation ID: ckac129.756

Implementing a smoking cessation training for lower socioeconomic groups into local policy in Amsterdam, the Netherlands: Identifying preconditions and barriers among multiple stakeholder groups

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Background:

Socioeconomic inequalities in smoking prevalence are high, partly because smoking cessation programs are insufficiently accessible and suitable for smokers with a lower socioeconomic position (SEP). To make it easier for this target group to access suitable smoking cessation programs, it is necessary to structurally implement such programs into local policies.

The study aims to identify preconditions and barriers for the implementation of smoking cessation programs for people with low SEP from the perspective of key stakeholders.

Methods:

The Feel Free! Smoking cessation rolling group training has been previously developed for people from lower socio-economic groups and was implemented in Amsterdam Noord. Semi-structured interviews were held with 25 stakeholders consisting of participants, trainers, professionals in the neighbourhood and stakeholders of the municipality. The interviews were audio-recorded, transcribed verbatim and analysed using a thematic approach. The Implementation Framework of Fleuren will be used to structure the presentation.

Results:

The main preconditions found are effective recruitment of participants by local professionals, having a central coordinator for implementation within the neighbourhood network, and offering a smoking cessation program with a clear added value for participants. The main barriers found are challenges in setting up a sustainable financial structure, allocation of organizational tasks, and high participant absences and dropout. More results will be presented in detail.

Conclusions:

This study shows that action is required from various stakeholders to facilitate the implementation process. These findings can inform policy makers and implementers to choose strategies to implement suitable smoking cessation programs into local policy.

11.Q. Pitch presentations: Monitoring the burden of disease

Abstract citation ID: ckac129.757
The global burden of neglected zoonotic diseases: current state of evidence

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The majority of emerging infectious diseases are zoonoses, most of which are classified as ‘‘neglected’’. By affecting both humans and animals, zoonoses pose a dual burden. The disability-adjusted life year (DALY) metric quantifies human health burden using mortality and morbidity. This review aims to describe and analyze the current state of evidence on the burden of neglected zoonotic diseases (NZDs) and start a discussion on the current understanding of the global burden of NZDs. We identified 26 priority NZDs through consulting the CDC One Health Zoonotic Disease Prioritization Exercise, the Joint External Evaluation reports, and the WHO roadmap for NTDs. A systematic review of global and national burden of disease (BoD) studies for these priority NZDs was conducted using pre-selected databases. Data on diseases, location and DALYs were extracted for each eligible study. A total of 1887 records were screened, resulting in 72 eligible studies (58 national or sub-national, 12 global, and 2 regional studies). The highest number of BoD studies was found for non-typhoidal salmonellosis (23), whereas no estimates were found for West Nile, Marburg and Lassa fever. Geographically, the highest number of studies were found in the Netherlands (11), China (5) and Iran (4). The number of BoD studies retrieved mismatched the perceived importance in national prioritization exercises. For example, anthrax was considered a priority NZD in 73 countries, but only one national estimate was retrieved. By summing the available global estimates, these diseases would cause at least 10 million DALYs in total. The burden of NZDs at the global level remains scattered, and trends were challenging to identify. There are several priority NZDs for which no burden estimates exist, and the number of BoD studies does not reflect national disease priorities. To have complete and consistent estimates of the global burden of NZDs, these diseases should be integrated into larger global BoD initiatives.

Key messages:

- There is a mismatched between the estimated retrieved in the search and the perception of the importance of these disease. This amplify the need for a comprehensive program.
- No complete list of zoonoses exist, and the definition used is vague. A stricter definition of zoonoses and what defines them will help provide a clear view of dealing with and controlling them.

Abstract citation ID: ckac129.758
The changing landscape of food deserts and swamps in Flanders, Belgium

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Introduction:

For decades, people’s body weight has been increasing at alarming rates, leading to a worldwide obesity epidemic. One of the main causes of this obesity epidemic is poor diet quality. The food environment has been suspected to be one of the principal drivers of poor diet quality. Older people and families with a poor socioeconomic background can be disproportionately affected.

Methods:

This study maps the food environment in Flanders between 2008 and 2020 by using the concepts of food deserts and food swamps. Food deserts have been defined as neighborhoods that lack access to some or all foods that are required for a balanced, nutritionally adequate diet. Food swamps refer to places where there is an abundance of unhealthy food options relative to healthy food options. A spatial analysis using population- and retail density datasets yielded the change in food deserts and swamps between 2008 and 2020.

Results:

Food deserts in Flanders are found to be small in area and very localized. While food deserts in areas with the two highest deciles of people older than 65 years increased from 1.3% to 1.6% of total surface area in Flanders between 2008 and 2020, the food deserts in areas with the two lowest deciles of low income families decreased from 4% to 2.4%. Food swamps in

Flanders on the other hand, are ubiquitous. In 2020, 42.9% of the residential area examined contained no healthy food retailers and 77.7% of the area can be considered a severe food swamp. Areas with a high number of vulnerable groups are healthier than Flanders as a whole because these areas are mostly found in dense urban centers where the ratio of healthy food retailers to all retailers is higher.

Conclusions:

Food deserts are a relatively small problem in Flanders in comparison to the widespread occurrence of food swamps. These food swamps exacerbates the obesity epidemic in Flanders and lead to a shorter health span of the affected individuals and to increased medical costs for society.

Key messages:

- The food environment in Flanders is generally unhealthy, making it easy for individuals to buy unhealthy foods.
- Food swamps are a major problem in Flanders, where unhealthy retailers drown out healthy retailers.

Abstract citation ID: ckac129.759
The prevention indicator system of the German Federal States – a tool to monitor prevention policies

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In 2015 the German Prevention Act was implemented. The National Prevention Conference published the first National Prevention Report in 2019 to evaluate the health promotion activities. The second National Prevention Report is planned for 2023. Development of a harmonized prevention reporting system for the German Federal States is needed to form the basis for the contribution of the Federal States to the next National Prevention Report. A working group mandated from the sub-national health authorities has developed a harmonized prevention reporting system for the German Federal States since 2018. The Robert Koch Institute collaborated as representative of the national level during the process. Subject areas for indicators were selected based on a survey in which all 16 State Ministries of Health participated. Indicator subgroups developed indicators for each subject area based on predefined indicator selection criteria. Final set of indicators was adopted by indicator rating and majority voting process. The German Health Ministers Conference acknowledged the indicator system in June 2021. The conceptual framework is adapted from the health determinants model of Dahlgren and Whitehead. The indicator system is divided into 14 subject areas categorized into upstream, midstream and downstream level of prevention indicators. Seventy-three prevention indicators were included as a whole. The indicator short list consists of 32 Core indicators. An overview of the prevention indicator system will be given. First results of a pilot data collection will be shown. Health promotion and prevention reporting tools are needed to monitor prevention policies and evaluate health promotion measures. The prevention indicator system of the German Federal States will be used for the National Prevention Strategy in Germany of which one component is the next National Prevention Report 2023.

Key messages:

- The prevention indicator system of the German Federal States is a useful tool to monitor prevention policies.
- The indicator system will form the basis for the German Federal States' contribution to the National Prevention Report 2023.

Abstract citation ID: ckac129.760
Monitoring the burden of disease in Scotland and the contribution of risk factors

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Background:

The Scottish Burden of Disease (SBoD) Study monitors the contribution of over 100 diseases and injuries to the population health in Scotland, in the context of disability-adjusted life years (DALYs). Providing robust estimates of burden is the first step in identifying areas of prevention which could have the biggest impact on health; including identification of modifiable risk factors and changes in the underlying risk factor prevalence. Our aim was to estimate DALYs for 2019, to describe the current burden in Scotland and as a baseline for future burden scenarios.

Methods:

The SBoD 2016 study estimated the burden using routine data and patient-level record linkage. For this update, years lived with disability were estimated using 2016 age-sex-deprivation specific rates, assuming no change in disease prevalence from 2016, but taking account of changes to the population structure. Years of life lost were calculated from 2019 observed deaths and the application of the Global Burden of Disease (GBD) aspirational life table. Population attributable fractions (PAFs) were sourced from the GBD 2019 and risk factor prevalence from the Scottish Health Survey.

Results:

In 2019 the leading causes of burden were ischaemic heart disease (IHD), Alzheimer's/other dementias, lung cancer, drug-use disorders and cerebrovascular disease, representing over a quarter (27%) of the total DALYs in Scotland. Application of PAFs shows that a proportion of the burden for each of these causes can be attributed to modifiable risk factors.

Conclusions:

IHD continues to be the leading cause of health burden in Scotland in 2019. However recent years show an increase in burden of social causes and diseases affecting the ageing population. Application of PAFs demonstrate the importance of continuing to monitor both the burden of disease in Scotland and the prevalence of risk factors, to provide robust evidence for planning of local and national services.

Key messages:

- The Scottish Burden of Disease continues to monitor the population health landscape of Scotland.
- Ischaemic heart disease continues to be the leading cause of burden in Scotland.

Abstract citation ID: ckac129.761
Evaluation of the quality of cause of death statistics of the last decades in the European Union

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Introduction:

The European Union (EU) do not publish the quality of cause-of-death statistics, when is possible to assess quality by reliability. Quality does not present consolidated indicators. Ill-defined and other inaccurate causes have presented different groupings.

Objective:

To assess the quality of official cause-of-death statistics of the European Union by member states from 2006 to 2020.

Methods:
Cases and population were from the WHO repertory. We selected causes in EU27 countries by up to fourth code-character of ICD10 -on the EuroStat website were not available-. Case counts were grouped into ill- defined, unspecific, less specific (the latter two, in inaccurate), and judicial (inaccurate external causes) categories, based on literature and expertise. We calculated age-adjusted rates to the Standard European Population by country, sex, period (2006-, 2011- and 2016-2020), and quality category. We tested the Comparative Mortality Ratio (CMR) of each country to the European Union median by a Bayesian approach, at 5% statistical significance. We plotted the rates proportion of each quality category in its all causes.

Results:
We included 25 countries. Some did not report all years. Six countries showed >19% for ill-defined causes and 3 member states had <5% in both sex and last period. In inaccurate, for the same time period and sex, average pointed 10% with a range of 3-19%. In the same period, CMR exceeded significantly the EU median in 19 and 18 countries for women and men, respectively; and exceeded in unspecific causes in 12 countries for women and men.

Discussion:
Literature showed that incorrect causes of death were random distributed. Probably major causes were biased and underestimated.

Conclusions:
Quality of cause of death is a useful indicator of mortality statistics reliability. Quality indicators targeted national gaps across EU. We need a new EU task force on statistics of causes of death in accordance with the XXI century.

Key messages:
- Quality indicators of causes of death statistics targeted national gaps across the European Union.
- The statistics of death causes underestimated the main causes of death in the European Union.

Abstract citation ID: ckac129.762
Undetected hypertension in primary care – a public health iceberg?

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Background:
Hypertension is largely asymptomatic and contributes to considerable lifetime cardiovascular morbidity and mortality, costing the NHS £2.1 billion annually. The national prevalence of hypertension is 13.7 % and lack of a national screening programme, despite meeting aspects of the Wilson Junger criteria, adds to delays in detection and treatment. Earlier detection could mitigate future cardiovascular risk. We wanted to understand the potential of detection of prehypertension in primary care to see if this fits the Wilson and Junger criteria for a screening programme.

Methods:
GP records of adult patients n = 2178 with a known diagnosis of hypertension on the hypertension register from a practice population of 10,000 patients (prevalence is 22%.) were analysed for the prevalence of prehypertension systolic 120-139 mm hg and diastolic bp of 80-89. The average length of prehypertension, the time delay in detection and treatment were assessed, alongside the prevalence of clinical and therapeutic inertia.

Results:
A retrospective analysis of a sample size of 1809 patients out of 2178 patients (83.1%) with known hypertension across 3 primary care sites over 20 years was undertaken. Of these 1809 patients, we found that 1095 patients (60.5%) were prehypertensive prior to being diagnosed. The mean time interval between detection of prehypertension to a formal hypertension diagnosis was 10.6 years, with a standard deviation of 7.89 years with no variation with age or sex. However, 588 patients (32.5%) did not have readings within the prehypertensive ranges prior to diagnosis and were opportunistically detected. 51 patients (2.82%) never had readings recorded within the prehypertensive range.

Conclusions:
Prehypertension predates hypertension by an average of 10.6 years. Offering annual screening nationally to patients of risk groups e.g., those with a family history, obesity, and alcohol excess, would enable earlier detection, treatment, and considerable cost saving.

Key messages:
- Prehypertension predates hypertension; therefore, hypertension meets the Wilson Junger criteria for earlier detection by a screening programme, which is lacking in the UK.
- Offering a national scheme to screen for hypertension to those at a higher risk, can only be considered a benefit to the public and should be implemented.

Poster Walks

1.R. Strengthening health system

Abstract citation ID: ckac130.001
Community-based health professionals in face of crisis – a practice example from Bremen, Germany

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At the end of 2020, a district-based analysis of Covid-19-infection rates in Bremen uncovered differences between socially deprived and ‘‘better off’’ areas. The first analysis conducted on a district level in Germany revealed a social gradient in the Covid-19-affectedness with deprived areas having above-average incidences. These areas are characterized by poor living conditions, high migrant population, low education and health literacy levels, language barriers and precarious job situations. Bremen's Health Senator acted on this challenge early on, initiated and financed the deployment of community-based health professionals (CHP) in disadvantaged areas to tackle the rising Covid-19-rates while reducing social inequalities and promoting health literacy. The CHPs' work is coordinated by the Association for Health & Academy for Social Medicine Lower-Saxony. The 14 CHP are multilingual, with a background in health professions, social work and public health. They cooperate with local partners in 18 disadvantaged districts in Bremen and Bremerhaven. In 2021, work focused on outreach work, low-threshold provision of multilingual information (e.g., on regulations, vaccination) and the support of local vaccination campaigns. Bremen currently has the highest vaccination coverage in Germany (87,5% of population with primary series, national average: 76,2%; 07/2022).

Since 2022, CHPs' work has shifted to health promotion activities aimed at mitigating the effects of the pandemic, e.g., physical inactivity, mental stress. Bremen was the first German city to pilot a large-scale implementation of CHP in socially disadvantaged areas. Due to their continuous presence, CHP quickly became people of trust and are integrated into local structures. Their work has received huge attention both in professional contexts and public media. The low-threshold outreach-work and close cooperation with local partners has high potential to address other health challenges in disadvantaged communities.

Key messages:

- Community-based health promotion with CHP is an effective way of reaching citizens in local settings and is able to adapt to unexpected social and health-related challenges.
- CHP strengthen the health literacy in the community and the communication of health regulations.

Abstract citation ID: ckac130.002
Improve service coordination and delivery in community hubs serving homeless and at-risk populations

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Background:

Two community hubs are currently located in Durham Region, Ontario, Canada, to provide a single point of access to a wide range of support services for individuals experiencing homelessness and other at-risk populations. The community hub in Oshawa is formally known as the Back Door Mission for the Relief of Poverty and the community hub in Ajax is formally known as the Ajax Hygiene Hub. It is unclear if these two community hubs are effective in addressing the needs of individuals experiencing homelessness and how the COVID-19 pandemic continues to impact these services amongst this population. This study was conducted to identify gaps and barriers within the community hub models as well as provide recommendations to improve the coordination and delivery of services serving individuals experiencing homelessness and other at-risk populations.

Methods:

A mixed methods approach was utilized in this study, which included surveys for individuals experiencing homelessness, through open-ended and close-ended questions to assess their experiences at either one of the two community hubs. A total of 75 surveys were completed by the study participants (40 surveys in Oshawa and 35 in Ajax). Thematic analysis was performed for all the open-ended survey responses. A literature review was also conducted to evaluate the community hub models as well as best practices for the implementation locally, nationally, and internationally.

Results:

Data analysis for the open-ended survey responses revealed the need for housing support, increased resources for medical services, and the expansion of programs provided by the community hubs.

Conclusions:

Homelessness is a major public health issue however community hubs play a pivotal role in addressing this concern in Durham Region. The equitable access to a diverse range of services that are co-located in a community hub is imperative for individuals experiencing homelessness, especially during the COVID-19 pandemic.

Key messages:

- The needs of homeless populations, program outcomes, service gaps, partnership collaboration, and best practices were explored to help inform the development of new community hubs in Durham Region.
- Study highlighted the effectiveness of community hubs in addressing the needs of homeless populations, whether it should become a permanent solution, and be developed in Durham Region and beyond.

Abstract citation ID: ckac130.003
A capital-based approach to understand health inequalities: empirical explorations

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Background:

The persistence of health inequalities may not be merely driven by education and income, but also by other economic and non-economic factors. In this study we investigated how the association between single-dimensional health and socioeconomic status (SES) changes when including health-related person capital, economic capital, social capital, cultural capital and non-health related person capital.

Methods:

The present study proposes a capital-based approach to understand health inequalities. It presumes intertwined relationships between a wide notion of health ('health-related person capital') and embodied resources ('non-health related person capital') on the one hand, and non-person capital, i.e. economic, social, and cultural resources on the other. We used cross-sectional data on 152,592 participants from the Dutch Lifelines cohort study. Correlations between capital constructs were estimated using partial least squares structural equation modelling.

Results:

The correlation between health-related person capital and SES (r = 0.15) was higher than the correlations between single-dimensional health (physical and mental health) and SES (r = 0.12, r = 0.04, respectively). Non-person capital, combining economic, social and cultural capital, showed a correlation of 0.34 with health-related person capital. This was higher than the correlation between health-related person capital and economic capital alone (r = 0.19). Lastly, the correlation between health-related person capital and non-person capital increased when non-health (personality and attractiveness) and health related person capital were combined into person capital construct (from r = 0.34 to r = 0.49).

Conclusions:

This exploratory observational study shows the empirical interconnectedness of various types of resources. Our findings corroborate the idea of considering health as a multidimensional concept, and to extend conventional SES indicators to a broader measurement of economic and non-economic resources.

Key messages:

- A wide notion of capital may be key to a better understanding of the persistence of health inequalities.
- Policy action needs to take into account the unequal distribution of economic, social, cultural, and person capital.

Abstract citation ID: ckac130.004
HPV self-sampling as an additional option in cervical cancer screening: a pilot study in Estonia

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Background:

Cervical cancer incidence and mortality rates remain high in Estonia and participation in organized cervical cancer screening program is low. The aim of this pilot study was to estimate the impact of offering an HPV self-sampling option on screening uptake.

Methods:

A randomized intervention study was conducted within Estonian organized cervical cancer screening program in 2021. Among target group women who had not participated in screening by August 2021, 26,000 women were randomly selected and allocated to two equally sized intervention arms offering a choice between attending a clinic or taking a self-sample. The opt-out group received a Qvintip sampler by regular mail to home address, the opt-in group received by e-mail a link to order the sampler from a web-site. A control group of 32,000 women received the usual reminder to attend screening at a clinic. Participation rates were calculated and data on user experience were collected with a questionnaire.

Results:

Significant difference in participation rates was observed between opt-out (41%) (among them 20% chose self-sampling, 21% chose clinic attendance), opt-in (34%) (8% self-sampling, 26% clinic) and control group (28%). Intervention arms showed higher screening uptake in all age-groups and regions, but the largest effect was seen at ages 60 and 65 years and in regions showing the lowest screening participation rates. Among self-sampling users, 99% agreed that self-sampling was easy and only 3% prefer testing at a clinic.

Conclusions:

Offering women a choice between HPV self-sampling or attending a clinic significantly increased cervical cancer screening uptake. Sending an HPV self-sampling kit to home address was the most effective approach. Majority of women who chose HPV self-sampling want to use this option in the future. HPV self-sampling should be integrated in the cervical cancer screening program in Estonia.

Key messages:

- HPV self-sampling increased cervical cancer screening participation in Estonia and was highly accepted.
- It is important to make HPV self-sampling available in cervical cancer screening program.

Abstract citation ID: ckac130.005
Assessment of needs-based usefulness of interventions to address system barriers to HPV vaccination

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Background:

Adolescents of underserved communities face multiple health system barriers to access HPV vaccination. The Horizon 2020 project RIVER-EU will implement interventions to address these barriers in the migrant community in Greece, the Turkish and Moroccan communities in the Netherlands, the Ukrainian community in Poland and the Roma community in Slovakia. The objective of this study was to identify promising evidence-based interventions that potentially meet the specific contextual needs of the target groups, as a basis for assessing their transferability.

Methods:

Based on the PIET-T models of transferability, we developed a methodology to assess the needs-based usefulness of an intervention for a target context. Criteria of intervention usefulness addressed specific aspects of the health issue, population, intervention content, outcomes, up-to-datedness, applicability, quality and usefulness of the evidence-base. Guided by methodological workshops, country members with their local advisory boards performed a rating of 32 interventions identified from a systematic literature search.

Results:

Through independent assessment in each country, 5 of 32 interventions were selected as useful, with overlap: 2 interventions were selected by all countries, and 1 by 2 countries. In all countries, trained community members to support HPV vaccination were seen as promising. In Greece and the Netherlands, an educational programme in schools was included. Further, the Netherlands chose an intervention addressing providers' HPV vaccine communication, and Slovakia a multilevel intervention.

Discussion:

The feedback of the country members on the assessment emphasised the structured way to face complexity of understanding the potential usefulness of an intervention from the perspective of the target country. Critical discussions on the interventions enabled to specify needs for further clarification, for adaptations, and alternatives to consider for transferability analyses.

Key messages:

- Identifying potentially useful health system approaches to vaccination in specific contexts is a complex step that goes beyond analysing quality of primary evidence.
- Our methodology for intervention selection emphasises the consideration of the unique needs of target communities to address health system barriers to vaccination.

Abstract citation ID: ckac130.006
Comparison between recommended and mandatory vaccine uptake during adolescence in Italy

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Background:

Immunization programs are key preventive interventions and have largely contributed to reducing the burden of infectious diseases and decreasing related morbidity, mortality and healthcare costs. The study aimed to investigate coverage regarding diphtheria, tetanus, and acellular pertussis (dTap) - Inactivated Poliomyelitis Vaccine (IPV) and Human Papilloma Virus (HPV) vaccine and attitudes towards vaccinations among undergraduate university students in Southern Italy.

Methods:

This cross-sectional study was conducted among 327 students through an anonymous online questionnaire and included socio-demographic characteristics, attitudes towards vaccinations overall and specifically on dTap-IPV and HPV, reasons for having received or not vaccinations and willingness to receive vaccinations.

Results:

One third of the students were concerned about serious adverse effects of vaccines and 95% believed that vaccines for uncommon diseases are useless. During adolescence, 89% of the sample received the mandatory dTap-IPV vaccine booster. Among unvaccinated students, 45% were unwilling to get vaccinated against dTap-IPV because they believed not to be at risk of infection (59%) and had lack of recommendation (35.3%). Regarding vaccination against HPV, 67% had received the recommended schedule. Among those who did not receive it, 34% were unwilling to get vaccinated because they did not feel at risk of HPV infection (41%). Interestingly, 16% of the sample disclosed some barriers to access vaccination centers. Moreover, 30% declared that HPV vaccination was discouraged by healthcare professionals (HCPs).

Conclusions:

Vaccination uptake is worryingly low and national objective coverage seems not still achieved. Likewise, risk perception of vaccine-preventable diseases was low and it seems negatively impact on the intention to get vaccinated. Improving vaccine confidence among HCPs is crucial as they have been shown to have the potential to influence patient vaccination uptake.

Key messages:

- Skilled communication with a trusted HCP could increase acceptance of vaccine during adolescence and address vaccine hesitancy.
- Strategies to disseminate information on vaccines should be established to increase mandatory and recommended vaccines coverage.

Abstract citation ID: ckac130.007
The positive impact of a care–physical activity initiative for people with low socioeconomic status

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Background:

Overweight and obesity rates are increasing worldwide, particularly among people with a low socioeconomic status (SES). Care-physical activity (care-PA) initiatives may lower overweight and obesity rates. A two-year care-PA initiative specifically developed for citizens with a low SES, X-Fittt 2.0, included 12 weeks of intensive guidance and sports sessions, and 21 months of aftercare. We answered the research question: what are the short- and long-term outcomes of participation in X-Fittt 2.0 in terms of health, quality of life and societal participation?

Methods:

Questionnaires and body measurements were taken from 208 participants at the start of X-Fittt 2.0 (t0) and after 12 weeks (t1), 1 year (t2) and 2 years (t3). We also held 17 group discussions (t1, n = 71) and 68 semi-structured interviews (t2 and t3). Continuous variables were analysed using linear mixed-model analysis, while we used descriptive statistics for the categorical variables. Qualitative data were analysed using thematic analysis.

Results:

Body weight was significantly lower at all three post-initiative time points compared with t0, with a maximum of 3.8 kg difference at t2 ($p < 0.05$). BMI, waist circumference, blood pressure and self-perceived health only significantly improved during the first 12 weeks ($p < 0.05$). A positive trend regarding paid work was observed, participants reported increased PA levels (including sports) and a few stopped smoking or drinking alcohol. Participants felt healthier and more energetic, reported improved self-esteem and stress levels, and had become more socially active. However, barriers to being physically active included a lack of money or time, or physical or mental health problems.

Conclusions:

X-Fittt 2.0 improved the physical health, QoL and societal participation of the participants. Future initiatives should take into account the aforementioned barriers, and consider a longer intervention period for more sustainable results.

Key messages:

- Care-physical activity initiatives can improve the physical and mental health, quality of life, lifestyle and societal participation of citizens with a low socioeconomic status.
- It is vital to improve the accessibility of care-physical activity initiatives, for example by lowering costs, so that existing and future initiatives better suit people with low socioeconomic status.

Abstract citation ID: ckac130.008
Screening intimate partner violence in the healthcare services during Covid-19 lockdowns in Israel

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Background:

Studies have shown increased rates of intimate partner violence (IPV) during the Covid-19 lockdowns. Healthcare services (HCS) have an important role in detection and screening of women victims of IPV. These women tend to visit the HCS more frequently, which creates an opportunity to detect, screen, and inform them about relevant support services.

Methods:

We conducted an online survey during Israel's 2nd and 3rd lockdowns (October 2020-February 2021). A self-administrated structured questionnaire was distributed in Arabic and Hebrew via social media. Eligibility criteria included women >18 years old. 519 women completed the questionnaire: Palestinian-Arab = 73; non-immigrant Jew = 319; and immigrant Jew = 127. We asked women whether they were ever screened (ES) for IPV or received information (RI) on support services in the HCS.

Results:

37.2% of the women reported any IPV; Palestinian-Arab women reported higher rates of IPV (49.3%) compared to non-immigrant Jew (34.2%) and immigrant Jew (37.8%). Prevalence of ES and RI on support services were low among the total study sample (21.8%, 47% respectively). Only 12.1% reported on both (ES and RI). Among women who reported IPV, only 26.9% reported that they had been ES, 39.4% RI, and 13.5% both. Whilst Palestinian-Arab women victims of IPV reported higher ES and a lower RI (30.6%,25% respectively) non-immigrant and immigrant Jew reported the opposite - higher prevalence of RI and less ES (non-immigrant Jew 45%,25.7%. Immigrant Jew 37.5%,27%, respectively). In the multivariate analysis after adjusts, Palestinian-Arab women were less likely to RI regarding support services (OR = 0.33,90%CI = 0.19-0.57), while immigrant Jew women had a greater chance to be ES in HCS (OR = 4.29, 90% CI = 1.43-12.80).

Conclusions:

To increase IPV detection in the HCS, there is a need for interventions on screening and providing information on support services specifically during emergencies where IPV is likely to increase.

Key messages:

- During emergency situations such as the Covid-19 when IPV is likely to increase, HCS should make more efforts for IPV screening and providing information on support services to women victims of IPV.
- Tailored intervention should consider barriers in the HCS for providing less information on support services to minority women, and less screening for immigrant women.

Abstract citation ID: ckac130.009
Implementation of Case Management in emergency departments: the view of the involved staff

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Introduction:

Frequent users of emergency departments (FUED; ≥ 5 ED visits in the previous 12 months) often present with somatic, psychological and substance use problems. Providing a Case Management (CM) intervention may reduce their number ED visits and improve their quality of life. However, there is limited knowledge about the implementation process of CM.

Methods:

This study aimed to introduce CM into the EDs in the French-speaking part of Switzerland and to identify the facilitators, barriers and needs encountered in this process. Semi-structured interviews were conducted with ED involved staff. An inductive content analysis was conducted.

Results:

Among 13 invited hospitals, 8 implemented CM (62%); 23 ED staff were sampled from all participating ED: 17 nurses (74%), 5 physicians (22%) and 1 healthcare manager (4%). The average age was 48,48 years (SD = 8,64) and 74% were female. Four main facilitators emerged from the analysis: 1) Direct hierarchy support and flexibility (e.g. time management, supplemental paid hours); 2) Exchange with colleagues (e.g. debriefing, support); 3) Supervision by the research team (training and toolkit consisting of a binder and USB stick containing the study presentation and implementation procedures); and 4) Motivation (pleasure to work on an innovative project, benefit for patients and caregivers). Lack of resources was an unanimously mentioned barrier (e. g., time to identify and contact FUED medical and social support). Finally, participants identified the following needs to enable CM implementation: official and protected time for the project, a dedicated room for CM, at least two team members involved in the project since its initiation with complementary skills (e.g.: somatic, psychiatric and social).

Conclusions:

Our study suggests that successful CM implementation is a complex process that, in addition to motivated ED staff, requires significant dedicated resources, such as protected time and a devoted support team.

Key messages:

- Future research should establish a case management intervention with resources (time, space, teams with complementary skills) specifically dedicated to this process.
- In order to increase the quality of care, institutions should dedicate more funding for the implementation and sustainability of case management to enable its optimal application by caregivers.

Abstract citation ID: ckac130.010
Improving population health in Germany – lessons of a pilot study to assess health system performance

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Background:

Improving the population health, both its level and equity, is a major goal of health systems. Health System Performance Assessment (HSPA) is a tool to evaluate the performance of different health system dimensions, e.g., population health, access, efficiency. For the first time, a systematic HSPA was piloted for Germany including the dimension population health.

Methods:

The conceptual framework for the German HSPA pilot has been developed in a previous feasibility study. The selection of indicators was based on established indicators used in other HSPA initiatives. Another inclusion criterium was data availability. The ten indicators to measure population health cover e.g., maternal and neonatal health, amenable mortality, infectious diseases, and cancer screening. The indicators are evaluated in terms of their trend over time (2000-2020), in international comparison (e.g., Austria, Denmark, France), and by various equity criteria (e.g., age, gender, region).

Results:

Overall, Germany's health system performs moderately regarding population health, especially when compared to selected European countries. While Germany performs very well in terms of incidence rates of infectious diseases, amenable mortality is an area with need for improvements. However, trends over time show improvements of the population health in Germany.

Conclusions:

Measuring population health in Germany using ten predefined indicators reveals areas for improvement. Furthermore, subgroup analyses indicate inequities. These results should be considered in further efforts aiming at the improvement of population health in Germany.

Key messages:

- Population health in Germany has improved over time.
- However, measuring population health within the German health system identified needs for improvement and inequities.

Abstract citation ID: ckac130.011
Introducing Community Houses in Italy: a scoping review of the international literature

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Background:

The SARS-CoV-2 pandemic put under pressure all the world's health systems, to the point that it was a severe threat to their stability. At the same time, this scenario confirmed the importance of primary health care to guarantee effective care for patients who suffer from complex and chronic diseases. From these considerations and in the light of the funding provided by the European Union for enhancing the health care system in Italy, our working group has decided to analyse various organisational models of Primary Health Care founded around the world to set up innovative Primary care community Centers in Italy, called Community Houses.

Methods:

A scoping review of the international literature was conducted on Pubmed, searching for primary care models based on integration and co-location of services. Each organisational model was then evaluated using different levels of multi-dimensional integration inspired by the taxonomy work of P. P. Valentijn, such as clinical, professional, organisational, system, functional and normative integration levels.

Results:

The search produced 2053 results, initially screened by title and abstract and, subsequently, by full-text, finally obtaining 116 articles. When a model is characterised by integrating services with external stakeholders, it also presents more integration levels than the others. In particular, these models are, on average, about 20% more likely to have an organisational, functional and normative integration in the model. Moreover, by stratifying for population complexity, we can find an increase in integration levels for populations suffering from chronic diseases with a higher degree of complexity, such as diabetes or cancer.

Conclusions:

From these preliminary results, we can conclude that it is necessary to prefer primary care models with more integration levels to deliver better healthcare for people with complex or chronic diseases, improving the performance of the Health Care System, especially in Italy.

Key messages:

- Our work has allowed us to advise the policymakers on a correct reorganisation of the National Health System in Italy employing the European Union funds.
- The results of this study will be used to organised Primary care community Centers in Italy, called Community Houses, which aim to facilitate the integration and co-location of services.

Abstract citation ID: ckac130.012
Communication between cancer patients, caregivers and oncologists about out-of-pocket spending

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Background:

Concern about the cost and affordability of cancer drugs is widespread and well known. Even in countries with universal healthcare systems or health insurance for all, additional patient out-of-pocket (OOP) expenses are prevalent. Studies showed that honest communication between oncologists and patients is an important component in alleviating financial burden of cancer care. The study explores patient-caregiver-oncologist communication regarding the affordability of OOP medication and the extent to which this communication is related to families' financial burden after their loved ones' death.

Methods:

A cross-sectional survey is conducted in Israel among 491 primary caregivers of deceased cancer patients, Jewish and Arab, in three oncology centers.

Results:

About 43% caregivers said that they and/or the patients had paid OOP for medications during the last half-year of the patient's life. Most (73%) oncologists who suggested an OOP medication hardly asked or did not ask about financial ability and took little or no interest in ability to afford it, 43% hardly explained or did not explain the advantages of an OOP medication, and 52% hardly explained or did not explain any treatment alternatives. A linear regression analysis reveals that older age and female gender are related to less communication about an OOP medication and that better education, greater affluence, and having private health insurance are related to more communication. About 56% of caregivers say that OOP payment for medications inflicted a very heavy or heavy financial burden on patients and their households. A regression analysis revealed that physicians' interest in their financial ability and in the explanation they gave decreased their burden.

Conclusions:

Discussing and explaining the meaning of OOP payment alleviates the financial burden that families experience. It is crucial to develop and invest in improving oncologists' education and skills to communicate costs more openly.

Key messages:

- Few oncologists took much interest in patients' ability to afford medications, while most caregivers found OOP payment for medications burdensome.
- Oncologists' explanations and interest in patients' means lightened the burden. Oncologists need to be better educated in speaking about costs.

1.S. Preparing for the unexpected

Abstract citation ID: ckac130.013
Temporal dynamics of socioeconomic inequalities in COVID-19 – a scoping review

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Background:
International evidence shows a socially unequal burden of SARS-CoV-2 infections and COVID-19 outcomes across different socioeconomic groups. However, less is known about the temporal dynamics of socioeconomic inequalities in COVID-19 throughout the pandemic. We conducted a scoping review to systematically map and synthesize the available evidence.
Methods:
We conducted a systematic literature search in Embase and Scopus with pre-defined eligibility criteria, including empirical research from 1 January 2020 to 24 August 2021. Additionally, several journals and the reference lists of all included articles were hand-searched to identify relevant studies. We used a standardized charting approach to extract relevant content and narratively synthesized the included evidence. The study follows the PRISMA guidelines for scoping reviews.
Results:
From 8,011 identified records, we finally included 46 articles in the analysis. 50.0% of all included studies were conducted in the United States. The majority of all studies analyzed surveillance data (n = 44) and used area-based socioeconomic indicators on an ecological level (92.5%). The study results show temporal dynamics in COVID-19 inequalities, frequently initiated through higher outcome rates in more affluent populations and subsequent crossover dynamics to higher rates in more deprived populations (41.9%). Furthermore, 91.4% of the analyses show maintaining or worsening social inequalities in health with ongoing pandemic progression, which hit the most deprived populations the hardest.
Conclusions:
The results show worsening social inequalities in COVID-19 over the course of the pandemic, with the most disadvantaged populations most affected during its progression. Targeted prevention and interventions, such as low-threshold testing and vaccination programs, infection protection for precarious jobs or living conditions, and targeted information are crucial to face socioeconomic inequalities throughout pandemics.
Key messages:
- Socioeconomic inequalities in COVID-19 show temporal dynamics over the course of the pandemic.
- Socioeconomically deprived populations had higher burdens of COVID-19 outcomes, especially in more advanced stages of the pandemic.

Abstract citation ID: ckac130.014

This abstract has been withdrawn

Abstract citation ID: ckac130.015
Associations of pre-existing comorbidities and COVID-19 in-hospital mortality: an unCoVer analyses

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Background:
Accumulated evidence on risk factors for adverse COVID-19 outcomes revealed that old age and male sex are main associates, next to pre-existing comorbidities, as analysed from scattered single cohorts of hospitalised COVID-19 patients of accessible electronic medical records. Hence, evidence from federated analyses is called for to provide a more comprehensive and robust analyses of risk factors.
Methods:
Using the unCoVer network, i.e., a research platform of 29 partners for the expert use of patient data as routinely gathered

in real-world healthcare settings, present analyses restricted to available data of four hospitals from Spain, Slovakia, Romania and Bosnia and Herzegovina covering 8,287 hospitalised COVID-19 patients. In-hospital death after COVID-19 diagnosis was examined in relation to common pre-existing comorbidities using virtual pooling of logistic regression models adjusted for age and sex.

Results:

Patients were on average 60.1 (± 20.9) years, 50.7% were male, almost half (43.3%) had at least one pre-existing comorbidity (17.4% having obesity, 21.9% hypertension, 18.0% diabetes and 13.7% cardiovascular diseases (CVD)), and 12.6% died during hospitalisation. Patients with comorbidities had a higher risk of mortality that was increasing with the number of comorbidities: from a virtual pooled odds ratio of 1.16 (95%CI: 0.96, 1.40) for one vs none to 1.30 (1.04, 1.64) and 2.14 (1.64, 2.79) for two and three or more comorbidities, respectively. Of the comorbidities, highest risk was seen for CVD (1.68; 1.40, 2.01), followed by hypertension (1.40; 1.19, 1.64) and diabetes (1.27; 1.07, 1.50), and the lowest for obesity (1.13; 0.94, 1.37).

Conclusions:

By federated analyses, this study confirmed that the number of comorbidities was a strong risk factor for in-hospital death after COVID-19, in particular CVD. The unCoVer platform pursues using scattered data sources by innovative computational resources and integrated information for enhanced impact.

Key messages:

- Federated analyses, capable of streamlining ethical and legal aspects, provide unique opportunities for robust results to inform public health.
- Higher COVID-19 in-hospital mortality risk with increasing number of comorbidities.

Abstract citation ID: ckac130.016
Evaluating the pandemic's impact on surgical site infections after abdominal surgery in Italy

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Background:

The COVID-19 pandemic led to important disruptions in surgical activity. The aim of this study was to evaluate the impact of COVID-19 on abdominal surgery outcomes in the region of Piedmont, in northern Italy.

Methods:

Data were gathered from 42 hospitals participating in the regional surveillance network from 2018 to 2020. SSI, overall mortality and case fatality rates (CFR) were calculated, comparing 2020 to mean 2018-19 data. Chi-squared tests were used to assess both the differences among the proportion of urgent and oncological procedures (based on ICD-9-CM codes) and rates between the two periods. Subgroup analyses on 2020 data were carried out comparing urgent vs. elective and oncological vs. non-oncological procedures using chi-squared tests. Analyses were performed using SPSS v. 28.0.1.0.

Results:

5407 procedures were recorded in 2018-19; 310 SSIs and 120 deaths were observed. The mean proportions of urgent and oncological operations were, respectively, 21.90% and 43.24%. In 2020, 1057 procedures were recorded, along with 44 SSIs and 29 deaths. 34.44% of procedures were urgent and 39.74% oncological. The mean 2018-2019 SSI rate was 5.73%, with an overall mortality of 2.22% and a CFR of 7.42%. The SSI rate in 2020 was 4.16%, with an overall mortality of 2.74% and a CFR of 9.09%. The proportion of urgent procedures significantly differed between the two periods ($p < 0.001$), as did the proportion of oncological procedures and SSI rates (both $p = 0.05$). Considering 2020, significant differences were found comparing overall mortality between urgent vs. elective procedures (4.95% vs. 1.59%, $p = 0.002$) and comparing SSI rates between oncological vs. non-oncological patients (3.57% vs. 2.20%, $p = 0.02$).

Conclusions:

During the pandemic, patients undergoing surgical procedures significantly differed, reflecting public health decisions. Even though these differences did not reach statistical significance, overall mortality and CFR increased in 2020.

Key messages:

- Results of this study suggest the COVID-19 pandemic had a negative impact on outcomes after abdominal surgery.
- Further longer-term studies are needed to assess the impact of policies implemented during the pandemic, to help inform future pandemic plans.

Abstract citation ID: ckac130.017
Changes in perceived health status in older men and women during the COVID-19 pandemic

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Background:

The COVID-19 pandemic has severely impacted older people. The disease and the measures to combat it have had a differential impact according to gender, with higher mortality rates in men and worse psychological and social consequences in women. The objective of this work is to analyze the changes in perceived health of older people in Europe during the first months of the pandemic and to assess the combined role of age and gender.

Methods:

Wave 8 data of SHARE-corona (Survey of Health, Aging and Retirement in Europe) ($n = 51{,}695$, aged$\geq$50) collected between Jun-Aug 2020 were used. Perceived health status was explored with a question on whether there has been a change compared with the health status before the COVID-19 outbreak (response options: worse, the same and better). Two-way ANOVA with interaction and Student's t-test with Bonferroni correction were used to compare the effects of gender and age group (50-59 years, 60-69 years, 70-79 years, and $\geq$80) in changes in perceived health.

Results:

Differences in perceived health were observed by age, as well as by gender in participants aged $\geq$70 years ($F = 91.94$; $p < 0.001$). These differences were significant both by gender ($F = 19.39$; $p < 0.001$) and age ($F = 191.79$; $p < 0.001$). No interaction was detected between both factors ($p = 0.170$), which allowed their effect to be studied individually. Among the people who reported a worsening in their perceived health, women aged 70 to 79 years predominated (11.1%), followed by men aged 80 and over (15.3%) and women of the same age group (16.4%).

Conclusions:

The results suggest an association between the change in perceived health during the pandemic and age. Women have a slightly worse health status than men in all age groups. Therefore, gender can be considered as an influential factor in perceived health in old age, which in turn can have a potential impact in the quality of life of older people.

Funding:
Projects Ref. H2019/HUM-5698 and Ref. 202010E158.

Key messages:

- Older people have been severely impacted by COVID-19 pandemic.
- The combined effect of age and gender on the change in perceived health status during the pandemic have been analyzed.

Abstract citation ID: ckac130.018
Psychosocial wellbeing of Berlin school children during the COVID-19 pandemic, June 2020-March 2021

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Background:
The COVID-19 pandemic and related restrictions have affected the wellbeing of school children worldwide. Specific problems evolving during the pandemic, their extent and duration havent́ been sufficiently explored yet. We aimed at describing school childrenś psychosocial and behavioral parameters and associated factors during the COVID-19 pandemic in Berlin, Germany.

Methods:
Our longitudinal study included students from 24 randomly selected Berlin primary and secondary schools, assessing psychosocial wellbeing and behaviors at four time points between June 2020 and March 2021. We analyzed temporal changes in the proportions of anxiety, fear of infection, reduced health-related quality of life (HRQoL), physical activity and social contacts, as well as sociodemographic and economic factors associated with anxiety, fear of infection and HRQoL.

Results:
Of initially 384 recruited students, 324 still participated in the fourth study round after nine months. During the observation period, presence of anxiety symptoms increased from 26.2% (96/367) to 34.6% (62/179), and fear of infection from 28.6% (108/377) to 40.6% (73/180). The proportion of children with limited social contacts (<1/week) increased from 16.4% (61/373) to 23.5% (42/179). Low physical activity (<3 times sports/week) was consistent over time. Low HRQoL was observed among 44% (77/174). Factors associated with anxiety were female sex, increasing age, secondary school attendance, lower household income, and presence of adults with anxiety symptoms in the student's household. Fear of infection and low HRQoL were associated with anxiety.

Conclusions:
A substantial proportion of school children experienced unfavorable psychosocial conditions during the COVID-19 pandemic in 2020/2021. In particular, students from households with limited social and financial resilience require special attention.

Key messages:

- Berlin school childreńs anxiety increased significantly during the pandemic months between June 2020 and March 2021 and was associated with anxiety in the family and lower household income.
- Almost half of the schoolchildren in our study reported low health-related quality of life after the second pandemic lockdown in March 2021.

Abstract citation ID: ckac130.019
Attitudes towards vaccination are associated with vaccination behaviour among university students

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Introduction:
Vaccination behaviour is influenced by various determinants. Evidence indicates a higher COVID-19 vaccine hesitancy among university students due to their age and a lower risk of complications compared to the general population in Germany. However, little is known about other COVID-19-related determinants for the population of German university students. This study aimed to investigate determinants of vaccination behaviour among German university students.

Methods:
The cross-sectional COVID-19 German Student Well-being Study was conducted at five German universities at the end of 2021 via an online survey (n = 7.267). Multiple logistic regressions were calculated to examine associations of vaccination behaviour (not vaccinated vs. fully vaccinated) and attitudes towards vaccination (5Cs: confidence in the safety of the vaccine, complacency - not perceiving diseases as high risk, constraints - structural and psychological barriers, calculation - engagement in information seeking, collective responsibility - willingness to protect others), health literacy in a pandemic (CHL-P), and additional determinants.

Results:
All 5Cs were associated with the vaccination status 'fully vaccinated', except for complacency. Regarding CHL-P, we found that students who felt that the current scientific knowledge about COVID-19 in terms of the policy decisions on pandemic measures was very complex had a higher odds for being vaccinated (OR = 3.02; 95% CI: 2.26-4.04). Regarding additional determinants, the analysis revealed that students who had been previously infected had in all regressions a lower odds for being vaccinated compared to students with no previous infection.

Conclusions:
Due to the strong association of the attitudes towards vaccination and vaccination behaviour among university students, we recommend that the different components of the 5Cs should be considered in future COVID-19 vaccination campaigns in the university context.

Key messages:

- Attitudes towards vaccinations impact on vaccination behaviour among university students.
- Perceiving the current scientific knowledge on COVID-19 as very complex increased the odds for vaccination.

Abstract citation ID: ckac130.020
The timeliness of COVID-19 testing and tracing in eight public health regions in the Netherlands

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Background:

Testing and Contact Tracing (TCT) was a core strategy in the fight against the spread of SARS-CoV-2. However, little is known about the real-world effectiveness of TCT for COVID-19. Because time is an important conditional factor, we aim to study timeliness of TCT in the Netherlands, and its determinants.

Methods:

We used routine COVID-19 TCT registry data from all individuals who tested positive for SARS-CoV-2 at 8 Dutch regional public health services from 1-6-2020 to 28-2-2021 (N = 338,066). We calculated median time intervals of TCT stages. Factors associated with the time between test result and completion of TCT, categorised as ≤ 3 days and >3 days, were assessed using logistic regression adjusting for region, testing site, and laboratory. Potential determinants were: gender, age, country of birth, number of close contacts, working in healthcare or education, TCT manpower, and the Oxford Covid-19 Government Response Tracker (OxCGRT).

Results:

The median time from symptom onset to TCT completion was 6 days (IQR:3-10). Median times between TCT stages were 1 day (IQR:0-3) for symptom onset to test request, 1 day, (IQR:0-1) for test request to sample collection, 1 day, (IQR:1-1) for sample collection to test result, and 2 days (IQR:1-5) for test result to TCT completion. In 31.7% of tests, time between test result and TCT completion was >3 days. This delay was associated with being older (65+), whereas being younger (0-14), a higher OxCGRT, scaling down TCT, and a higher number of TCT employees were associated with a shorter interval.

Conclusions:

Over fifty percent of interval times from symptom onset to TCT completion exceeded the median SARS-CoV-2 incubation period of 5 days. There seems to be little room for improvement on the side of the index case, but there are some implications for logistics such as increasing TCT manpower, and better integration of digital systems.

Key messages:

- Testing and contact tracing were key elements of fighting the spread of COVID-19, but the potential impact was reduced because >50% of interval times exceed the median SARS-CoV-2 incubation period.
- The influence of contextual factors shows that stricter government policies, and increasing TCT manpower could help speed up the process of TCT for COVID-19.

Abstract citation ID: ckac130.021
European studies to evaluate COVID-19 vaccine effectiveness in HCWs: results from Italian hospitals

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Background:

Evaluating COVID-19 vaccine coverage and risk factors is useful to develop public health strategies against COVID-19 pandemic. In the framework of two studies commissioned by the European Centre for Disease Prevention and Control (ECDC) and coordinated by Epiconcept, France, we reported findings about incidence and seroprevalence among healthcare workers (HCWs) enrolled from three Italian hospitals.

Methods:

From July 2021 to date, the AOUP "G. Rodolico-San Marco" (Catania), the San Gerardo Hospital (Monza) and the Policlinico Gemelli (Rome) participated in the ECDC study to measure COVID-19 vaccine effectiveness. Catania and Rome also participated to the ECDC study of nosocomial transmission. HCWs were asked to complete a weekly questionnaire to report changes in health status and professional/personal exposures. At recruitment, a nasopharyngeal swab for RT-PCR and a blood sample for serology test were collected. Moreover, HCWs were followed-up with a weekly or bimonthly nasopharyngeal or saliva swabs. Blood samples were collected every one or two months.

Results:

A total of 226 HCWs was enrolled from Catania, 330 from Rome and 132 from Monza in the COVID-19 vaccine effectiveness study. As of February 2022, PCR tests performed were 2270 in Catania, 5475 in Rome and 891 in Monza sites. Moreover, the serological tests performed were 845 in Catania, 760 in Rome and 395 in Monza sites. A total of 6 SARS-CoV-2 infections were identified in Catania, 34 in Rome and 4 in Monza sites. Interestingly, the study of nosocomial transmission reported the highest incidence rate in Catania (4 per 10,000 person-day), while 0.7 per 10,000 person-day in Rome. During the study period seroprevalence declined by 17% among HWCs enrolled in Catania.

Conclusions:

Our findings revealed low number of COVID-19 infections, with high COVID-19 vaccine coverage among HCWs. However, further analyses are needed to provide more robust estimates of vaccine effectiveness.

Key messages:

- Monitoring risk factors is useful to understand the pandemic scenario among high-risk groups.
- A larger sample size and follow-up will improve public health vaccination strategies against COVID-19.

Abstract citation ID: ckac130.022
Increasing role of Public Health Rapid Response Teams in infectious disease outbreaks

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Background:

Following the Ebola crisis (2013-2016), the WHO, Global Health Security Agenda and other international actors advocated for the development of Public Health Rapid Response Teams (RRTs) to strengthen outbreak response. Despite significant investment, evidence on the uptake, composition and effectiveness of such teams remains lacking.

Methods:

Qualitative review of published and grey literature including from governmental and multilateral agencies, with semi-structured interviews of key informants. Thematic content analysis was completed and evidence synthesised to inform future policy recommendations.

Results:

RRTs have been adopted globally providing surge capacity in outbreak settings. RRTs typically include microbiologists and field epidemiologists but can be more efficacious when broadly multidisciplinary with the inclusion of social scientists, risk communicators and infection prevention and control professionals. The organisation of RRTs must be responsive to district and national contexts so existing systems are not undermined, with regional collaboration beneficial where skill gaps exist. Literature and interviewees agreed that RRTs should not be uniformly defined by narrow technical capabilities, but rather regional standards and evaluation of deployments used to assess operational readiness.

Conclusions:

Public Health RRTs should be multiprofessional in nature and evaluated against regional standards to be effective. Future research should seek to assess the experience of countries before and after RRT implementation including detailed economic assessment.

Key messages:

- Public Health Rapid Response Teams (RRTs) are increasingly adopted globally to strengthen outbreak response.
- RRTs should be truly multidisciplinary and rigorously evaluated against regional standards to maintain effectiveness.

Abstract citation ID: ckac130.023
Geospatial characteristics of medical workforce and infrastructure to combat COVID-19 in Kazakhstan

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Background:

After cessation of initial quarantine in Kazakhstan, the COVID-19 outbreak peaked in July 2020, imposing dramatic stress on the country's healthcare system. This study was focused on calculation of updated epidemiological characteristics, on evaluation of available medical workforce and infrastructure and the impact of workforce density on infected and dead individuals via ArcGIS platform.

Methods:

The national and local incidence rate (IR), mortality (M) and case-fatality rates (CFR) were calculated along with the population-weighted densities of beds, physicians, general practitioners, resuscitators, nurses and healthcare budget. Associations between the density of different health workers, infected and dead individuals were investigated using Poisson regression. Finally, we constructed vector maps of country regions clustered by IR and CFR to depict the density of beds and those health workers that were significantly associated with infection and death rates.

Results:

There is much heterogeneity between the country regions in terms of CFR (range from 0.28 to 2.57) and IR (range from 1.62 to 12.04), while density of beds was characterized by a relatively greater stability (range from 3.47 to 6.66) and so did density of physicians (range from 0.79 to 2.76) and density of nurses (range from 5.73 to 8.26). Densities of beds, physicians, general practitioners, resuscitators, and nurses have been linked significantly with infection and death rates.

Conclusions:

As COVID-19 epidemic is still far from ending, findings of this study could be of interest for policy makers to formulate an appropriate action plan in the view of possible repeated outbreaks.

Key messages:

- Available medical workforce and infrastructure were insufficient during the pandemic time in Kazakhstan.
- Densities of beds, physicians, general practitioners, resuscitators, and nurses are significantly associated with infection and death rates.

Abstract citation ID: ckac130.024
Absence among National Health Service workers during the COVID-19 pandemic in Portugal

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Background:

By March 2020, the first Covid-19 cases were detected in Portugal. While the National Health Service (NHS) faced an increased demand for health care, anecdotal evidence showed that the NHS absenteeism rose. This might be explained by outbreaks in healthcare units, COVID-19 infection due to close contact with patients, self-isolation and quarantines, and family challenges originated by lockdowns. The present work aimed to quantify the absenteeism among NHS workers during the COVID-19 pandemic in Portugal.

Methods:

This study used data for the number of NHS workers and absence days (2015-2021), from the Portuguese NHS Transparency Portal and the Strategy and Planning Office. Absenteeism was compared, before and after the pandemic onset, in absolute terms, and as absence rates (number of absent days as a percentage of potential workforce days). Additionally, we performed an interrupted time series analysis, by fitting a Poisson regression model with level change. We controlled for data seasonality using Fourier terms (pairs of sine and cosine functions).

Results:

From 2015 until March 2020, the average monthly absence rate was of 12.2, rising to 14.4 in the remaining period. This represented an increase of 18% in the absence rate. The interrupted time series showed an increase of 10.8% in the NHS absenteeism after the pandemic onset [Relative risk $=1.10$; 95% confidence interval (CI) 1.10-1.11; $p<0.01$]. When accounting for seasonality in the data, the model showed an increase of 11.0% in the NHS absenteeism [Relative risk $=1.11$; 95% CI 1.01-1.22; $p<0.05$].

Conclusions:

These results highlight the excess of absence days among the NHS workers during the COVID-19 pandemic. In future healthcare crises, health professionals should be protected, by assuring a safe workplace and making protective equipment available. Only then will be possible to reduce constraints in healthcare assistance, guarantee the adequate response, and contain the absence costs.

Key messages:

- During the COVID-19 pandemic in Portugal, the NHS absenteeism increased by 11% ($p<0.05$).
- The absence rates might have threatened healthcare assistance, and increased the healthcare costs.

Abstract citation ID: ckac130.025
COVID-19 and religion: evidence and implications for future public health challenges

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Background:
Religious and cultural beliefs strongly influence people's attitudes and behaviors that, in turn, may positively or negatively affect both individual and public health. In this regard, we aimed to collect and analyze evidence on the impact of religion in the current COVID-19 pandemic.
Methods:
We performed a scoping review investigating both scientific and grey literature available on the topic from the onset of the pandemic to September 2021. Pubmed, Web of Science and Google Scholar were investigated and a hand-search on Google was also performed. Studies dealing with religion and COVID-19 were included and narratively summarized according to topics.
Results:
46 articles were included in the review. Predominant topics emerged were 1) religious pilgrimages and rituals worldwide being relevant to COVID-19 outbreaks, especially in the first pandemic wave 2) difficulties to engage the Closed Religious Communities (e.g. Haredi, Amish, etc.) in which community way of life, restrictions in using media and resistance to comply to preventive measures were identified as significant COVID-19 risk 3) COVID-19 unofficial treatments and vaccine hesitancy also supported by concerns on the religious acceptability of vaccine composition or firm interpretation of the Ramadan fasting 4) a fuel of religious discrimination 5) religious communities and leaders strongly trusted in conveying COVID-19 information.
Conclusions:
Our findings highlighted how religion has represented both a risk for the spreading of the virus and a precious opportunity to convey evidence-based and culturally-sensitive COVID-19 information engaging people in fighting the pandemic. To be prepared for similar future challenges, scientists, politicians and health professionals need to acknowledge the role that culture and religion have in influencing people's lives to design specific health policies and strategies to ensure that all people are effectively engaged in health production and protection.
Key messages:

- Religion has represented both a risk factor for COVID-19 outbreaks and a resource to convey evidence-based information and overcome resistance to implementing COVID-19 preventive measures.
- Health policy should become more sensitive to religious and cultural issues acknowledging the role played by religion in facing complex global health challenges.

Abstract citation ID: ckac130.026
Using R programming to inform and improve case notification procedures in a local public health unit

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Issue/Problem:
COVID-19 was declared a pandemic in March 2020. Information systems, particularly those related to laboratory testing notification, became extremely important as a mechanism of fast identification of cases. In Portugal, any test performed in a professional setting is of mandatory notification.
For a local public health unit in northern Portugal, much like in other regions worldwide, challenges related to lack of human and material resources were felt over the course of the pandemic.
Description of the problem:
In 2021, an intensive surveillance strategy was implemented using up to date notification database analysis through R programming, focusing on simplified data availability for contact tracing team members and accuracy of notifications submitted by laboratories, including verification of individual identifying information.
Results:
Some laboratories were identified has having lower data completion rate, which had negative effects on contact tracing timeliness, while others failed to notify tests conducted. Public Health workers warned partners of these failures and worked with them to develop solutions. Interventions included facilitation of access to technologies to notify test results, as well as revision of internal processes to ensure correct patient identification. During the intervention, successful notification rates were increased, and new informal and formal partnerships were developed, leading to faster identification of clusters.
Lessons:
Establishing partnerships with stakeholders and developing support systems is beneficial towards epidemiological surveillance efforts. Adequate analysis of notification procedures was an important step towards standardization and correctness of information required for epidemiological surveillance.
Key messages:

- Resilient information systems are important for surveillance, especially during a pandemic.
- Partnerships with community stakeholders are essential to timely and adequate epidemiological response.

2.R. Achieving universal health coverage

Abstract citation ID: ckac130.027
Health equity of displaced Syrians in Lebanon

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Lebanese government data indicates that the country hosts 1.5 million displaced Syrians (DS). Providing care for DS is a challenge, especially when barriers and discrimination issues arise in accessing the Lebanese health system. This study therefore aimed to understand the causes of biases, their mechanisms, their forms and their consequences on access and quality of care for DS in Lebanon. A qualitative study using in-depth semi-structured interviews was utilized. In 2021, 28 semi-structured interviews were conducted with doctors (n = 12) and nurses (n = 16). Six group interviews were conducted with DS (n = 22) in different Lebanese healthcare facilities. The recruitment of participants was based on reasoned and targeted sampling. The interviews were recorded and transcribed for later narrative content analysis. Thematic analysis was performed to identify common themes in participants' experiences of DS in accessing Lebanese healthcare. The results showed a barrier of access to care related to transportation and financial issues. Discrimination emerged as an underlying mechanism that drives health inequity. Several factors contributed to the presence of biases in the Lebanese healthcare system. Healthcare services provided to the Syrian population may not be the best due to inequity to access the health system attributable to the discriminatory behavior of healthcare providers. The underlying causes of discrimination are due to the fragility of the Lebanese healthcare system facing a humanitarian crisis with a collapsed infrastructure torn by previous wars and current socio-political and financial problems. Global initiatives can provide the help needed for the equitable provision of health services by providing the resources necessary to address this problem. The findings of this study highlight the changes that should be performed at the micro (cultural skills) and macro (equitable distribution of resources) levels to grant quality of healthcare services for DS.

Key messages:

- The health equity of DS in Lebanon is influenced by the lack of resources and the socio-political situation.
- Measures should be examined to deliver equally health services for both Lebanese and Syrians.

Abstract citation ID: ckac130.028

Impact of COVID-19 pandemic on inequalities in mortality: an analysis in Piedmont and Emilia-Romagna

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Background:

Italy was heavily hit by the COVID-19 pandemic. According to official statistics, during 2020 there were more than 75,000 excess deaths compared to the average expected mortality in 2015-2019. General mortality (GM) is a good measure of both the direct and indirect effects of the pandemic because it's exempt from potential bias due to misclassification of events. Evidence shows a greater burden of disease and mortality attributable to COVID-19 among disadvantaged populations, with the risk of an exacerbation of existing health inequalities. We aim to analyse the trend of social inequalities in mortality during the first pandemic year in two Italian regions (Piedmont and Emilia-Romagna) using data from Administrative Population Registries (APR) and statistical databases.

Methods:

Data on deaths occurred between Jan 2015 and Jan 2021 in subjects ≥ 65, stratified by educational level, were obtained from Regional APR and the Census. Using a time series approach, we computed Standardized Mortality Rates (SMR), Relative Index of Inequalities (RII) and Slope Index of Inequalities (SII), adjusted by age, gender, month and region. SMR, RII and SII from March 2020 were forecasted using Holt-Winters method and compared to the observed values in the same period.

Results:

SMRs were higher than expected during the two 2020 epidemic waves (Mar-Apr, Oct-Dec) in both regions. RII didn't increase significantly. Absolute inequalities instead rose in Piedmont during both pandemic waves, mostly among women, and in Emilia-Romagna in March among men.

Conclusions:

The impact of the pandemic on inequalities in GM has been at least of the same size of the impact of other mechanisms of unequal mortality. APR coupled with sociodemographic data are a quick and reliable source for assessing the unequal impact of the COVID-19 pandemic on health. Further research is needed to explore mechanisms underlying these effects e.g. inequalities in cause-specific mortality and access to health services.

Key messages:

- The unequal impact of the pandemic on mortality was confirmed.
- Administrative data linked with Census and health data are efficient and reliable sources for a timely monitoring of health inequalities.

Abstract citation ID: ckac130.029

Covid-19 Vaccination and the issue of insurance status

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Issue:

It is estimated, that 11000 - 14000 people that live in Zurich do not have health insurance (~3% of pop.). Covid-19 vaccination in Switzerland required an online registration ('Vacme') with name, address and health insurance number. Health insurance in Switzerland is only accessible to people with registered residence in the country. This systematically excluded people without right of residence, health insurance or internet access.

Description:

To address this issue the health service of the city Zurich organized a vaccination site for the uninsured from 14.06.2021 onward. To achieve this a simplified registration procedure was established, which allowed us to offer Vaccination to everybody, independent of their insurance status. Instead of the health insurance number, on site personal used a dummy number and the address of our site to register those patients. To remove language and technological barriers. In order to lower, the inhibition threshold for people without legal residence the Police department was informed and agreed not to circulate the area of the vaccination site on vaccination days.

Results:

Between 14.06.2021 and 19.02.2022, 880 people came for vaccination of which 603 (69%) were clearly identifiable as individuals from non-insured populations. (See Graph)

Lessons:

It is therefore critical not to forget these people when organizing public health measures, especially when addressing a pandemic or other infectious diseases (HIV, Hepatitis). A group specific information approach is of paramount importance to reach such subpopulations. Non-insurance is a known barrier for universal access to care.

Acknowledgements: We would like to thank the involved departments of the city Zurich, chief medical officer canton zurich, our collaboration partners and the staff of our vaccination site.

Key messages:

- When fighting a pandemic it is of utmost importance to reach as many people as possible with given interventions including vaccination.
- Non-insurance is a known barrier for universal access to care.

Abstract citation ID: ckac130.030
Gateways not gatekeepers – reaching seldom-heard groups to gather public health community insights

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Background:

Each local authority in England must develop a Health and Wellbeing Strategy (HWS) in collaboration with NHS partners to plan and support delivery of local improvements in health and wellbeing. HWSs often draw on diverse sources but few are informed by consultative exercises involving citizens. South Tyneside Council in Northern England sought to ensure their new HWS was community-informed, specifically including seldom-heard groups and individuals. Specific objectives of this community insights research were to:

1.Target sampling and recruitment activities at typically marginalized, vulnerable or otherwise underrepresented groups

2.Explore the health and wellbeing-related views and priorities of these groups to address health inequalities

Methods:

A mapping exercise was undertaken to identify organisations who might act as gatekeepers to accessing participants from underrepresented groups. Focus groups were held in settings-based venues where members would be comfortable and known to one another. Representatives of voluntary and community sector (VCS) organisations often helped to co-facilitate the discussions.

Results:

119 participants took part in 16 group discussions. Three were held online, two were outdoors, while 11 involved community venues where the groups regularly met. We reached older and younger people, minority ethnic groups, and vulnerable men and women, including residents who had experienced homelessness, mental health issues, substance misuse, offending, domestic violence and learning disabilities. Participants were largely concerned with the wider determinants of health (such as poverty, employment, and leisure spaces), shifting the narrative away from individual lifestyle factors that tend to be the focus of much public health discourse.

Conclusions:

Gatekeepers from the VCS were essentially gateways, enabling us to include underrepresented voices in local consultation processes and generate new insights to inform the South Tyneside HWS.

Key messages:

- Public health strategy development can address health inequalities through community-informed consultative exercises involving seldom heard members of vulnerable communities.
- Community consultations seeking to reach typically under-represented groups require gatekeepers acting as gateways, and meeting participants where they are comfortably located at community venues.

Abstract citation ID: ckac130.031
Schistosomiasis control in adults: a call for action towards the goal of universal health coverage

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Background:

Schistosomiasis is a high-burden parasitic disease and endemic in tropical climates, such as Madagascar. Recently it is emerging in Europe. Chronic infections lead to disabilities including loss in work productivity. Current control strategies focus on school-aged children, thereby systematically excluding adults. The goal to eliminate the disease as a public health problem is aligned with the Sustainable Development Goals agenda, including Universal Health Coverage (UHC). We aim at assessing the distribution of schistosomiasis among adults in Madagascar, in order to promote more targeted public health initiatives against the disease.

Methods:

In a cross-sectional study, 1477 blood samples were collected at three primary health-care centers in Madagascar from 03.21 to 01.22. A semi quantitative PCR assay was used to assess the presence of Schistosoma. Positivity rates with 95% Confidence Intervals (CI) were reported by gender and age groups.

Results:

Our study population had a balanced gender distribution with 54.2% [CI: 51.7;56.8] of females and a median age of 37 years (IQR: 24-48). Preliminary results show an overall Schistosome positivity rate of 59.5% [CI: 57.0;62.0]. Positivity was higher in males 62.4% [CI: 58.7;66.1], than in females 57.1% [CI: 53.5;60.5]. Highest positivity was seen in the 18-34 year age group with 66.2% [CI: 62.7;69.6]. Lowest positivity of 46.2% [CI: 39.2;53.2] was observed in adults aged over 55 years.

Conclusions:

Our preliminary results provide evidence of high positivity rates of schistosomiasis among adults in a highly endemic country. Differently from many studies, males seem more affected than females. The youngest age group, representing the more active workforce of a population, shows a higher positivity rate. Our data suggests that, in the logic of UHC and health as a human right, public health strategies for schistosomiasis need to be re-addressed towards a universal coverage of affected individuals.

Key messages:

- Inequalities in current control strategies to fight the tropical disease schistosomiasis might hinder the achievement of disease elimination and universal health coverage goals.
- Further systematically assessment and re-addressing of public health strategies towards universal coverage of affected individuals might help to close gaps in health care and reach the set goals.

Abstract citation ID: ckac130.032
Health status of people with intellectual disabilities: A systematic literature review

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Background:

People with intellectual disabilities (ID) have a right to the highest level of health and to non-discrimination in health care. There are an estimated 89,000 people with ID living in Austria. Little is known about their health status and about their health care. We carried out a systematic review with the aim to provide an overview of comparative studies on the health status and health behaviour of people with and without ID.

Methods:

The systematic literature search was conducted in 3 electronic databases for the search period 2008 to March 2020, supplemented by a reference list check and a search of relevant websites. Abstracts and full texts were dually screened, data extraction was performed by one person and checked by a second. Bias risk was assessed by two people using the AXIS tool for cross-sectional studies. Results were summarised narratively.

Results:

A total of 73 publications were included. The literature review reveals a very clear picture: people with ID have a shorter life expectancy, are more affected by illness and health problems, are more likely to have health-related limitations in daily living and are more likely to die from potentially preventable causes of death that could be avoided either through preventive measures or by high-quality medical care.

Conclusions:

To better assess the health situation of people with ID in Austria, Austria-specific data is needed. Furthermore, systematic initiatives in the areas of prevention, health promotion and health care are necessary. People with ID should therefore be systematically considered in all strategies and processes in the health sector. In terms of health literacy, a stronger information policy towards people with ID and towards their relatives and health care professions would be indicated.

Key messages:

- People with ID have a shorter life expectancy, more illness and health problems, health-related limitations in daily life and are more likely to die from preventable causes of death.
- Health data for people with ID is missing in Austria and systematic initiatives in the areas of prevention, health promotion and health care are strongly needed.

Abstract citation ID: ckac130.033
Older German adults' health-related quality of life and associated social factors

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Background:

A differentiated analysis of the structural relationships between social factors and health-related quality of life (HRQOL) in older German adults has not yet been conducted. In this analysis, we aimed to examine the relationships between sociodemographic, socioeconomic, psychosocial, and behavioural factors and both physical and mental HRQOL in older German adults.

Methods:

A community-based postal survey was used to collect cross-sectional data from German adults aged 65 and older ($n = 1687$, 33% response proportion, 52% female). Physical and mental dimensions of HRQOL were assessed using Short Form 36, version 2. Multiple linear regression models were used to analyse the associations between social factors and both physical and mental HRQOL.

Results:

Health locus of control, physical activity, and income were positively associated with both physical HRQOL (Adj. $R2 = 0.34$, $p < 0.001$) and mental HRQOL (Adj. $R2 = 0.22$, $p < 0.001$), whereas age was negatively associated with both. Alcohol use was positively associated with physical HRQOL, and social support was positively associated with mental HRQOL.

Conclusions:

A differentiated understanding of the relationships between social factors and HRQOL assists in group-specific targeting of health interventions. Demand-oriented interventions should consider underlying social factors to reduce socially determined inequities in HRQOL among older German adults. Depending on the focus of the intervention, it may be helpful to take specific social conditions into account. The results may be transferable to municipalities in high-income European countries.

Key messages:

- Sociodemographic, socioeconomic, psychosocial, and behavioural factors are associated with physical and mental health-related quality of life in older German adults.
- Social conditions should be considered when targeting group-specific interventions to reduce socially determined inequities in health-related quality of life among older adults.

Abstract citation ID: ckac130.034
Tobacco product menthol and flavour bans: their utility for LMIC and lessons from the EU ban

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Background:

Flavoured tobacco products increase smoking uptake and create dependence. By June 2020 all cigarettes with a characterising flavour, including menthol were banned across the EU, UK and Moldova but many low and middle income countries (LMIC) are yet to develop and implement bans despite high smoking prevalence. This paper has two objectives: to establish whether (1) flavoured tobacco products are present and marketed in LMIC and (2) the experience of bans in Europe can guide development of legislation elsewhere.

Methods:

Research involved analysis of menthol/flavour market data, review of academic and commercial literature and online media.

Results:

The median menthol/capsule market share of the cigarette market grew significantly in middle income countries ($p < 0.05$) between 2005 and 2019, both in lower and upper middle-income countries [lower: 2.5% (IQR: 0.5-4.0) to 6.5% (IQR: 3.6-15.9); and upper: 4.0% (IQR: 0.8-9.8) to 12.3% (IQR: 3.5-24.3)]. No market data were available on low-income countries, but the academic literature suggested high prevalence of menthol use in Zambia. Tobacco industry strategies underpinning growth of menthol/flavoured tobacco use in LMICs included in-store marketing and display, colourful packs and non-conventional flavour names. Tobacco industry attempts to circumvent the EU ban included introducing new flavoured tobacco products and accessories not included in the ban and exploiting the ban on characterising flavour (as opposed to an ingredient ban) by introducing cigarettes with lower levels of menthol.

Conclusions:

Banning flavoured and menthol cigarettes in LMIC would impact a growing proportion of smokers in these countries.

From the European experience, menthol and flavour bans that include all tobacco products and accessories and ban flavour as an ingredient rather than a characterising flavour is recommended. Currently, lack of marketing bans and standardised packaging in LMICs exacerbate the impact of flavours.

Key messages:

- Flavoured and menthol tobacco products are a growing problem in LMICs.
- Bans should include all tobacco products and accessories and ban flavour as an ingredient.

Abstract citation ID: ckac130.035
Barriers to HIV testing among transgender women and men who have sex with men in sub-Saharan Africa

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Background:

Accessing HIV testing services is a challenge for transgender women and men who have sex with men (MSM) in sub-Saharan Africa. Only a little about this issue has been understood and discussed. No systematic review exists that discusses barriers to HIV testing among transgender women and MSM on the regional level.

Methods:

We systematically searched databases namely MEDLINE, CINAHL, and Google Scholar to identify qualitative studies that reported decision-making and/or experiences with HIV testing uptake among transgender women or MSM and that were conducted in sub-Saharan Africa between January 2005 and March 2020. Two independent authors performed the selection, extraction, and thematic analysis of data.

Results:

Twelve out of 794 studies were found eligible and included for synthesis. The synthesis led to the development of a framework illustrating multi-level, inter-related barriers to HIV testing. Couple-based HIV testing policies, criminalizing same-sex behaviors, and (health) governance being influenced by traditional religious (Islamic or Christianity) belief systems were the barriers at the regional level. Discriminatory practices in the communities and health institutions were the community-specific barriers. Interpersonal barriers included interactions with healthcare providers leading to forced disclosure and/or discrimination, and individual level barriers included fears and depressive thoughts, and poor healthcare access.

Conclusions:

We identified policies and practices at the regional and country levels that hindered HIV testing practices among transgender women and MSM, which should be reconsidered while providing HIV prevention services to people of gender-minority backgrounds. We also think that countries from the global west do have a responsibility to question the sovereignty of some African countries for their inability to provide optimal health care to gender minority populations.

Key messages:

- Policies/practices that hinder access to HIV testing for transgender women and MSM in African countries should be discussed on the regional and global levels.
- Countries from the global west do have a responsibility to enforce African countries to provide optimal health care to gender minority populations.

Abstract citation ID: ckac130.036
Associations between biomass fuel use and child health: a community-based study in Bhaktapur, Nepal

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Background:

Biomass fuel use for cooking is widespread in low- and middle-income countries. Previous studies have mainly focused on adverse health outcomes in adults or specific diseases. In a cohort among young children living in Bhaktapur, Nepal, we aimed to describe the association between the use of biomass cooking fuels in families with child health using measures of linear growth, cognition and chronic illness.

Methods:

Caregivers of 600 marginally stunted children aged 6-11 months were interviewed about their primary source of cooking fuel at enrolment into a randomized controlled trial. Children's body length (n = 572) was measured at age 18-23 months. At the same time, blood samples (n = 497) were taken, and we measured leukocyte telomere length (LTL) as a marker of chronic disease risk. We chose LTL expressed as z-scores as a measure of chronic disease. Cognitive abilities were measured by the Wechsler Preschool and Primary Scale of Intelligence, 4th edition (WPPSI-IV) and NEPSY-II subtests when the children were 4 years old (n = 531). Associations were estimated in multiple regression models.

Results:

About 18% of all families used biomass as primary cooking fuel. Children from families using biomass fuel were on average slightly shorter (mean difference 0.14 Z-scores, 95% CI: 0.28, 0.00), had lower IQ scores (mean difference 2.2 (95% CI: 0.5, 3.9), and shorter LTL (mean difference: 0.09 (95% CI: 0.05 to 0.13) compared to those not using biomass fuel. The observed associations were unaltered after adjusting for relevant confounders.

Conclusions:

In children from households in poor, urban neighborhoods in Nepal, biomass fuel use for cooking was associated with health indicators for child growth and cognition as well as longevity and chronic illnesses reflected in shortening of telomeres. As this was an observational study, residual confounding cannot be excluded. Our findings support the ongoing effort to reduce exposure to biomass fuel in low-resource settings.

Key messages:

- Biomass fuel use was associated with diverse child health indicators in young Nepalese children.
- A better understanding of mechanisms leading to adverse health outcomes early in life is needed.

Abstract citation ID: ckac130.037
Youth HIV services in the context of COVID-19 pandemic in Sofala Province, Mozambique

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Background:

After the first COVID-19 case in Mozambique, the government established a state of emergency in period April - September 2020. To reduce exposure for people living with HIV (PLWHIV), the Ministry of Health modified service delivery guidance, interrupting community activities, and revising patient flow within health facilities. The study aimed to measure the impact of the COVID-19 pandemic on HIV testing and treatment services in Sofala Province, Mozambique.

Methods:

The study analysed the activities in 9 youth HIV services called SAAJs (Serviço amigo do adolescente e jovem) supported by Doctors with Africa CUAMM in 2020 and 2021. The following data were gathered and analysed: number of counselling sessions, number of HIV tests performed, number of people who tested positive and therefore started the antiretroviral treatment (ART), number of PLHIV on ART. Data were disaggregated by sex and age.

Results:

In 2020 and 2021 85466 and 141844 counselling sessions were performed, respectively. A decrease of 41% was observed in the second trimester of 2020 compared with the previous one. The number of counselling sessions came back at pre-pandemic levels in the 2nd trimester of 2021. People aged 20-24 accessed more in 2020, while those aged 15-19 in 2021. In 2020 people tested for HIV were 22753, while the number was twice in 2021: the increase was higher among males($p<.05$). In 2020 females were more likely to be tested, while in 2021 it was the opposite($p<.05$). The positivity rate was 2.5% and 1.5%, respectively; in both years males were more likely to be tested positive($p<.05$). In 2020 86.1% of people tested positive started the ART, in 2021 98%. Males were more at risk of not starting the ART($p<.05$). The number of PLWHIV on ART did not decrease over time.

Conclusions:

ART provision was generally maintained during the COVID-19 pandemic, while other services were heavily impacted. The difference observed among sex was significant and may inform future interventions.

Key messages:

- The pandemic impacted severely HIV services in 2020, especially counselling and testing activities.
- It is relevant to assess how the population responded to services' restoration.

Abstract citation ID: ckac130.038
Evaluation of interventions for essential newborn care practices at home-based delivery in India

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India has the largest share of neonatal mortality, accounting for 21.7 per 1,000 in 2019, while the global goal is at least 12 per 1,000 by 2030. More than 20% of deliveries still occur at home in India for various reasons. Several national interventions were designed to ensure essential practices even at home by engaging skilled birth attendants (SBAs), antenatal care (ANC), and community health workers (CHWs). This study evaluates the effectiveness of these interventions on essential newborn care practices (EP); clean cord care, thermal care, and breastfeeding. Using data from the 2015-2016 India Demographic and Health Survey (n = 9,273), this study employs structural equation modeling to confirm the relationship between SBA, ANC, CHWs̀ counseling, and EP, including indirect effects of ANC and CHWs and moderating effects of women's empowerment. The results show that SBA and ANC have significant direct effects (standardised coefficient = 0.105 and 0.056, respectively) on EP, and ANC and CHWs have significant indirect effects (0.015 and 0.004) in the well-fitted model (CFI = 0.938, TLI = 0.920, RMSEA (upper 90% CI) = 0.028 (0.029), SRMR = 0.044). The empowerment-related factors which had a significant positive moderating effect on the paths from SBA to EP and from ANC to EP are decision-making power (0.007, 0.003), allowed mobility (0.002, 0.001), and education (0.009, 0.004). More than 90% of EP variance is not associated with the factors in this model (standardised coefficient = 0.958). SBA demonstrated the most considerable effectiveness for EP, while ANCs and CHW indirectly impacted EP. Improving women's empowerment can be an effective strategy to enhance EP. Previous literature said that the other factors explaining EP could be quality of care, other interventions for a safe birth, and cultural characteristics. Policymakers are recommended to consider comprehensive factors to address barriers to safe home birth and design CHW's intervention to persuade SBA.

Key messages:

- To optimize the effects of skilled birth attendants, quality of care need to be improved.
- Improving women's empowerment can be an effective strategy to enhance essential practices.

Abstract citation ID: ckac130.039
Early adolescents' sexual and reproductive health literacy in Lao PDR

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Background:

Sexual and reproductive health literacy (SRHL) refers to the ability to access, understand, appraise, and apply information for decision-making related to sexual and reproductive health. The low level of SRHL in adolescents increases their sexually risky behaviors and endangers sexual health. Although early adolescence is a critical development period for forming initial views on sexuality and is often a time for attempting risky behaviors, studies on SRHL for early adolescents are fairly limited in Las PDR. As an initial step for the development of a global health project between Lao PDR and South Korea, this study assessed the level of SRHL and the differences in gender among early adolescents in Lao PDR.

Methods:

Participants were 235 students conveniently recruited from one junior high school each in two provinces in Lao PDR. SRHL was measured using the 39-item Teen Pregnancy Health Literacy scale consisting of 4 subscales of finding, understanding, appraisal, and application. The scores were classified into inadequate, problematic, sufficient, and excellent using the SRHL index formula. The mean differences in gender were compared using t-test.

Results:

The mean of the SRHL scores of the participants was 19.07 (±10.57). The mean score was significantly lower for girls, at 17.67 (±11.22) than for boys, at 21.37 (±9.05) ($p = .006$). Significant differences were further identified in all four subdomains of SRHL: finding ($p = .025$), understanding ($p = .005$), appraisal ($p = .041$), and application ($p = .029$). The majority of participants (91.7%) were categorized as having an 'inadequate' or 'problematic' level of SRHL.

Conclusions:

The level of SRHL among most early adolescents was found to be inadequate. The level of SRHL among girls was much lower than that among boys. The findings suggest a gender-specific approach to developing health education programs to improve SRHL among early adolescents and prevent future sexually risky behaviors in Lao PDR.

Key messages:

- Most of the early adolescents who participated in this study were categorized as having an inadequate or problematic level of SRHL.
- This study suggests a gender-specific approach to develop and implement interventions to improve adolescents' SRHL, particularly in lower-middle-income countries, to ultimately enhance sexual health.

2.S. Child and adolescent public health

Abstract citation ID: ckac130.040

Quantifying the burden of Hypercholesterolemia among Adolescents in India

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Hypercholesterolemia is a kind of hyperlipidemia in which an individual's blood contains excessive non-high-density lipoprotein (non-HDL) cholesterol and low-density lipoprotein (LDL) cholesterol, which has emerged as a significant covariate of coronary heart disease. Descriptive, bivariate and multivariable regression analyses were used to unearth the current hypercholesterolemia levels, probable risk factors, and its impact on other metabolic diseases among adolescents using data on 35,830 adolescents aged 10-19 years from the Comprehensive National Nutrition Survey, India, 2016-18. Findings suggest that the mean lipid levels for total cholesterol, LDL, HDL, and triglycerides were 140.6, 84.1, 47.3, and 95.3, respectively, with females bearing the higher burden. The study further identified early adolescents, urban residents, and overweight individuals at a higher risk of having elevated non-HDL. Western and Eastern regions bore higher LDL levels. Further, for a unit increase in TSFT risk of having high LDL increased by 2.55 times. Zinc deficits are at 2.13 times higher risk compared to zinc sufficient. Adolescents consuming unhealthy diets were at higher risk of elevated LDL. The study contends that it is essential to prevent the increasing levels of lipid profiles among Indian adolescents. Vitamin and mineral deficiencies and unhealthy dietary habits are significantly associated with high LDL and non-HDL levels. In the longer run, this might cause the early onset of complex cardiometabolic disorders, which would disrupt the individual's social and economic well-being. Hence, appropriate interventions are needed to curtail these early onsets by primarily focusing on adolescents.

Key messages:

- Present study is primarily focussed upon the cholesterol levels among adolescents in India.
- How this imbalance in cholesterol levels among adolescents would affect the chronic conditions among adolescents in India.

Abstract citation ID: ckac130.041

Does neighbourhood crime mediate the relationship between neighbourhood SES and birth outcomes?

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Background:

Previous studies have consistently found that women living in low socioeconomic status (SES) neighbourhoods are at higher risk of experiencing adverse birth outcomes compared to women from high SES areas. However, the mechanisms through which neighbourhood SES might influence health at birth remain poorly understood. One of the proposed pathways is the exposure to higher crime rates. The aim of this study is to investigate whether neighbourhood crime mediates the relationship between neighbourhood SES and birth outcomes.

Methods:

A retrospective cohort study including over 1.3 million singleton births occurred in the Netherlands between 2010 and 2017. Individual-level data from the Dutch perinatal registry was linked to quintiles of neighbourhood SES scores and neighbourhood-level crime rates. Using the mediational g-formula, we estimated the total effect, natural direct effect, and natural indirect effect of neighbourhood SES on birth outcomes: small-for-gestational-age (SGA), low birth weight, and preterm birth. The neighbourhood SES intervention settings correspond with a hypothetical improvement in neighbourhood SES from the lowest to the highest quintile.

Results:

The hypothetical improvement in neighbourhood SES resulted in a 6.6% (CI = 5.6%; 7.5%) relative reduction in the proportion of SGA births, an 8.9% (CI = 7.6%; 10.3%) reduction in the proportion of low birth weight, and a 5.1% (CI = 4.0%; 6.1%) decrease of preterm birth. Neighbourhood crime accounted for 29.0% (CI = 25.1%; 32.8%) of the total effect of neighbourhood SES on SGA, and for 8.6% (CI = 5.1%; 11.6%) of the total effect on low birth weight. For preterm birth, we found no evidence of mediation by neighbourhood crime.

Conclusions:

Neighbourhood crime mediates the association between neighbourhood SES and key adverse birth outcomes. Interventions targeted at lowering neighbourhood crime rates could improve birth outcomes in disadvantaged areas.

Key messages:

- Neighbourhood crime mediates the association between neighbourhood SES and adverse birth outcomes in the Netherlands.
- Results from this study can provide guidance to neighbourhood-level strategies aiming at improving health at birth and reducing health inequalities.

Abstract citation ID: ckac130.042

Do fathers have sufficient knowledge to administer medicine to children correctly?

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Background:

Recently, the father's involvement in childcare is increasing in Japan. Inappropriate use of medication for children at home has been reported worldwide, however, the most responsible person was likely to be the mother. We aimed to compare the knowledge related to administering medication to children between fathers and mothers among Japanese parents.

Methods:

An online survey regarding medication administration to children was conducted in March 2022. Parents living with preschool children were recruited and categorized by four factors: sex (fathers and mothers), age of children, regular medication, and the difficulty level in giving medicine to their own children. The cross-sectional data were collected for each category. The knowledge related to administering medication to children was measured using ten statements such as "Children can be given a reduced dose of adult medicine" using a 5-point Likert scale. The answer "disagree" was defined as correct understanding and was compared between fathers and mothers (Chi-square test).

Results:

The participants were 145 fathers and 128 mothers. The percentage of fathers who answered all questions correctly or all questions incorrectly was 9.0% (mothers = 13.3%) and 25.5% (mothers = 13.3%) respectively. Each statement was answered correctly by fathers 20.0-57.9% and by mothers 25.8-71.9% and fathers were less likely to have the correct knowledge than mothers (6 items, $p < 0.05$). The biggest difference between those two groups was the statement of "Children should be given more than the proper dose for rapid effect". Furthermore, the fathers having some difficulties in giving medicine had lower awareness about appropriate medication use than fathers having no difficulties.

Conclusions:

Fathers were more likely to have lower knowledge related to administering medication to children than mothers. Medical professionals like pharmacists will need to support fathers.

Key messages:

- Fathers were more likely to have lower knowledge related to administering medication to children than mothers among Japanese parents living with preschool children.
- To improve fathers' knowledge related to administering medication to children, support by medical professionals like pharmacists will be needed.

Abstract citation ID: ckac130.043
The design of a user-centred m-health application for caregivers of children undergoing ORL surgery

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Background:

In the context of common surgical procedures in pediatric otorhinolaryngology (ORL) patients, providing for education to families for hospitalization, surgery, and postoperative home management has been shown to improve peri-operative outcomes. In this regard, the use of Mobile Health Applications (MHA) is increasing. However, for these tools to be needs-appropriate and effective, their development requires a user-centred approach.

Methods:

Our study aimed to explore the informational needs and preferences - in terms of features and functionalities - of health care providers and ORL patients' caregivers (end-users) to inform the development of an MHA supporting ORL peri-operative process effectively. The study was conducted at a 136-bed maternal and child health hospital in Trieste. A user-centred participatory study design was employed, and the methodology steps were informed by the 3 cycles of the Information System Research Framework (Schnall et al., 2016).

Results:

The Relevance cycle was performed to better understand the environment as well as end users' (64 participants) informational needs and desired features for the MHA. Five critical information/education moments of the ORL perioperative period were identified. In the Rigour cycle a literature review was performed to identify further key topics relevant to understanding ORL end-users' needs and relevant features for the MHA. In the Design cycle the final contents were defined to be displayed on the MHA spread across the 5 identified moments. A randomized controlled trial will then be conducted to evaluate the effectiveness of the MHA compared to standard care.

Conclusions:

Triangulation of data sources collected by experts, ORL patients' caregivers, and healthcare professionals ensured the rigour of the methodology adopted in the study. Moreover, such a MHA user-centred developed MHA favours end-users positive health outcomes and organizational benefits of health services.

Key messages:

- Contextualizing, and responding to the health informational needs and intent to use by end users is a critical foundation for the design and adoption of MHA in a maternal and child health hospital.
- To implement MHA quality in the process of children ORL health management and family consumer satisfaction, user-centred design methods are needed and feasible.

Abstract citation ID: ckac130.044
Impact of socioeconomic position on childhood obesity in Finland based on register data from 2018

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Background:

Obesity is a globally growing public health challenge among children. In developed countries, the risk of obesity is commonly higher among lower socioeconomic groups. Measuring socioeconomic position (SEP), especially income, is challenging in surveys as self-reported information may suffer from reporting, awareness, recall and non-response bias. Our aim is to utilize official register data on several SEP indicators and measured height and weight of children, to identify the strongest predictors of SEP of the parents on the risk of obesity among the whole 2-17-year-old child population in Finland.

Methods:

Data for all children who had visited child health clinic or school health care in 2018 were extracted from the National Outpatient Register on Primary Health Care Services (n = 387623, coverage 40% in 2018). Obesity was defined according to the WHO criteria. SEP indicators were obtained from Statistics Finland for both parents living in the same household with a child. Boosted regression model was used to analyze the contribution of SEP to obesity using training dataset on 155479 non-related children.

Results:

The area under the curve for the final model in training dataset was 0.736 and 0.718 in validation dataset. Mother's educational level (12.6% of the total explained variation) and household's disposable income (12.6%) were the SEP indicators that most strongly predicted childhood obesity, whereas the impact of educational level of the father was somewhat smaller (8.1%). The influence of the age of a child was even bigger (39.2%), the prevalence of obesity being highest at 11 and 9 years of age among boys and girls, respectively.

Conclusions:

Our results based on official register data from Finland, a Nordic high-income country, endorse earlier findings on higher obesity risk among children with low socio-economic family background. Identification of the SEP related risk factors and support to families are essential in the prevention of childhood obesity.

Key messages:

- Several family socio-economic factors are reflected in the risk of childhood obesity.
- Utilizing objective register data offers a way to tackle many challenges related to self-reported survey data.

Abstract citation ID: ckac130.045
Maternal respectful care and Post-Traumatic Stress Disorder among postpartum mothers in Israel

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Background:

Maternal Respectful Care (MRC) approach was recommended by the WHO for improving maternal birth experience and mental health. We examined the association between MRC and Post-Traumatic Stress Disorder (PTSD) among postpartum women.

Methods:

A cross-sectional study took place between November 2020 and October 2021. 817 postpartum women (Jewish- 444 Arab-373) were interviewed via Zoom due to Covid-19 limitations. MRC was measured by 26 statements from disrespectful/abusive care during childbirth in facilities (DACF); 4 statements from the Mother on Respect questionnaire (MOR-feeling mistreatment based on ethno-national background, level of command of the Hebrew language and disagreement with the staff); and 4 statements regarding abuse of the NorVold Abuse Questionnaire (NorAQ). PTSD was measured by Solomon et al.'s tool, and dichotomized into 12 score cutoff. (Yes /No PTSD).

Results:

PTSD prevalence was 14.3%, significantly higher among Palestinian-Arab compared to Jewish women (22.0%,7.9%, respectively), and it was higher in women who had lower MRC scores: did not receive postpartum education (19.9%,11.9 % respectively) received; received midwife support 11.7%,18.4% didn't receive; reported racism 26.1%,11.4% not; Felt humiliated at healthcare services vs. not (16.8% , 10.6%, respectively); women who reported mistreatment based on national/cultural background, compared to others (MOR) (36.6%,13.1%, respectively). In the multivariate analysis after adjusting to different independent variables, Palestinian-Arab women were 6.04 times at risk for PTSD (OR = 6.04,95% CI = 3.38-10.78),Women who reported racism are 2.14 times more likely to PTSD (OR = 2.14, 95% CI = 1.30-3.54). Women who reported feeling humiliated visiting the health care system are 2.08 times more likely to PTSD (OR = 2.08,95% CI = 1.23-3.52).

Conclusions:

MRC is an important factor for maternal PTSD among postpartum women and it should be considered specifically among minority women.

Key messages:

- MRC can contribute to quality care, improving birthing mothers experience and reducing negative health outcomes such as PTSD, and it should be improved for women.
- The health care services need to run a program to overcome racism and reduce unrespectful care for postpartum women.

Abstract citation ID: ckac130.046
Regulation and financing of prenatal screening and diagnostic tests for fetal anomalies in Europe

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Background:

Pregnant women frequently use prenatal screening and diagnostic tests to detect fetal structural and chromosomal anomalies; however, the regulation and financing of these examinations differ substantially across countries. In this paper we focus on the provision, financing and setting of the following tests in selected European countries: First Trimester Screening (FTS)/Combined Test (CT), Non-invasive Prenatal Test (NIPT), second-trimester ultrasound screening for fetal anomalies, amniocentesis/chorionic villus sampling.

Methods:

We chose 6 European countries that differ in various criteria (e.g., health/insurance system, geographical location) to illustrate the range of possible regulations and forms of funding: Germany, Switzerland, Netherlands, United Kingdom, Norway, Italy. We conducted a comprehensive hand search and consulted experts from the 6 countries using a questionnaire.

Results:

The results are based on 11 completed expert questionnaires and 22 published sources. The heterogeneity of the provision, regulation and financing of the tests concerns in particular the choice of the first-line screening test for fetal trisomies (FTS/CT, NIPT or the identification of risk factors), the implementation of the NIPT, the reimbursement of the tests, the uptake of the examinations, but also the professional groups responsible for antenatal care (midwives, gynaecologists). There are some similarities between countries, e.g., concerning the provision and financing of invasive tests and of the ultrasound screening for fetal anomalies in the second trimester.

Conclusions:

The results highlight the significant heterogeneity between European countries regarding prenatal screening and diagnostic testing for fetal anomalies. Due to the many ethical aspects of the topic, a broad societal discourse with the relevant interest groups and stakeholders seems to be necessary. Decision-makers should pay particular attention to high-quality and non-directive counselling.

Key messages:

- European countries take different approaches to offer and fund prenatal screening and diagnostic tests for fetal anomalies.
- The implementation of screening strategies should focus in particular on the importance of high-quality counselling to enable informed decision-making.

3.R. Chronic diseases

Abstract citation ID: ckac130.047
Overview of national strategies for the prevention and management of non-communicable diseases

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Background:

Several countries have developed national strategies or policies for preventing and managing non-communicable diseases (NCDs) which are the leading cause of death worldwide. We aim to provide an overview of these strategies from selected countries and their implementation, focusing on chronic respiratory and cardiovascular diseases, diabetes and depression.

Methods:

Using a comprehensive structured hand search, strategies from 8 countries (Germany, Switzerland, Netherlands, Finland, Ireland, United Kingdom, Canada, Australia) were identified and information on the main characteristics and implementation process of the strategies was extracted.

Results:

A total of 18 strategies were included. Most of the strategies formulate rather broad overarching aims or visions (e.g., ''stay healthy'' or ''living healthier lives'') as well as more specific targets that differ across strategies, e.g. focusing on improving quality of life and health literacy, reducing health inequalities or strengthening integrated care. The level of detail of information on implementation, monitoring and evaluation processes as well as financing is very heterogeneous. All strategies provide information on activities to achieve their aims, e.g. in the areas of health promotion/primary prevention, self-management, screening, integrated care, measures for specific risk groups or activities outside the health sector. Only a few strategies mention specific, already implemented (and evaluated) interventions, such as prevention or disease management programmes.

Conclusions:

The included NCD strategies differ considerably in terms of level of detail, structure and implementation. We focused on interventions within the health sector and on adults as a target group. However, for the prevention and management of NCDs, it is important to start in early childhood and to adequately address the social determinants of health with a 'Health in All Policies' approach.

Key messages:

- Many countries have developed and implemented strategies to strengthen and coordinate action to tackle NCDs which are a growing problem worldwide due to their high mortality and morbidity.
- A structured approach from the macro to the micro level seems crucial for a comprehensive, coordinated overall policy for preventing and managing NCDs.

Abstract citation ID: ckac130.048
A systematic review of multimorbidity patterns: social determinants and classification methods

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Background:

Governments and healthcare systems are facing multimorbidity (MM) as a major challenge due to the difficulties related to its proper identification and clinical management. Despite growing research on MM, its epidemiology is poorly understood due to the great complexity of underlying patterns of chronicity. The present review aims to identify the most frequent MM profiles and their social determinants.

Methods:

A systematic review following the PRISMA statement was conducted. The search strategy was performed by combining three sets of keywords (MM, inequalities and patterns) that were searched in Pubmed, Scopus, Web of Science, OVID, CINAHL Complete, and PsycINFO. Primary studies analysing MM patterns and their relationship with social determinants were included. The quality of the studies was assessed using the Axis tool quality assessment.

Results:

After the review process, 96 studies were selected from the 46,726 identified. The main methods used to identify MM patterns fell into five categories: latent class analysis (38.54%), cluster techniques (23.96%), factor analysis (19.79%), and machine learning (10.42%), and expert knowledge (7.29%). Latent class analysis was widely used, although in recent years the use of techniques based on machine learning has increased. The main patterns were cardiometabolic, cardiovascular, mental, musculoskeletal, complex MM, and respiratory diseases. Some MM profiles were more prevalent among lower-SES groups. In particular, patterns of mental multimorbidity were more prevalent among women and complex patterns were associated with low income.

Conclusions:

Results show different disease combinations among disparate social determinants such as gender, age, education, and socioeconomic status. Our results suggest that more and better designed studies are needed to improve clinical practice and health policies with the aim of enhancing the quality of patients with MM and their relationship to health system use and care.

Key messages:

- Patterns of mental multimorbidity and complex multimorbidity were more prevalent among women and men of low socioeconomic status, respectively.
- An increasing number of studies are using a network-based approach to classify multimorbidity.

Abstract citation ID: ckac130.049
Direct and indirect costs attributable to musculoskeletal disorders in Belgium

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Background:

Within the European Union, musculoskeletal (MSK) disorders represent the most prevalent and costly work-related health problems affecting about 45 million workers. Since middle-aged people during their formative and peak income-earning years are predominantly affected, MSK disorders are the major contributors to the loss of productive life years in the workforce compared with other non-communicable diseases. This study aimed to summarize the average yearly economic impact of low back pain (LBP), neck pain (NKP), osteoarthritis (OST) and rheumatoid arthritis (RHE) in Belgium from 2013 to 2017.

Methods:

Direct costs, measured by reimbursed expenditures for medical services and medications, were derived by the national health insurer. Indirect costs were computed by multiplying the mean number of days absent from work (derived by the Belgian health interview survey, as prevalence data) with the average gross daily wage. Multivariate regression models were used to explore the extent to which average yearly costs were associated with MSK disorders. The method of recycled predictions allowed to estimate the marginal effect of each MSK disorder on costs.

Results:

25% of Belgian adults were affected by at least one MSK disorder that incurred on average to 1,524€ per capita. LBP was the most costly disorder (2,405€ per capita) followed by NKP (2,260€ per capita). In the working population, 15% had at least one MSK disorder with an average indirect cost of 3,083€ per capita. People with LBP were the only showing a significantly higher indirect cost compared to a population without LBP, with an adjusted cost per capita of 5,875€.

Conclusions:

The adult Belgian population is largely affected by MSK disorders. Every year the total adjusted healthcare cost amounted to more than 3 billion Euros. Additionally, on average every year Belgium spends around 2 billion Euros for work absenteeism related to one of the MSK disorders.

Key messages:

- MSK disorders have a great societal cost in Belgium.
- Intervening on the working population that is largely affected can help reducing absenteeism costs.

Abstract citation ID: ckac130.050
Disability risks in past populations: Sweden from the 1800s until 1959

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Background:

While diseases in contemporary and past populations are thoroughly studied, the knowledge about disability and the risks of getting it is poor. Like diseases, disabilities increase with growing age affecting primarily elderly groups. Whether this notion holds historically and for other groups at risk for disability and differences over time is not known. This study estimates the disability risks in Swedish populations c. 1800-1959 by age, sex and disability type (sensory, physical, mental).

Methods:

We use data on two historical populations in the 1800s (N = 36,500; 550 with disability) and 1900-1959 (N = 194,500; 4,700 with disability) drawn from digitized parish registers reporting socio-economic and demographic characteristics over lifetime and on disabilities. Cox proportional regressions estimate disability risks across time by group (age, sex, disability type).

Results:

Our preliminary results based on unadjusted estimates from 1900-1959 suggest that the disability risks doubled or more. In the 1950s, women had 2.6 times higher risk than 50 years before, while it was 2.0 for men. The major rise started in the 1930s (Men 1.51; Women: 1.67), and grew in the 1940s (Men 1.80; Women: 2.14). Next, we will assess these risks by group and in the 1800s.

Conclusions:

From 1900-1959, Swedish populations experienced consistently higher disability risks, which doubled for men and almost tripled for women. These risks increased while improvements in public health and economic growth would subsequently make Sweden internationally known as a modern welfare state. That health improvements did not reduce the disability risks but the reverse, was possibly due to higher recognition or labeling of disabilities.

Key messages:

- Our study is unique in providing long-term results on populations at risk for disability while public health improved.
- Public concerns to confine disabled people for treatment in the early welfare era increased the disability risks beside longer life expectancy.

Abstract citation ID: ckac130.051
Development and internal validation of a new life expectancy estimator for multimorbid older adults

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Background:

Multimorbidity is highly prevalent among older adults and associated with a shorter life expectancy. Many guidelines recommend tailoring preventive care of multimorbid people according to life expectancy. Indeed, patients with a relatively short life expectancy might not have the time to benefit from a preventive care intervention. Our objective was therefore to develop and internally validate a life expectancy estimator for older multimorbid adults.

Methods:

We analysed data of the OPERAM (OPtimising thERapy to prevent Avoidable hospital admissions in Multimorbid older people) cohort study in Bern, Switzerland. 822 hospitalized participants aged 70 years old or more, with multimorbidity (3 or more chronic medical conditions), and polypharmacy (use of 5 drugs or more for >30 days) were included. Our main outcome was time to all-cause mortality assessed during 3 years of follow-up. Candidate predictors included demographic variables (age, sex), clinical characteristics (Charlson-Comorbidity-Index, number of drugs, body mass index, weight loss), smoking, functional status variables (Barthel-Index, falls, nursing home residence), and hospitalization. We internally validated and optimism corrected the model using bootstrapping techniques. We transformed the 3-year mortality prognostic index into a life expectancy estimator using the Gompertz survival function.

Results:

At baseline, the participants (58% men) had a median age of 79 years (min: 70; max: 99). They took daily a median of 10 chronic medications (min: 5; max 38). During 3 years of follow-up, 292 participants (36%) died. The analysis is ongoing and results will be presented at the congress.

Conclusions:

A life expectancy estimator eventually helps personalising care to prevent under- and overuse of preventive care in the growing older population.

Key messages:

- We provide the first life expectancy estimator for older multimorbid adults.

- A life expectancy estimator eventually helps personalising care to prevent under- and overuse of preventive care in the growing older population.

Abstract citation ID: ckac130.052
Changing epidemiology and trends in incidence of kidney cancer in England, 1985-2019

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Background:
Kidney cancer is the 7th most common cancer in the UK, accounting for 4% of all new cancer cases. The risk factors for kidney cancer include obesity, smoking, hypertension, and exposure to certain environmental and occupational carcinogens. We conducted a retrospective population-based cohort study to examine whether there have been changes in the incidence of kidney cancer in England during the past four decades.

Methods:
Individual level data for patients diagnosed with kidney cancer in England during 1985-2019 were obtained from the Office for National Statistics/Public Health England. Average annual incidence rates were calculated by two age categories (0-49, 50+ years) and all ages combined during the seven five-year time periods (1985-89 to 2015-19). The percentage change in incidence was calculated as change in the average annual incidence rate from the first (1985-89) to the last time period (2015-19).

Results:
During the 35-year study period, a total of 197,819 new cases of kidney cancer were registered in England (62.4% males, 37.6% females). In young people aged 0-49 years, the average annual incidence rates increased by 164% in males and 144% in females (from 1.4/100,000 in 1985-89 to 3.7/100,000 in 2015-19 in males and from 0.9/100,000 in 1985-89 to 2.2/100,000 in 2015-19 in females). In older people aged 50+ years, the rates increased by 129% in males and 147% in females (from 24.5/100,000 in 1985-89 to 56.0/100,000 in 2015-19 in males and from 11.9/100,000 in 1985-89 to 29.4/100,000 in 2015-19 in females).

Conclusions:
There has been a steady and significant increase in the incidence of kidney cancer in England over the past four decades. The largest increase (164%) was observed in young males aged 0-49 years, which was unexpected. Considering the risk factors for kidney cancer, further research is needed to understand the role of environmental/occupational exposures in causing kidney cancer.

Key messages:
- About 24% of kidney cancers in the UK are attributed to obesity and 13% to smoking. This research highlights the benefits of reducing the prevalence of obesity and smoking in the general population.
- The unexpected significant increase in the incidence of kidney cancer in young people aged 0-49 years needs further investigation.

Abstract citation ID: ckac130.053
Changing epidemiology and trends in incidence of thyroid cancer in England, 1985-2019

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Background:
Thyroid cancer is 2-3 times more common in females and is currently the fastest growing cancer worldwide. Exposure to ionizing radiation is the only established risk factor for thyroid cancer. Other factors include obesity, history of benign thyroid conditions, and family history. We conducted a retrospective population-based cohort study to examine whether there have been changes in the incidence of thyroid cancer in England during the past four decades.

Methods:
Individual level data for patients diagnosed with thyroid cancer in England during 1985-2019 were obtained from the Office for National Statistics/Public Health England. Average annual incidence rates were calculated by two age categories (0-49, 50+ years) and all ages combined during the seven five-year time periods (1985-89 to 2015-19). The percentage change in incidence was calculated as change in the average annual incidence rate from the first (1985-89) to the last time period (2015-19).

Results:
During the 35-year study period, a total of 58,710 new cases of thyroid cancer were registered in England (27.3% males, 72.7% females). In young people aged 0-49 years, the average annual incidence rates increased by 375% in males and 438% in females (from 0.4/100,000 in 1985-89 to 1.9/100,000 in 2015-19 in males and from 1.3/100,000 in 1985-89 to 7.0/100,000 in 2015-19 in females). In older people aged 50+ years, the rates increased by 146% in males and 171% in females (from 2.4/100,000 in 1985-89 to 5.9/100,000 in 2015-19 in males and from 4.1/100,000 in 1985-89 to 11.1/100,000 in 2015-19 in females).

Conclusions:
There has been a steady and substantial increase in the incidence of thyroid cancer in England over the past four decades. The largest increase in incidence was observed in young people aged 0-49 years. Some of this increase is due to enhanced surveillance and sensitive diagnostic methods, but other factors (e.g., obesity and history of benign thyroid conditions) need to be considered.

Key messages:
- The unexpected substantial increase in the incidence of thyroid cancer in young people aged 0-49 years needs further investigation.
- It is important to determine what proportion of the cases are due to enhanced surveillance and what proportion are due to environmental exposures.

Abstract citation ID: ckac130.054
ATHLOS Healthy Ageing Scale score as the predictor of mortality in Poland and the Czech Republic

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Background:
A novel tool to measure healthy ageing was developed by the ATHLOS consortium (Ageing Trajectories of Health-Longitudinal Opportunities and Synergies). ATHLOS Healthy Ageing Scale, constructed using harmonized data from 16 independent ageing cohorts, was designed to contribute to

worldwide research on healthy ageing. The aim of the analysis was to assess the relation between ATHLOS Healthy Ageing Scale and all-cause mortality in Central European populations.

Methods:

Participants of the Polish and Czech HAPIEE cohorts (baseline age 45-69 years) were followed for 14 years. ATHLOS Healthy Ageing Scale was based on over 40 health indicators related to intrinsic capacity and functional ability. Cox proportional hazards models were used to determine the relationship between the ATHLOS Healthy Ageing Scale scores and all-cause mortality.

Results:

As many as 9,922 Polish and 8,518 Czech participants had non-missing data on the ATHLOS Healthy Ageing Scale score and mortality (1828 and 1700 deaths, respectively). After adjustment for age, dose-response associations with mortality in both genders and countries were found (HR for lowest vs. highest quintile of the ATHLOS Healthy Ageing Scale: 2.98 and 1.96 in Czech and Polish women and 2.83 and 2.66 in Czech and Polish men, respectively). Only modest attenuation was observed when additionally adjusted for education, economic activity, smoking and self-rated health.

Conclusions:

The ATHLOS Healthy Ageing Scale was found to be a good predictor of all-cause mortality in urban populations of Poland and Czechia. This composite indicator seems to be an important contributor to a better assessment of healthy ageing.

Key messages:

- Independent inverse associations between ATHLOS Healthy Ageing Scale and all-cause mortality were found in both men and women in urban population samples from Central and Eastern Europe.
- Given its predictive validity for all-cause mortality, this novel tool may substantially contribute to a better assessment of healthy ageing.

Abstract citation ID: ckac130.055
Dual task test: Screening procedure for early detection of cognitive impairment among healthy adults

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Background:

Early detection of cognitive impairment can slow progression to dementia when using appropriate therapy. For early detection of dementia dual task combining cognitive tasks and walking might be suitable, since individuals with cognitive impairment have shown greater changes in gait specific parameters on dual task test (DT) compared to single task test (ST). This study investigates whether these changes correlate with poorer cognitive function in healthy older adults.

Methods:

In a cross-sectional study 174 healthy adults (66,48±4,26years; 40%female) completed the Cognitive Functions Dementia Test (CFD), with a lower CFD index indicating lower cognitive function. Participants performed ST (walking 20m) and DT (walking 20m & counting backwards), in which step frequency, stride length and gait speed were monitored by Pablo sensors. Cognitive cost (CC) was determined for each gait variable. CC represents a change score between SD & DT and quantifies cognitive demands, with higher CC indicating poorer cognitive function. Pearson correlations and stepwise linear regression adjusted for age and gender were applied to analyze the association between CFD Index (dependent variable) and CC gate variables (predictors) ($\alpha = 5\%$).

Results:

Significant correlations were observed between CFD Index and CC step frequency ($p = .014$, $r = -.187$), CC stride length ($p = .037$, $r = -.160$) and CC gait speed ($p = .002$, $r = -.232$). Since gait variables were intercorrelated (multicollinearity), only gait speed was significant predictor for CFD Index ($ß = -.243$, $p < .001$, $R^2 = .053$) in a stepwise adjusted regression model.

Conclusions:

Changes in gait speed might be sensitive enough to indicate differences of cognitive performance among older individuals. Therefore, DT could be included in screening procedures as alert for potential cognitive decline.

Key messages:

- Changes in gait speed might be sensitive enough to indicate differences of cognitive performance among older individuals.
- DT is sensitive to distinguish different cognitive performance in healthy elderly with potential for early detection of mild cognitive impairments.

3.S. Digital health and communication

Abstract citation ID: ckac130.056
Assessing the state of Web-based communication for public health: a systematic review

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Background:

Communicating strategically is a key issue for health organisations and, over the past decade, healthcare communication via social media and websites has generated a great deal of studies. As for systematic reviews, there is, however, fragmentary evidence on this type of communication. The aim of this research was to summarise the evidence on Web institutional health communication for public health authorities to evaluate aim-specific key points based on existing studies.

Methods:

Guided by the PRISMA statement, we conducted a comprehensive review across two electronic databases (PubMed and Web of Science) from 2011 until 7 October 2021, searching for studies investigating institutional health communication. Two independent researchers reviewed the articles for inclusion, and assessment of methodological quality was based on the Kmet appraisal checklist.

Results:

78 articles were selected. Most of the studies targeted health promotion/disease prevention (n = 35), followed by crisis communication (n = 24), general health (n = 13), and misinformation correction/health promotion (n = 6). Engagement and message framing were the most analysed aspects. Few studies focused on campaign effectiveness. Only 18 studies had an experimental design. Kmet evaluation was used to distinguish studies presenting a solid structure from lacking studies. In particular, considering the 0·75-point threshold, out of 74 studies, 28 were excluded (37·8% of the total). Studies above this threshold were used to identify a series of aim-specific and medium-specific suggestions, as communication strategies employed differ quite greatly.

Conclusions:

Overall, findings suggest that no single strategy works best in the case of Web-based healthcare communication. The extreme variability of outcomes and the lack of a unitary measure for assessing the end-points of a specific campaign or study leads us to reconsider the tools we use to evaluate the efficacy of Web-based health communication.

Key messages:

- This systematic review provides an overview on Web-based health communication. Results suggest that no single strategy works best and the need to reassess its evaluation tools.
- Communicating strategically is key for health organisations. This systematic review analyses a corpus of texts, in an effort to summarise and analyse existing, albeit fragmentary, evidence.

Abstract citation ID: ckac130.057
Disruptive e-prevention from 2019: dummy online drug selling sites to reach new consumers

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Background:

The last three decades have seen the development of chemsex, the diversification of substances through New Psychoactive Substances (NPS), and new technologies allowing people to buy online and find peers to consume on applications while remaining in private spheres (Trend, Cadet-Taillou, 2020). The latter has made it more difficult to reach users, so as to document their uses and the population, and to design public health schemes aimed at users, except through targeting metapopulations known to consume more than the general population (Léobon et al., 2018; Talley et al., 2011).

Methods:

The PlaySafe association designed two dummy websites, one selling GBL, the other NPS. These websites use the same graphics and syntactic codes as the main websites of the field, except for: 1) a fake drug named ''love machine''; 2) an automatic redirection to a health promotion page instead of payment finalization. The information collected is: delivery region, birth year, gender, perceived usefulness of the health promotion messages, whether people would recommend to friends, the contents and quantities of the shopping cart, the time spent on each page, and data gathered via Google Analytics.

Results:

On both websites 21,459 order attempts have been placed. This pathfinder research project has allowed to reach 6,203 people on the GBL website in 30 months and 7,927 people in 12 months on the NPS website, with people spending on average 1 min 35 s on the first website's prevention page and 1 min 27 s on the second. Around 85% of people consider the content useful, among whom 75% would recommend the website to friends. This communication also aims to present the characteristics of the reached population.

Conclusions:

This innovative approach has allowed to precisely target a population escaping public health research and prevention schemes. It appears interesting to explore online prevention, especially since most of the respondents consider the experience helpful and recommendable.

Key messages:

- NTIC can serve research and actions in public health in order to reach online drug buyers.
- Monitoring the online drug market can be used to design actions by stakeholders.

Abstract citation ID: ckac130.058
COVID-19 contact tracing apps in Europe, technological feat or failure?

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Background:

In the context of infectious disease control (IDC), public health services (PHS) have been under great pressure during the COVID-19 pandemic, especially with the burden of contact tracing. Most European Union countries have developed contact tracing apps for smartphones (CTA) with the goal of aiding PHS in IDC. CTAs generally use proximity data from mobile devices to determine a user's risk of exposure to SARS-CoV-2, thus providing testing and isolation recommendations. This review aimed to study the acceptance and adoption of CTAs in Europe.

Methods:

5 European countries were selected: Germany, Spain, France, Ireland, Italy. A literature review was carried out and official sources of information from each country were consulted in order to compare the adoption of each national CTA. Criterias included number of downloads, rating in the app stores, costo of development, proportion of positive tests registered. Potential factors influencing population adherence to CTAs were also investigated.

Results:

In proportion to their population, the number of downloads varied significantly in each country (18 % in Spain, 67% in France, 75% in Ireland). Except for Spain, all countries integrated additional functions into the CTA to increase its uptake, such as access to the vaccination certificate. App stores ratings ranged from 3.0 (Spain) to 3.9 (France and Ireland). The proportion of tests added in the apps varied significantly (1% in Italy and Spain, 4% in Ireland, 10% in France and 17% in Germany). Concerns that lead to the non-use of CTAs were related to data protection, smartphone battery drainage and app bugs.

Conclusions:

CTAs as a way to identify contacts from a positive case had a low impact in the analyzed countries, with low population adherence being an important factor. Adding more features within the apps, minimizing bugs, and increasing public confidence in data privacy seem essential to increase uptake in the future.

Key messages:

- Although conceptually attractive, CTAs have not proven to be effective in the context of the COVID-19 pandemic.
- There is a need for research and evaluation of the use of CTA, including cost effectiveness metrics, to inform future implementation similar technologies.

Abstract citation ID: ckac130.059
The "grey" digital divide in older adults during COVID-19 in Germany: Who is most at risk?

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Background:

During the COVID-19 pandemic, physical distancing was a recommended public health measure. For some older adults, distancing has not only been physical but also social due to a lack of access to the internet - either due to consciously opting out or lack of resources. This study aims to assess who is most at risk of not having access to the internet and the associated negative mental and physical health outcomes.

Methods:

Participants were drawn from the 2020 German Ageing Survey (DEAS) in June and July 2020, and include community-dwelling adults above 45 years old (N = 4,823; 56.5% response rate). Two complementary analytic approaches were used to identify lack of access: logistic regression (LR) and Classification and Regression Tree (CART) analysis, using social indicators as predictors. LR provides information about main effects of the predictors; CART, through an exploratory, non-parametric procedure, illustrates the mathematical relationship of the variables.

Results:

CART analysis revealed that the strongest discriminating factor for internet access was being over or under 75 years old (n = 3,131 Pr = 0.075 vs n = 1,545 Pr = 0.385). Moreover, for older individuals high education was a protective factor (n = 739 Pr = 0.260 vs n = 805 Pr = 0.499), while for younger individuals a monthly income of 2,000€ set the internet access cut-off point (n = 2520 Pr = 0.0504 vs n = 611 Pr = 0.177). Logistic regression revealed that gender (OR = 1.50; pv < 0.001), education (OR = 0.36; pv < 0.001), monthly income (0.93; pv < 0.001) and region in Germany (West-East) (OR = 2.42; pv < 0.001) explain 29.40% of internet access' variance. Results are preliminary.

Conclusions:

In times of forced physical distancing, the "grey" digital divide increases the vulnerability of disadvantaged groups. CART analysis helped identify groups at higher risk of not having access to the internet and yields the ground for tailored public health interventions.

Key messages:

- The strongest discriminating factor for internet access in Germany during the COVID-19 pandemic was being over or under 75 years old. For younger individuals a monthly income of 2k € set the threshold.
- The "grey" digital divide affects individuals over 75 years old with middle or low education the most, increasing the risk of associated negative mental and physical health outcomes.

Abstract citation ID: ckac130.060
Research ethics with real-world data (RWD) on COVID-19 infections: the unCoVer study

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Issue:

The aim of the Horizon 2020 unCoVer project (Unravelling Data for Rapid Evidence-Based Response to COVID-19) is to coordinate research expertise in utilising Real World Data (RWD) to investigate the underlying risk factors for COVID-19 infection and severity, the effectiveness of treatments and the impact on health systems. RWD is particularly useful in a dynamic health context as it is relevant, timely, and more ecologically valid. Pooling clinical databases and integrating epidemiological principles and powerful biostatistical tools optimises resources and fully exploits routinely-collected data.

Description of the problem:

RWD sharing poses new practical and ethical challenges to research. The unCoVer network has developed a federated data platform to access diverse databases for advanced analytics. This data access process entails GDPR, and regulatory and ethical nuances. The use of large-scale data from heterogeneous sources across multiple jurisdictions for research purposes presents a complex systems challenge.

Effects & Lessons:

A dedicated team of unCoVer network members is responsible for addressing these challenges. Here, we describe the ethical and regulatory aspects of RWD sources, the role of the Data Protection Authorities and the Data Protection External Authority Board (DP-EAB) of the Uncover project, and the documentation involved, including a data processing agreement and a data transfer agreement. We provide an overview of the main principles for sharing RWD whilst maintaining integrity and security and how this translates into procedures to protect the rights, security, and well-being of human research participants. This represents a practical framework for researchers.

Key messages:

- Sharing RWDs presents new practical and ethical challenges for research where large-scale datasets from heterogeneous sources across multiple jurisdictions must be arranged in a structured manner.
- Using the Uncover project framework, heterogeneous data can be shared and harmonized in a standard manner. This framework can be used in future RWD projects to generate real-world evidence.

Abstract citation ID: ckac130.061
Applicability of European legislation for the protection of data while using tracing applications

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Background:

Since the beginning of the COVID pandemic, Member States have started using tracing applications. The European Commission immediately confirmed the possibility of collecting personal data without the obligation to obtain the citizens' consent. Aware of the threat of data breach, the Commission has tried to remedy the situation and has given up the recommendation followed by a guide on how to use the tracing applications.

Methods:

In order to achieve the determination of the applicable European legislation, we used the doctrinal method in combination with the quantitative empirical research in the area of comparison of individual tracing applications.

Results:

The geolocal applications are regulated by GDPR. Based on Article 6 (1) GDPR, Commission confirmed the possibility to restrict the citizens' privacy. The Commission drew the attention to the collection of personal data based on the exception of "public interest" without necessity of the citizens' consent. In combination with Article 23, the Member states may restrict the lawful processing of data by legislative measure for protection of "public health". The applications using Bluetooth exposure notification system (ENS) do not operate with personal data. Thus, these are in general out of scope GDPR and regulated by the Directive on privacy and electronic communications. Article 15 of the Directive allows processing of communication without citizens' consent for the reasons listed in paragraph 1, which did not include "public health", therefore the applications cannot be use without citizen's consent.

Conclusions:

The use of applications with geolocation allows Member states to process personal data without guarantees in order to protect public health. This approach is unacceptable in relation to the right to privacy. If a situation like the covid pandemic occurs again, exclusively applications with ENS should be used. The use of these applications, even in times of pandemic, is conditioned by the citizens' consent.

Key messages:

- The project is expected to define applicable European legislation for using tracing applications and thus contributing to their safe use in the future with the least impact on citizens' rights.
- The use of geolocal applications without legal proceeding of sensitive data contributed in 2020 to an increase of data breach up to 68%, thus it is necessary to adhere to the principles set by GDPR.

Abstract citation ID: ckac130.062
Assessment of Cyberostracism and Personality Inventory In First Year University Students In Turkey

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Background:

Being ignored, one of the most common problems among young people, can occur not only in face-to-face communication but also through social media communication tools over the internet and is called cyberostracism (CO). The effects of cyberostracism on people are at least as effective as in real social life and can cause a wide variety of affective disorders. It is thought that the family, environmental factors and the individual's own personality traits effectively control such negative emotions. This study aims to evaluate the CO level and personality types of students who have just started university in Turkey.

Methods:

This cross-sectional study was conducted in 2021 spring semester and 3148 students in the first year of their university in Turkey constituted the study group. To evaluate the CO levels of the students, CO Scale (min-max score 14-70) and to evaluate the personality type, Ten Item-Personality Inventory (TIPI) was used. The questionnaire prepared in accordance with literature was filled out online by the students. Mann Whitney U, Kruskal Wallis analyses and Multiple Linear Regression was used.

Results:

In the study, 1847 (62.5%) were female and the mean age was 19.9±1.8 years. The mean score obtained from the CO scale was 21.1±8.1; 41.8% of the participants had the Agreeableness personality type. Male gender, extended family, not good at face-to-face communication with friends, creating a membership by hiding their identity in social media and being ignored in social media were predictive for CO (F: 69.176, R2: 0.172, $p < 0.001$) was shown in multiple linear regression.

Conclusions:

Distance education programs during the pandemic period have limited the face-to-face communication of young people, causing them to spend more time in cyberspace. Personality type has been an important factor affecting the level of cyberostracism by determining our behaviour when exposed to difficult life events.

Key messages:

- Young people exposed to cyberostracism, may enter dangerous environments and groups that they think will be easily accepted in their real lives.
- It is thought that young people should be guided to use social media more consciously in the future in order to prevent cyberostracism.

Abstract citation ID: ckac130.063
Digital Health Literacy and Infodemic: the impact on Italian medical students between 2019-2020

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Background:

The COVID-19 infodemic is putting pressure on public health systems to control the pandemic. With the internet and social media playing a key role in emergency communication, digital health literacy (DHL) can be considered a determinant of health. This study aims to assess the impact of infodemic on the skills of medical students, for whom low levels of DHL may affect the ability to identify the best available medical evidence.

Methods:

A cross-sectional web-based survey was conducted at the University of Florence (Italy) in Apr-May 2019 (pre-pandemic period) and in Nov-Dec 2020 (pandemic period) to investigate DHL skills. Two different cohorts of students, both in their first year of medical school, participated in the survey. The 8-item self-assessment tool (IT-eHEALS) with a 5-point Likert scale was used to examine DHL. The change in perception of ability between the two cohorts was examined using the Wilcoxon test.

Results:

A total of 329 students participated in the survey in 2019 (F: 58.1%; mean age 20.6±2.1) and 341 in 2020 (F:61.9%; mean age 19.8±2.0). In 2019, participants' DHL level was moderate with a IT-eHEALS overall mean score (MS) of 28.4±5.8. Students had a good idea of how to find helpful health information (MS 3.9±0.8) and how to use the web for this purpose (MS 3.8±0.9), but they were less confident about the usefulness of the information they received (MS 2.9±1.1). In 2020, the medical students' DHL level deteriorated as the overall MS of IT-eHEALS decreased to 23.4±7.2 ($p < 0.01$). The scores of the IT-eHEALS items were significantly lower and students indicated that they found it difficult to assess the information they found (MS 2.4±1.1; $p < 0.01$).

Conclusions:

DHL can contrast infodemic, but the latter in turn may have a negative impact on perceived DHL skills if personal knowledge base is not well structured. Training programmes for medical students as future health care providers should be reinforces to guide their practise.

Key messages:

- Assessing digital health literacy is the first step in directing public efforts towards empowering educational programmes to improve health literacy.
- Medical students, as future health professionals, should be able to use the best evidence to help their patients identify healthy beliefs and behaviours to manage in health emergencies.

Abstract citation ID: ckac130.064
Evaluation of Telemedicine awareness, knowledge, attitude, skill levels of physicians and students

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Background:
The increase in the use of information and communication technologies around the world brings about developments and changes in the provision of health services. It is accepted that telemedicine applications will facilitate health services for patients and health personnel. This study aimed to evaluate the telemedicine awareness, knowledge, attitude and skill levels of physicians and medical school students.

Methods:
This cross-sectional study was conducted between July and August 2021. A questionnaire form was prepared using the relevant literature then filled online by the participants. Telemedicine Awareness, Knowledge, Attitudes and Skills Questionnaire was used in the research. The universe of the research consisted of medical faculty students and physicians across Turkey. In the study, 933 people were reached by using the purposeful snowball sampling method, one of the non-probability sampling methods. Mann Whitney-U test, Kruskal Wallis test, Spearman correlation analysis and Multiple Linear Regression analysis were used.

Results:
Of the participants, 442 (47.4%) were female, 497 (53.3%) were medical students, and 436 (46.7%) were physicians. Their ages ranged from 18 to 59, with a mean of 28.0±8.8 years. The median (min-max) scores obtained from the Telemedicine Awareness (TA) sub-section were 18(0-24), 51.3% of them had scores above the median score. TA sub-section had a moderate positive correlation ($r = 0.559$, $p < 0.001$) with knowledge sub-section and a weak positive correlation ($r = 0.208$, $p < 0.001$) with skill level sub-section. TA scores were higher among men, physicians and those who want to participate in a telemedicine training program. TA increased as the level of computer and internet knowledge increased ($F = 29.171$, $R2 = 0.197$, $p < 0.001$).

Conclusions:
It can be said that TA is at a moderate level among medical students and physicians in Turkey. TA increased as the level of computer and internet knowledge, telemedicine knowledge and skills increased.

Key messages:
- It may be beneficial to add telemedicine education to the medical school curriculum.
- For physicians in working life, it is recommended to include telemedicine applications in the scope of continuing medical education.

Abstract citation ID: ckac130.065
Remote patient monitoring at home using ambient sensors: a systematic review

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Background:
The world population is ageing, and their health needs imply substantial demands on health systems. Remote Patient Monitoring (RPM) may help elderly patients live independently in their homes for longer. The essence of RPM is the continuity of use, which is challenging for wearable devices and patient-led technologies. Unobtrusive (ambient) sensors could be an innovative solution, such as motion detectors and similar technologies. This study aims to review the evidence on the effect of ambient sensors on healthcare use by the elderly.

Methods:
This is a systematic review for narrative synthesis, searching five databases, Medline, Embase, CINHAL, Scopus and Web of Science, on 21 Feb 2022 without setting a lower time limit. No restrictions on the design of studies were applied. A meta-analysis was not feasible due to the heterogenicity of the studies.

Results:
Out of 5,653 search results, 180 studies were subjected to full-text review, of which 6 studies were included in the final synthesis. All the included studies were conducted in the USA. Four studies assessed the technology's cost-efficiency, while only one reported significant cost savings. One study reported a significant reduction in hospital days and visits to a physician among the users. Using ambient sensors was associated with an increased length of stay in facilities where the elderly can live independently, including at home. The impact on the number of hospitalisations or emergency room visits was unclear.

Conclusions:
Our review identified limited evidence on the effect of ambient sensors on healthcare use by the elderly. The potential has been demonstrated for ambient sensor technologies to result in cost savings; however, further research is needed to assess the impact on health outcomes.

Key messages:
- Ambient sensors can be effectively used to remotely monitor the health of eldelry people at home.
- Further research is needed to assess the cost effectiveness of using ambient sensor technologies in remote patient monitoring.

4.R. Environment and health

Abstract citation ID: ckac130.066
Impact of the MEDEA exposure-reduction strategies on indoor air quality during desert dust storms

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Background:
Desert dust storms (DDS) impact the Mediterranean basin heavily, particularly in the context of climate change, reduced

precipitation and increasing desertification. There is a pressing need to develop policies protecting EU citizens' health from DDS. While Public Health authorities in affected regions commonly issue warnings, the effectiveness of recommendations to reduce exposure has not been documented.

Methods:

This work is part of the wider "MEDEA" intervention studies, co-funded by LIFE 2016 Programme. Among other outcomes, the studies examined the effectiveness of an indoor exposure-reduction intervention (i.e., decrease home ventilation and use of air cleaners) across homes of asthmatic schoolchildren and individuals with atrial fibrillation in Cyprus. Participants were randomized to either a control or indoor intervention group. The assessment took place in a sample of participants' homes, during 2019 and 2021, with the collection of indoor and outdoor PM10 and PM2.5 samples, which were analyzed for mass and elemental concentrations.

Results:

Indoor PM2.5 and PM10 mass and elements concentrations were significantly lower in the indoor intervention group compared to the control group, both during days with no dust (e.g., 55% and 48% reduction for PM2.5 and PM10, respectively) and days with desert dust (PM2.5: 47% and PM10: 40% reduction). In addition, the infiltration of PM2.5 and PM10 particles from the outdoor to the indoor air was significantly lower in the intervention vs. the control group (PM2.5: -55%, 95% CI: -42%, -65%; PM10: -41%, 95% CI: -61%, -12%).

Conclusions:

The study assessed a realistic exposure-reduction strategy and provided first-time evidence that closing doors and windows along with air cleaners can reduce indoor exposure to DDS particles. This evidence can further inform decision-making and strategic planning for population-level mitigation of DDS health effects in Mediterranean Europe.

Key messages:

- Decreasing home ventilation and use of air cleaners during DDS can reduce indoor particle mass concentrations by up to 50%, and infiltration of particles from outdoor environments by up to 60%.
- Demonstration of the effectiveness of a sustainable exposure-reduction intervention can contribute towards the adaptation of the population to the effects of climate change.

Abstract citation ID: ckac130.067
The impact on ambient air pollution and asthma-related admissions of COVID-19 transport restrictions

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Exposure to air pollution is a known risk factor for asthma exacerbations, emergency attendances and hospitalisations. In Europe, the main source of air pollution is the transport industry, and so the COVID-19 transport restrictions provided an opportunity to examine if reduction in traffic had a demonstrable impact on ambient air quality and asthma-related admissions. Routinely collected data was used to conduct a retrospective population cohort study. The Environmental Protection Agency provided daily nitrogen dioxide (NO2) and particulate matter (PM) concentrations for Dublin, and all asthma-related admissions were collected from the Hospital In-Patient Enquiry system. The two years prior to the pandemic were compared with the period of transport restrictions (from March 2020). During the period of restrictions, there was a significant reduction in the mean number of daily asthma admissions (2.8 v 4.5 admissions $p < 0.001$). There was also a significant decrease in mean daily concentrations in two pollutants: NO2 (16.7 v 24.0µg/m3 $p < 0.001$) and PM2.5 (7.8 v 8.9µg/m3 $p = 0.002$). Only NO2 had a statistically significant correlation with asthma admissions ($r = 0.132$ $p < 0.001$). Transport restrictions introduced to mitigate against COVID-19 led to improvements in air quality, as seen by the reductions in pollutant concentrations. Previously described associations between pollutants and asthma, would suggest that these improvements in air quality contributed to the reduction in asthma admissions. Whereas the primary source of NO2 is transport emissions, PM is made up of particles from multiple sources, which likely explains the lack of correlation between asthma admissions and PM. Public Health need to advocate for transport policies which can improve air quality, and as a result, public health.

Key messages:

- Poor air quality poses a significant health challenge requiring public health input and advocacy.
- Reducing vehicle traffic can improve air quality which would have a positive impact on public health.

Abstract citation ID: ckac130.068
Medical studentś needs for an integration of climate change into the medical curriculum

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Background:

The impacts of climate change (CC) on health comprise increased human morbidity and mortality. Consequently, physicians need to be systematically trained to address CC in their professional life. Due to lacking research on educational needs of medical students, we developed a survey instrument to assess studentś attitudinal and knowledge-based needs for the integration of CC into medical curricula and their readiness to learn.

Methods:

Our survey was administered online to 788 students at the Medical Faculty of Heidelberg University between 06/2021 and 02/2022. Data analyses included descriptive statistics, reliability analyses as well as regression modeling with regard to readiness to learn.

Results:

214 students participated in the survey, 170 fully completed datasets were included in the analysis. A majority of students (72.35%) (strongly) agreed that doctors carry a responsibility to address CC in their work setting, while only 4.71% (strongly) agreed, that their current medical training had imparted them with enough skill to do so. Students showed both considerable knowledge and interest in the area of CC, its health impacts, vulnerabilities and clinical adaptation (70.09% correct answers). Knowledge gaps were identified in the areas of health co-benefits and sustainable healthcare (55.53% and 16.71% of correct answers). 79.42% of students want to learn about CC through the integration into existing mandatory courses.

Conclusions:

Results encourage the integration of CC topics with a focus on knowledge and professional role development into existing mandatory courses of the medical curriculum. Specifically, they also pinpoint health impacts and adaptation as greatest areas of interest for students and at health co-benefits and sustainable healthcare as areas with least prior knowledge.

Key messages:

- Heidelberg medical students want to learn about CC in their curricula.
- They have decent knowledge about CC and health but knowledge deficits in the topic areas of health co-benefits and green health sector.

Abstract citation ID: ckac130.069
Climate-sensitive health counselling: a quantitative survey on addressing climate change

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Background:
Climate change and its mitigation have significant health implications. Hence, medical associations call on physicians to inform the population about health risks of climate change and possible health co-benefits of climate action. However, so far it is unclear what preferences the general public has about climate-sensitive health counselling (CSHC). Therefore, we developed a survey tool to a) characterize experiences of CSHC, b) identify preferences about communication methods and themes, and c) determine associations of socioeconomic characteristics and climate change attitudes with CSHC preferences.

Methods:
The tool development for this cross-sectional online-based survey was embedded in a bigger research project on the conceptualization of CSHC, which follows an exploratory mixed-methods design. Results of preceding qualitative interviews about CSHC were integrated into the tool development. After two pilot tests, the tool was administered from April to June 2022 through the population-based HeReCa panel (Health Related Beliefs and Health Care Experiences in Germany), comprising 3200 participants from 5 federal states. Sociodemographic data is available for all participants.

Results:
The final tool entails 46 items, sorted into 7 sections. Two sections serve as dependent variables for the association analysis: 13 items about the acceptability of different communicative approaches of CSHC and 18 items on preferences for themes in CSHC. Three sections serve as independent variables for the analysis: attitudes on climate change, level of engagement, and sociodemographic data. Two sections assess experiences with CSHC and preferred information channels to serve as descriptive results.

Conclusions:
A rigorous methodology proved helpful for survey development within a mixed methods study. In triangulation with qualitative data, results of the survey will help physicians to deliver CSHC tailored to the preferences of different sociodemographic groups.

Key messages:

- We developed a survey tool to measure the general public's preferences regarding climate-sensitive health counselling (CSHC) of physicians.
- Our study will provide guidance for physicians on how to offer CSHC to specific patient subgroups based on socioeconomic characteristics and attitudes towards climate change.

Abstract citation ID: ckac130.070
The role of public health services in implementing heat health action plans in Germany

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Background:
The rise in extreme heat periods is a major public health challenge of climate change and the World Health Organization therefore recommends the implementation of heat health action plans (HHAPs). In Germany, HHAPs are not implemented in a comprehensive manner nor nationwide. Public health authorities have been identified as key actors with regards to heat and health. This study aims at assessing the role of public health services in the implementation of HHAPs in Germany.

Methods:
First, a review of the scientific and grey literature on the role of public health services in heat adaptation in Europe was conducted. Second, a policy document analysis of the legislation of Germany's federal states for public health services and their potential role in the implementation of HHAPs was carried out. Finally, semi-structured interviews with selected experts from multiple sectors at the local, federal and national level on their perception of the role of public health services in the implementation of HHAPs in Germany were undertaken.

Results:
Preliminary findings show that the legal framework for public health services in the different federal states addresses environmental health and civil protection to varying extents, but that climate change-specific health risks are barely mentioned. The expert interviews revealed perceived barriers for the public health services to implement HHAPs, notably with regards to personnel (e.g. competencies, time), organizational structures (e.g. financial resources, administrative structures, legal mandates) and competing other tasks (e.g. COVID-19 response). Facilitators included motivated individuals, funding opportunities for cross-sectoral collaboration and political support.

Conclusions:
The role of public health services in HHAP implementation in Germany varies widely between the different geographic settings and is influenced by several factors at the individual, organizational and political level.

Key messages:

- Public health services can play an important role in heat adaptation, for example through coordinating the implementation of heat health action plans.
- Strong legal frameworks, sufficient organizational structures and well-trained personnel are important preconditions for an effective response by public health services to climate change challenges.

Abstract citation ID: ckac130.071
CO2 production in waste management during the COVID pandemic in an Italian hospital

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Background:

Personal protection equipment (PPE) use in hospitals has consistently increased due to the Sars-Cov-2 outbreak, in wards repurposed for Covid-19 patients and wards that kept their usual activity. This increase influenced an environmental emergency in terms of health waste (HW) disposal. This study aims to assess the economic and environmental impact of the increase in HW generated before and during the pandemic in an Italian Hospital.

Methods:

Data from 2016 to 2019 and 2020 to 2021 was retrieved from Risk Management department. Per capita and per days-of-stay waste quantity were calculated for the hospital inpatient wards and medical service areas (anatomical pathology, laboratories, radiology, nuclear medicine). Linear regression models assessed the epidemiological impact of COVID, and LOESS analysis modeled the relationship between infectious HW generation and the percentage of COVID-related inpatient days. Average weight of HW per patient was used to estimate the monetary value of CO2 produced.

Results:

Preliminary results show that the inpatient days related to COVID nonlinearly influenced the infectious HW generated by wards. PPE usage increased in every context, and the proportion of COVID-related bed-days ranged from 2% to 12% in low-incidence months to 17% to 31% during acute phases. Pre-COVID CO2 production weighted 487 kg per patient and cost 1705€ per-capita, whereas during the pandemic it amounted to 768 kg per patient and cost 2688€ per capita which resulted in a significant increase of 983€ per patient.

Conclusions:

In light of the results, HW disposal is an urgent issue that should be addressed by policy makers when implementing new monitoring systems for hospitals. A more adequate disposal of HW could substantially contribute in reducing air pollution and concurrently reduce the economic impact health systems due to the coronavirus pandemic.

Key messages:

- The COVID-19 pandemic has brought an increase in hospital waste generation.
- The improvement of HW disposal monitoring system should be considered to avoid reaching critical levels in the near future.

Abstract citation ID: ckac130.072
Burned area mapping using satellite data – a tool for monitoring effects on environment

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Background:

Significant crop residue burning not only negatively affects local communities but is becoming an important public health issue for global climate change mitigation efforts. This practice is linked with air quality impairment, water contamination, soil degradation, fauna destruction. Chronic exposure to a high level of air pollution may cause permanent health injuries such as the development of lung diseases. The intentional burning of crop residues is a well-known practice across Romania even it is restricted by law.

Methods:

We propose a generic software model capable of detecting burned areas based on a time series of multi-spectral optical images together with a multi-step algorithm that uses a pre-trained Gaussian Naive-Bayes classifier to map burned crop fields, named BCMA (Burned Crop Mapping Algorithm), using Copernicus Sentinel-2 acquisitions. BCMA can be trained and extended to recognize other user-defined burned areas and it can be used to produce burned crop fields maps at a global scale in near-real-time at high resolution. We focused on two restrained geographical areas where burned areas were signalized in local press as massive burning vegetation events.

Results:

We provide burned area maps generated with an implementation of BCMA over two sites in Romania: Ostroveni - Dolj county and Domogled - Mehedinti county, based on acquisitions from July 2020.

Conclusions:

This model provides a fast and reliable tool for detection of burned areas regardless of the landscape and vegetation that could help stakeholders to react and make a proper intervention. Our study highlights the meaningful implications of using this tool to track crop fields burning and to organize large scale awareness campaigns around sustainable crop residues management with positive impact on environment, human health, and agriculture. Further government agencies' positions regarding using satellite monitoring of burning vegetables might be crucial.

Key messages:

- Satellite imagery is a valuable source of information for environment monitoring.
- More strategies are need to bring health and environment sustainability to the center of the climate change and to deliver information to the policy makers.

Abstract citation ID: ckac130.073
Scientific clues on global food (in)security and climate change relationship as drivers of health

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Issue:

Food insecurity is in close relationship with the determinants of health. Global crisis including climate change (CC), natural disasters, poverty can deepen the burden, and all are linked with the economic, social, commercial, structural determinants of health. Defining such connections may help in proposing practical solutions.

Description of the problem:

COVID-19 pandemic made the food security (FS) problem more visible. Food security considers basically the affordability, availability, and the quality of food. Food insecurity (FiS), violation of the right to healthy food, influences disease patterns and causes communicable and non-communicable diseases (NCDs). Globally, 71% of deaths are attributed to NCDs. Analyzing the relationship between FiS and other determinants of health like CC may be helpful for sustainable solutions in such a world where we are talking on "our planet, our health" motto. Example given in this study is the relationship between the country values/rankings of the "Global Food Security Index (GFSI)" and the "Climate Change Performance Index (CCPI)". GFSI defines the FS situation and CCPI defines countries' response to CC.

Results:

Countries' CCPI and GFSI values do not show a linear relationship. For example, Norway, as a country at the top of the Human Development Index (HDI) ranking list has both high CCPI and GFSI values. On the other hand, although USA and Canada have low CCPI, both have good GFSI values. Sub dimensions of the indicators may also vary across countries.

Crisis like COVID-19, conflicts, poverty emphasize the need on improving the indicators in a transdisciplinary approach.

Lessons:

Investigating indicators taking the determinants of health into account is helpful. However, different characteristics of the countries make it difficult to propose a standard approach to overcome the problems. Developing ''new'' indicators with transdisciplinary work might be useful in this sense.

Key messages:

- Food (in)security and climate change have ''complex'' interactions.
- Transdisciplinary approach may facilitate proposing realistic solutions.

Abstract citation ID: ckac130.074

Environmental Health Literacy: an index to study its relations with pro-environmental behaviors

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The citizen' awareness about environmental health risks has been identified as an important determinant of citizens' choices for the adoption of pro-environmental behaviors, but for its study simple measures to be applied in population studies are still lacking. The Environmental Health Literacy (EHL), is a recent sub-cathegory of health literacy, including functional, critical and interactive dimensions, that can be applied in surveys on environmental health risk perception and behaviors. The aim of our study was to elaborate and validate an EHL Index (ELHI) using data from a large multicenter survey carried out among 4778 students of different disciplines in 15 Italian Universities, with a self-administered anonymous questionnaire investigating risk perceptions, attitudes and behaviors towards environmental health risks and including a simple Functional Health Literacy test (FHL). From the original questionnaire of 56 items three sets of questions were selected to represent the three dimensions of health literacy (Functional, Critical or Interactive) and their outcomes were compared with the answers about FHL test and pro-environmental behaviors. The Principal Component Analysis was used to select the most representative questions that were then grouped in the EHLI. The index was significantly associated with both FHL test and behaviors questions. The ROC curve indicated a satisfying accuracy and was used to identify the best cut-off for ELHI. In conclusion the constructed ELHI can be considered reliable and useful for further population surveys in similar target people to plan communication interventions about environmental health risks and their prevention through individual choices.

Key messages:

- An Environmental Health Literacy Index is proposed as simple measure to be used in population surveys.
- This measure resulted associated with behaviors and can be considered accurate and reliable.

Abstract citation ID: ckac130.075

Results of a Qualitative Study on Disaster Nursing in a Coastal Region of Lower Saxony/Germany

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The increase in heavy rainfall in recent years shows the need to consider disaster preparedness also for persons in need of assistance and care who are cared for at home or in old people's and nursing homes. Evacuation concepts in the event of a heavy rainfall event lasting several days with simultaneous power failure are hardly available for the vulnerable group so far. As part of the LifeGRID project funded by the Federal Ministry of Education and Research, the question is being investigated as to what regional challenges and requirements arise in the event of flooding and a prolonged power blackout in the Wesermarsch district. In addition, the question will be addressed as to how the current care situation of patients referred to electricity presents itself in such a situation. Within the framework of a qualitative design, expert interviews were conducted with care service managers in winter 2022. The four guided interviews were transcribed and their content analysed. In coping with the assumed catastrophic events, the interviewees see problem areas in the organisation, communication, form of care and target group, in addition to the regional characteristics. It became clear that there are not only unanswered questions regarding responsibilities in the event of a crisis, but also that the diversity of forms of care (e.g. private households) poses a particular challenge. The interviewees do not see any viable alternatives to secure communication in the event of a power failure and also see that respiratory patients, for example, have a special need for care (e.g. due to the limited battery life of the respiratory equipment). The results also show that the nursing experts have different views on how they should prepare for such a scenario. These range from passivity to proactivity. A clear need for action becomes visible for cooperation and networking of the relevant actors, promotion of disaster literacy as well as the necessity to adapt the training curricula.

Key messages:

- Climate change is exacerbating the demands for concepts that sustainably contribute to increasing disaster literacy. The results of the study underline this.
- Patients receiving outpatient care and residents of nursing homes for the elderly who depend on a continuous power supply have not yet been the focus of disaster management.

4.S. Epidemiology: socioeconomic risk factors

Abstract citation ID: ckac130.076

Trends of socioeconomic inequalities in overweight and obesity in children and adolescents in Germany

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Background:

Overweight and obesity in early life are risk factors for chronic health conditions in the later life course. Children and adolescents from socioeconomically disadvantaged families are more likely to be overweight or obese than their better-off peers. This study examined post-millennial trends of socioeconomic inequalities in the prevalence of overweight and obesity among young people in Germany.

Methods:
Repeated cross-sectional data were used from the German health interview and examination survey for children and adolescents (KiGGS). Overweight and obesity were assessed by body mass index, based on measured height and weight of 3- to 17-year-old participants in KiGGS baseline (2003-06) and KiGGS wave 2 (2014-17). Socioeconomic position (SEP) was measured using a composite index of parental education, occupation and income. The regression-based slope index of inequality (SII) and relative index of inequality (RII) were calculated to estimate the extent of absolute and relative inequalities in the prevalence of overweight and obesity.

Results:
The overall prevalence of overweight and obesity among 3- to 17-year-olds in Germany did not change over time and was recently 15.4% and 5.9%, respectively. In both survey waves, overweight and obesity were more prevalent in lower SEP-groups. From 2003-06 to 2014-17, overweight increased in the low-SES group, whereas it tended to decrease in those with higher SES. This trend was concomitant with increasing socioeconomic inequalities in overweight over the observation period (SII from 0.11 to 0.19, $p = 0.054$; RII from 2.1 to 3.7, $p = 0.021$). No such trend was found for obesity.

Conclusions:
Socioeconomic inequalities in overweight have widened among the young in Germany since the early 2000s. Structural interventions that are effective in preventing and reducing overweight in young people from socially disadvantaged backgrounds are still needed.

Key messages:

- Overweight increased among young people from socioeconomically disadvantaged families.
- Socioeconomic inequalities in overweight increased among children and adolescents.

Abstract citation ID: ckac130.077
Area-level socioeconomic deprivation, non-national residency, and Covid-19 incidence

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Introduction:
Socioeconomic conditions affect the dynamics of the COVID-19 pandemic. We analysed the association between area-level socioeconomic deprivation, proportion of non-nationals, and Covid-19 incidence in Germany.

Methods:
Using nationally representative data at the level of 401 German districts from three waves of infection (January-2020 to May-2021), we fitted Bayesian spatiotemporal models to assess the association between socioeconomic deprivation, proportion of non-nationals, and Covid-19 incidence, controlling for age, sex, vaccination coverage, settlement structure, spatial and temporal effects. We estimated risk ratios (RR) and corresponding 95% credible intervals (95%-CrI) for deprivation quintiles. We further examined the deprivation domains (education, income, occupation), interactions between deprivation, sex and the proportion of non-nationals, and explored potential pathways from deprivation to Covid-19 incidence.

Results:
Covid-19 incidence risk was 15% higher (RR = 1.15, 95%-CrI = 1.06-1.24) in areas with the highest deprivation quintile (Q5) compared to the least deprived areas (Q1). Medium-low (Q2), medium (Q3), and medium-high (Q4) deprived districts showed 5% (1.05, 0.98-1.13), 8% (1.08, 1.01-1.15), and 6% (1.00, 1.00-1.12) higher risk, respectively, compared to the least deprived. Districts with higher proportion of non-nationals showed higher risk compared to districts with lowest proportion, but the association weakened across the three waves. During the first wave, an inverse association was observed with highest risk in least deprived areas (Q1). Deprivation interacted with sex, but not credibly with the proportion of non-nationals.

Conclusions:
Socioeconomic deprivation and proportion of non-nationals are independently associated with Covid-19 incidence. Regional planning of non-pharmaceutical interventions and vaccination strategies would benefit from consideration of area-level deprivation and non-national residency.

Key messages:

- Area-level socioeconomic deprivation and proportion of non-nationals are independently associated with higher risk of Covid-19 incidence across 401 German districts.
- Tailored non-pharmaceutical interventions and immunisation strategies are needed, which properly consider area-level socioeconomic deprivation and non-national residents.

Abstract citation ID: ckac130.078
Understanding addiction in e-cigarette users – the EVAPE project

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Background:
Electronic cigarettes (e-cigarettes) are often advertised as a healthier option to combustible cigarettes and as smoking cessation aid. However, e-cigarettes are a growing health concern and their addictive potential remains to be fully understood. Within the EValuation of the Addictive Potential of E-cigarettes (EVAPE) project, we studied subjective and objective measures of addiction in relation to e-cigarette use.

Methods:
This cross-sectional analysis was based on 832 participants of the first wave (2016) of England from the ITC Four Country Smoking and Vaping (4CV) Survey, who were using e-cigarettes daily or weekly for at least four months. Perceived addiction to e-cigarettes was categorised as very vs. not/somewhat addicted, and perceived addictiveness of e-cigarettes relative to combustible cigarettes as equally/more addictive vs. less addictive. Objective measures of addiction included urge to vape, time to first vape after waking, frequency of use, and used nicotine strength. We examined associations between these objective and subjective measures of addiction using multivariate logistic regression, adjusted for age, gender, education, and cigarette smoking.

Results:
17.8% of participants reported feeling very addicted to e-cigarettes and 42.3% considered e-cigarettes equally/more addictive than combustible cigarettes. Those who felt very addicted had higher odds of regarding e-cigarettes as more addictive (OR 3.43 (95%-CI 2.29-5.19)). All objective measures of addiction were associated with higher perceived addiction, whereas only a shorter time to first vape was associated with perceived product addictiveness.

Conclusions:
Subjective measures of addiction to e-cigarettes, in particular perceived addiction, correspond with objective measures. Understanding the addictive potential of e-cigarettes is the

cornerstone for developing new strategies for prevention and treatment, and ultimately understanding their role from a public health perspective.

Key messages:

- Despite being promoted as healthier alternative to combustible cigarettes, electronic cigarettes are a growing health concern, also given their potential addictiveness.
- We found both subjective and objective indicators of addiction to be prevalent in a relevant proportion of electronic cigarette users, suggesting an addictive potential of electronic cigarettes.

Abstract citation ID: ckac130.079
Differences in labour market marginalisation among young immigrant groups and Swedish-born youth

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Background:

There is a knowledge gap regarding the risk for labour market marginalisation among younger cohorts of refugees and non-refugee immigrants. We investigated if the risk of long-term unemployment (LTU) and disability pension (DP) differs between young refugees and non-refuge immigrants compared to the Swedish-born. The role of age at arrival, duration of residency and morbidity in this association was also investigated.

Methods:

All 19- to 25-year-olds residing in Sweden on 31 December 2004 (1691 refugees who were unaccompanied by a parent at arrival, 24,697 accompanied refugees, 18,762 non-refugee immigrants and 621,455 Swedish-born individuals) were followed from 2005 to 2016 regarding LTU (>180 days annually) and DP using nationwide register data. Cox regression models were used to estimate crude and multivariate-adjusted (adjusted for several socio-demographic, labour market and health-related covariates) hazard ratios (aHRs) with 95% confidence intervals.

Results:

Compared to the Swedish-born, all migrant groups had around a 1.8-fold higher risk of LTU (range aHR = 1.71-1.83) and around a 30% lower risk of DP (range aHR = 0.66-0.76). Older age at arrival was associated with a higher risk of LTU only for non-refugee immigrants. Both older age at arrival and a shorter duration of residency were associated with a lower risk of DP for all migrant groups. Psychiatric morbidity had the strongest effect on subsequent DP, with no significant differences between migrant groups and the Swedish-born (range aHR = 5.1-6.1).

Conclusions:

Young immigrants had a higher risk of LTU and a lower risk of DP than their Swedish-born peers. No differences between the different immigrant groups were found. Age at arrival, psychiatric morbidity and duration of residency are strong determinants of being granted DP.

Key messages:

- Young refugees and non-refugee immigrants both had a similar higher risk of long-term unemployment and a similar lower risk of disability pension than their Swedish-born peers.
- Age at arrival, psychiatric morbidity and duration of residency are strong determinants of being granted disability pension for young refugees and non-refugee immigrants in Sweden.

Abstract citation ID: ckac130.080
Effect of socio-economic deprivation on refugee health: a natural experiment study in Germany

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Background:

Characteristics of the place of residence have been proposed as a key determinant of physical and mental health, but so far, little experimental evidence exists. The quasi-random dispersal of refugees in Germany serves as a natural experiment to study the causal relationship between socio-economic deprivation and health as well as the impact of the social context on this relationship.

Methods:

Refugees subject to dispersal policy (n = 1723) were selected from the nation-wide German IAB-SOEP-BAMF Panel from 2016 to 2018. The effect of German Index of Socioeconomic Deprivation quintiles (Q1-Q5) on change between baseline (t0) and follow-up (t1) in mental (mcs) and physical (pcs) health component scales of SF-12 were analysed using multi-level linear regression. Social context variables were included in a mediation analysis.

Results:

Across quintiles, mental health improves (Δmcs = 0.5) and physical health declines (Δpcs = -0.8) between t0 and t1. Fully adjusted models show a negative, dose-responsive relationship between deprivation and physical health, which is statistically significant for Q4 (coef. Q4vsQ1: -1.84, 95%CI: -3.50;-0.17). Models for mental health show an improvement in Q5 (coef. Q5vsQ1: 6.00, 95%CI: 1.70;10.31). Social context variables have no effect on physical health but slightly diminish the effect on mental health (coef. Q5vsQ1: 4.78, 95%CI: 0.65;8.90).

Conclusions:

The quasi-random dispersal of refugees in Germany acts as a natural experiment to disentangle selection effects from the relationship between deprivation and health. Results suggest a negative effect of deprivation on physical health and a potential positive effect on mental health which can be partially explained by the social context. Limitations are the small sample sizes in deprived quintiles and short follow-up periods. This analysis can act as a magnifying glass for similar effects among other population groups, but causal paths need to be investigated further.

Key messages:

- The quasi-random dispersal of refugees in Germany acts as a natural experiment to disentangle selection effects from the relationship between deprivation and health.
- Results from a natural experiment suggest a negative effect of deprivation on physical health and a potential positive effect on mental health which can be partially explained by the social context.

Abstract citation ID: ckac130.081
Risk behaviors among migrant adolescents in Italy

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Background:

Over the last decade, the student population migrated to Italy has quadrupled, but studies on their potentially harmful behaviors such as substance use are still scarce. The aim of this research is to monitor risk behaviors among migrant adolescents in Italy and provide appropriate indications for the definition of targeted policies and interventions.

Methods:

A representative sample of 15 year-old adolescents was drawn from the 2018 Italian Health Behavior in School-aged Children (HBSC) survey data. Smoking habits, alcohol consumption and drunkenness were investigated and differences with Italian peers were assessed.

Findings:

Results were based on more than 18,500 students, of which 16% were migrants: 32.7% from Western countries (We), 32.5% from Eastern European countries (Ee), and 34.8% from non-Western/non-European countries (nW). Compared with natives, students from nW countries showed a lower risk of smoking habits (OR: 0.72, 95%CI: 0.58-0.89) and weekly alcohol consumption (OR:0.57, 95%CI:0.43-0.75), whereas drunkenness was more prevalent among Ee migrants (OR: 1.42, 95%CI: 1.10-1.83). Overall, both migrant and Italian girls showed a lower risk of unhealthy behaviors than boys.

Conclusions:

Compared to the native counterparts, migrant adolescents showed differences in substance use according to their ethnic background. We observed two different immigration patterns: the Western immigrants, who came from countries with higher affluence and share similar risk behaviors with native peers, and non-Western immigrants, who came from less affluent countries and seemed to maintain the risk behaviors of their culture of origin.

Key messages:

- More in-depth studies that include specific information on migrant culture are needed to explain the observed differences in risk behaviors among young migrants.
- Our findings suggest that interventions aiming at smoking and/or drinking reduction should focus mainly on the male migrant adolescents.

Abstract citation ID: ckac130.082
Interaction between APOE ε4 genotype and education on mild cognitive impairment

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Introduction:

Studies have identified the apolipoprotein E (APOE) ε4 genotype to be a genetic risk factor for mild cognitive impairment (MCI) with environmental factors, such as education, modifying this genetic effect. The aim of this study was to investigate possible interaction of APOE ε4 status and educational attainment on MCI.

Methods:

Information on education, MCI and APOE status was available for 3,829 participants from the Heinz Nixdorf Recall study. Logistic regression models were fitted to estimate sex- and age-adjusted odds ratios (OR) and 95% confidence intervals (95%-CI) for education (<14 years vs. ≥14 years of education), APOE status (carrier vs. noncarrier) and the interaction between APOExeducation on multiplicative scale with MCI. To consider interaction on additive scale, the relative excess risk due to interaction (RERI) was calculated. The effect of APOE on MCI was additionally stratified by educational groups.

Results:

A higher chance of MCI was observed for reporting <14 years of education (OR: 1.37 [95%-CI: 1.11, 1.69]) and having a positive APOE ε4 status (OR: 1.27 [95%-CI: 1.04, 1.55]). Stratified analysis showed a stronger genetic effect of APOE ε4 status on MCI in participants with low education (OR: 1.42 [95%-CI: 1.12, 1.79)], compared to participants with higher education (OR: 1.00 [95%-CI: 0.67, 1.45)]. An indication for positive interaction between education and APOE ε4 status on MCI was found on additive scale (RERI: 0.52 [95%-CI: 0.01, 1.03]), no interaction on the multiplicative scale was observed.

Conclusions:

Results gave indication for positive interaction on the additive scale of APOE ε4 status and education, showing stronger genetic effects on MCI in groups of low education. Socioeconomically disadvantaged environments and health behaviors related to low educational attainment may be responsible for an altered APOE ε4 expression. Higher educated groups seem to be better equipped to reduce their genetic susceptibility for MCI.

Key messages:

- Gene-environment interaction seems to be present on the additive scale between education and APOE ε4 status on MCI .
- Socioeconomically disadvantaged environments and health behaviors related to low educational attainment may be responsible for an altered APOE ε4 expression on MCI.

Abstract citation ID: ckac130.083
Time period effects in work disability due to common mental disorders among young employees

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Background:

Previous research on period effects in risk for work disability due to common mental disorders across employment sectors and occupational classes in young employees is lacking. Temporal changes in the healthcare system or social insurance policies or other structural/organisational changes could contribute to such time period effects. We aimed to investigate time period effects in the risk of work disability, defined as long-term sickness absence (LTSA) and disability pension (DP) due to common mental disorders (CMDs), among young employees according to their employment sector (private/public) and occupational class (non-manual/manual).

Methods:

Three cohorts, including all employed individuals with complete information on employment sector and occupational class, aged 19-29 years and resident in Sweden on the 31-Dec-2004, 2009 and 2014 (n = 573,516, 665,138 and 600,889 individuals in cohort 2004, 2009 and 2014, respectively) were followed for four years. Crude and multivariate-adjusted hazard ratios (HRs and aHRs, respectively) with 95% confidence intervals (CIs) were estimated regarding the risk of LTSA and DP due to CMDs using Cox regression analyses.

Results:

In cohort 2004, public sector employees had a higher relative risk for LTSA due to CMDs than private sector employees (aHR, (95%CI): 1.24, 1.16-1.34 and 1.18, 1.11-1.26 among non-manual and manual workers). These associations were similar in the later cohorts. Compared to cohort 2004, the rate of DP due to CMDs was considerably lower in the later cohorts leading to uncertainties in the risk estimates limiting the comparability for time period effects regarding the risk of DP due to CMDs across employment sectors and occupational classes.

Conclusions:

Stricter regulation changes regarding the receipt of DP in Sweden, rather than other time period events, may have differentially affected the risk of work disability among young non-manual and manual employees working in the private and public sectors.

Key messages:

- Time period effects did not seem to influence the association of long-term sickness absence due to common mental disorders across employment sectors and occupational classes.
- The risk of disability pension due to common mental disorders by sector of employment and occupational class varied, to some extent, across the different time period cohorts.

Abstract citation ID: ckac130.084
Untangling the influence of depression on clinical risks: role of leukocytes and somatic symptoms

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Background:

Depression has been associated with increased hospitalization and mortality risk, especially for cardiovascular causes. We previously found a composite circulating inflammation score (INFLA-score) to explain part of this link, although the role of its component and of depressive symptoms domains in this relationship is unexplored.

Methods:

In an Italian population cohort (N = 13,191; age$\geq$35 years; 51.7 % women; 4,856 hospitalizations and 471 deaths, median follow-up 7.28/8.24 years), we estimated the proportion of association explained by C-reactive protein levels (CRP), platelet count, granulocyte-to-lymphocyte ratio (GLR) and white blood cell counts (WBC), in multivariable Cox regressions modelling first hospitalization/mortality for all and cardiovascular (CVD), ischemic heart (IHD) and cerebrovascular disease (CeVD) causes vs depression severity based on an alternative validated version of PHQ-9. We also estimated the proportion of association explained by INFLA-score in the associations of polychoric factors tagging somatic and cognitive depressive symptoms with clinical risks.

Results:

In models adjusted for age, sex and education, significant proportions of the positive influence of depression on clinical risks were explained by CRP (4.8% on IHD hospitalizations), GLR (11% on all-cause mortality) and WBC (24% on IHD/CeVD hospitalizations). Stable associations of somatic but not of cognitive depressive symptoms were observed with increased hospitalization risk (+16% for all causes, +14% for CVD causes), with INFLA-score again explaining small but significant proportions of these associations (2.5% for all causes, 8.6% for IHD causes).

Conclusions:

These findings suggest a prominent explanatory role of leukocytes in the link between depression and clinical (especially CVD) risks, and highlight the importance of inflammation in the influence of somatic depressive symptoms. Therefore, acting on these factors may reduce clinical risks associated with depression.

Key messages:

- Inflammation – in particular leukocytes - plays a role in the link between depression and clinical risks.
- This effect is more pronounced for cardiovascular events and for somatic depressive symptoms.

Abstract citation ID: ckac130.085
Associations between early life transitions and depressed mood over time: A 27-year study

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Background:

Few studies have looked at how life transitions influence depressed mood from adolescence to adulthood and if parental socioeconomic status (SES) moderates these effects.

Study questions:

- Are early life transitions (leaving education, leaving the parental home, attaining employment, and beginning cohabitation) associated with the development of depressed mood?
- Does SES affect the exposure to depressed mood and moderate the impact of life transitions?

Methods:

We used latent growth modelling to analyze depressed mood in a Norwegian sample (n = 1257) surveyed at age 13, 14, 15, 16, 18, 19, 21, 23, 30 and 40 (1990-2017). The effects of life transitions were modelled as time-varying predictors. At age 30 and 40, attaining employment and beginning cohabitation were used as covariates while parenthood was controlled for from age 19. Time-invariant covariates were gender and SES.

Results:

Depressed mood peaked at age 15 and 18, but decreased over time - following a polynomic curve with a linear (B = -.38, 95% CI = [-.49, -.28], $p < .001$) and quadratic slope (B = .05, 95% CI = [.013, .086], $p < .001$). Leaving the parental home (B = -.166, 95% CI = [-.250, -.083], $p < .001$) and beginning cohabitation (B = -.130, 95% CI = [-.231, -.029], $p < .05$) led to decreases in depressed mood regardless of age of transition. Higher SES was associated with lower depressed mood at intercept compared to mid-SES (B = -.106, 95% CI = [-.295, -.030], $p < .05$) and low SES (B = -.202, 95% CI = [-.343, -.062], $p < .05$). Girls also reported a higher intercept level of depressed mood (B = .274, 95% CI = [.165, .383], $p < .001$). Life transitions were not moderated by SES.

Conclusions:

The study demonstrated that leaving the parental home and beginning cohabitation were associated with depressed mood, and SES showed no moderation. Public health initiatives should therefore pay attention to life transitions when aiming to lessen depressive symptoms from adolescent years to adulthood.

Key messages:

- Including life transitions can help better identify critical periods in developing depressed mood in the transition to adulthood.
- The often reported gender gap and social disparity in mental health was supported by the current study.

Abstract citation ID: ckac130.086
Mediation of behavioural and socioeconomic risk factors associated with malaria in children in Ghana

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Background and objectives:

Malaria remains a major global public health concern and a leading cause of morbidity and mortality especially among children <5 years in Ghana. While an association between poverty and malaria has long been recognised, evidence on the causal pathways between socioeconomic position (SEP) and malaria is scarce. Our study contributes to addressing this gap by investigating the association whilst taking mediation through potential behavioural and socioeconomic factors into account. This can help to identify more specific targets for interventions on a structural level.

Methods:

Using data of 3,004 children from the Malaria Indicator Survey of the Demographic and Health Surveys Program conducted in Ghana in 2019, a household wealth index (quintiles) was derived using principal component analysis based on household assets. Causal multiple mediation analyses investigated mediating effects of treatment-seeking, bed net (LLIN) use, educational attainment, and housing conditions on the association between socioeconomic position and children's malaria fever events.

Results:

Higher maternal educational attainment and housing conditions jointly mediate 18% of the association between socioeconomic position and malaria fever events (OR = 0.98; 95%CI = 0.96-0.99). Maternal educational attainment and seeking formal prenatal health care jointly mediate 20% of the total effect (OR = 0.98; 95%CI = 0.95-1.00), in presence of a lower socioeconomic position. No strong mediation was found for educational attainment jointly with the use of LLINs between malaria and socioeconomic position in this study (OR = 0.99; 95%CI = 0.97-1.01).

Conclusions:

As shown by the proportions mediated between malaria and socioeconomic position, findings suggest that current malaria control efforts could be strengthened by investments at the structural levels, such as increased (female) education, targeted improvements in housing, and stronger integration of informal health care.

Key messages:

- Mediation analysis highlights possible targets for structural malaria interventions, as educational improvements, housing and health care provider mediate up to 20% between SEP and malaria.
- Structural interventions should include improving housing conditions, quality education for women and the inclusion of informal health care provider for preventive actions against malaria.

Abstract citation ID: ckac130.087
Maternal care experience and postpartum depressive symptoms among migrant and native in Portugal

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Background:

Migration is a risk factor for both, poor maternal experience with healthcare services (MEHCS) and postpartum depressive symptoms (PPDS), a matter of concern due to their adverse consequences. We aimed to assess the association between MEHCS and PPDS taking into account the migration status.

Methods:

This is part of a population-based study (baMBINO project), enrolling native (PT; n = 1568), permanent migrant (PM; n = 676) and temporary migrant (TM; n = 757) women recruited at delivery (2017-2019) in 32 Portuguese public hospitals. MEHCS was assessed based on 39 items of the Migrant Friendly Maternal Care Questionnaire asking about how women have experienced maternal care during pregnancy, during delivery and after birth. Items were grouped into 9 components each one assessing a different issue of MEHCS. For each component women were classified as having "good" or "less than good" experience. PPDS were assessed using the Edinburgh Postnatal Depression Scale (cut-off$\geq$12). Multivariate logistic regression model was fitted to estimate the association between MEHCS and PPDS. Adjusted odds ratio (aOR) and respective 95% confidence interval were obtained.

Results:

PPDS were reported by 3.8%, 5.8% and 8.2% of PT, PM and TM women, respectively ($p < 0.001$). After adjustment, 4 out 9 components of MEHCS appeared related with PPDS, such that women reporting less than good experience with "understanding information" (aOR = 1.72 95%CI:1.14-2.60), "decisions according to maternal wishes" (aOR = 1.56 95% CI:1.04-2.34), "time waiting for healthcare" (aOR = 1.50 95%CI:1.04-2.18) and "healthcare provider's attitudes during pregnancy" (aOR = 1.58 95%CI:1.01-2.47) showed higher odds of PPDS than women reporting good experience.

Conclusions:

Further than the migration status, poor experience with some issues of maternal care seems play a role in the risk of PPDS

Key messages:

- Awareness should be given to maternal care experience.
- Public health strategies should address factors underlying a positive maternal experience.

5.R. Epidemiology and impact

Abstract citation ID: ckac130.088
Association between the Multidimensional Poverty Measure and COVID-19 mortality in Colombia

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Background:

Different socioeconomic aspects have been related to mortality from COVID-19. For this reason, the objective of this study was to analyze the association between the Multidimensional

Poverty Measure at the municipal level (MPM) and the clinical outcome of mortality in the resident population of Colombia with a diagnosis of COVID-19.

Methods:

Observational, non-concurrent cohort study of confirmed cases of COVID-19 reported in Colombia by August 2021. The main outcome variable was mortality from COVID-19, and the main exposure variable was MPM. The covariates included in the analysis were patient's sex, age, and municipality of residence. Unadjusted and adjusted logistic models were used using balanced random samples of deaths and recovered patients, calculating odds ratios (OR) and 95% confidence interval ranges (CI).

Results:

In total, 4,194,538 cases of COVID-19 were included in the analysis, of which approximately 3% died. According to the adjusted multivariate analysis, it was found that patients who live in municipalities with an MPM between 20 to 40%, 41 to 60%, 61 to 80% and more than 80% had an OR of 1.6 (95% CI 1.4 to 1.8), 1.6 (95% CI 1.3 to 1.9), 1.7 (95% CI 1.2 to 2.5), and 2.2 (95% CI 0.7 to 7.8), respectively, for mortality from COVID-19 compared with an MPM of less than 20%. When analyzing the data according to sex for the MPM from 20 to 40%, 41 to 60%, 61 to 80% and more than 80%, an OR for women of 1.7 (95% CI 1.5 to 2.0), 1.8 (95% CI % 1.5 to 2.1), 1.9 (95% CI 1.3 to 2.6) and 2.8 (CI 0.9 to 10.1) respectively. For men an OR of 1.5 (95% CI 1.3 to 1.7), 1.4 (95% CI 1.2 to 1.7), 1.6 (95% CI 1.1 to 2.3) and 1.9 (95% CI 0.6 to 6.0) respectively compared to a MPM less than 20%.

Conclusions:

The risk of mortality from COVID-19 in Colombia is increased in populations with higher MPM. Social determinants of health have an important effect on the outcomes of COVID-19.

Key messages:

- Only a few studies exist in South America on social determinants in health and COVID-19. This study provides evidence to understand the impact of poverty measures on mortality in COVID-19 patients.
- Multidimensional poverty measure at the municipal level was associated with increased COVID-19 mortality in a large cohort of patients from the Colombian population.

Abstract citation ID: ckac130.089
Histopathological Findings of Lung Cancer in Black Coal Miners in the Czech Republic

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Background:

Coal miners with coal workers' pneumoconiosis (CWP, J60 according to ICD-10) were previously found to have a significantly higher risk of lung carcinoma compared to the general male population. The presented study aimed to analyze the incidence of lung carcinoma in miners, histopathological findings in cohorts with and without CWP, and effect of smoking cessation on the histopathological profile.

Methods:

Analysed cohorts consisted of miners with (n = 3476) and without (n = 6687) CWP. Data on personal and working history obtained from the medical records were combined with information on lung cancer from the Czech Oncological Register and histopathological findings. Statistical analysis was performed using non-parametric tests and the incidence risk ratio (significance level of 5%).

Results:

In 1992-2015, 180 miners (2.7%) without CWP and 169 (4.9%) with CWP, respectively, were diagnosed with lung carcinoma. The risk of lung cancer in miners with CWP was 1.82 (95% CI: 1.48-2.25) times higher than in those without CWP. Squamous cell carcinoma (37%) was the most common histopathological type, followed by adenocarcinoma (22%) and small cell carcinoma (21%). A statistically significant difference between the cohorts (p = 0.003) was found in the histopathological subtypes, with the incidence of small cell carcinoma being 2 times higher in miners without CWP than in those with CWP. Only a few individuals with lung carcinoma were non-smokers. The incidence of small cell carcinoma, which is strongly associated with smoking, is significantly higher in miners without CWP.

Conclusions:

Smoking constitutes the most important risk factor for developing lung carcinoma even in that cohort. However, CWP remains a very important risk factor.

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Key messages:

- The risk of lung cancer in black coal miners with coal workers' pneumoconiosis (CWP) was 1.82 (95% CI: 1.48–2.25) times higher than in those without CWP.
- The incidence of small cell carcinoma was 2 times higher in black coal miners without CWP than in those with CWP.

Abstract citation ID: ckac130.090
Dietary exposure to acrylamide and breast cancer risk: results from the NutriNet-Santé cohort

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Background:

Acrylamide is classified as a probable human carcinogen by the IARC but epidemiological evidence on the carcinogenicity of acrylamide from dietary sources is limited. This study aimed to investigate the associations between dietary acrylamide and breast cancer risk in the NutriNet-Santé cohort.

Methods:

This prospective cohort study included 80,597 French women (mean [SD] age at baseline: 40.8 [14] years) during a mean (SD) follow-up of 8.8 (2.3) years. Acrylamide intake was evaluated using repeated 24h dietary records (n = 5.5 [SD 3.0]), linked to a comprehensive food composition database. Associations between acrylamide intake and breast cancer risk (overall, premenopausal and post-menopausal) were assessed by Cox hazard models adjusted for known risk factors.

Results:

The mean (SD) dietary acrylamide intake was 30.1 (21.9) µg/d (main contributors: coffee, potato fries and chips, pastries and cakes, and bread). During follow-up, 1016 first incident breast cancer cases were diagnosed (431 premenopausal, 585 post-menopausal). A borderline significant positive association was observed between acrylamide intake and breast cancer risk overall (HRQ4 vs Q1 = 1.21 [95% CI: 1.00-1.47]) and a positive association was observed with premenopausal cancer

(HRQ4 vs Q1= 1.40 [95% CI: 1.04-1.88]). Restricted cubic spline analyses suggested evidence for non-linearity of these associations, with higher HR for intermediate (Q2) and high (Q4) exposures. Receptor-specific analyses revealed a positive association with estrogen receptor-positive breast cancer, which represented 86% of total cancer cases. Acrylamide intake was not associated with post-menopausal breast cancer.

Conclusions:

Results from this large prospective cohort study suggest the potential deleterious role of dietary acrylamide in breast cancer etiology, especially in premenopausal women, and provide new insights that should encourage further mitigation strategies to reduce the content of acrylamide in food.

Key messages:

- Results from this large prospective cohort study suggest that dietary acrylamide exposure is associated with an increased risk of breast cancer, especially in premenopausal women.
- These epidemiological findings are in line with experimental data that conducted IARC, EFSA and other public health institutions worldwide to classify acrylamide as a probable carcinogen for humans.

Abstract citation ID: ckac130.091
Elevated risk of depression and anxiety disorder by „high strain“ occupations: a systematic review

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Background:

Poor working conditions might lead to mental illness.

Methods:

We performed a systematic review with meta-analyses as an update of a review published in 2013. We registered the study protocol with PROSPERO (registration number: CRD42020170032) and searched for epidemiological studies in MEDLINE, PsycINFO, and Embase. Two reviewers carried out independently all review steps including title-abstract screening, full-text screening, risk-of-bias assessment and data extraction. Discordances were solved by consensus. We determined the certainty of evidence using the GRADE-approach.

Results:

Ten cohort studies with acceptable study quality examined the relationship between high job strain and the incidence of depression. In the “classic” demand-control-model, ‘high strain’ (combination of high demands and low control) is compared with ‘low strain’ (combination of low demands and high job control). For high strain, the risk of depression was elevated by 73%, the pooled effect estimate for the risk of depression was 1.73 (95% CI 1.32-2.27. In a dichotomous analysis (without dividing job strain into the four dimensions mentioned above), there was a doubled risk of depression with high job strain (pooled effect estimate = 1.99, 95% CI 1.68-2.35). We found comparable risk estimates for men and women. The GRADE assessment revealed a high certainty of evidence of the association between job strain and depression. We also found a considerably increased risk of anxiety disorder among individuals prone to high job strain.

Conclusions:

This systematic review finds a clear association between high job strain (high demands in combination with low control) and depression as well as anxiety disorders.

Acknowledgment: This study was financially supported by SUVA (Schweizerische Unfallversicherungsanstalt).

Key messages:

- High job strain (high demands, low control) is clearly associated with depression and anxiety disorders.
- The GRADE assessment revealed a high certainty of evidence of the association between job strain and depression.

Abstract citation ID: ckac130.092
Trajectories of part-time work and sickness absence among shift working healthcare employees

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Background:

Healthcare systems are facing major challenges due to population ageing, increased need for care, and economic challenges combined with staff shortage. The existing need for longer work careers combined with increasing turnover rates in healthcare highlights the need to understand working hours in association with work capacity and sustainable work careers. We aimed to investigate the concurrent changes in part-time work and sickness absence (SA) among healthcare employees without any SA spell >14 days at baseline.

Methods:

Annual working hour and SA data from 23 hospital districts and cities in Finland for 2008-2019 (172 922 employees with at least one work shift in any year). The sample was restricted to 20274 employees with ≤31 work shifts/year in 3 consequent years during the follow-up and without any SA spell >14 days at baseline in 2008. Part-time work/year (yes/no), SA months/year, and nightwork/year (% of nightwork of all shifts) as time varying covariate were used in the group-based trajectory models examining the concurrent changes. Models for age groups (in 2008 and categorized into < 25 years of age, ≥25 and <40 years, ≥40 and <55 years, and >55 years) will be considered later.

Results:

A five-trajectory solution identified groups for “stable full-time work without SA” (56.8%), “increasing part-time work and stable very low SA” (13.5%), “slight increase both in part-time work and SA” (16.5%), “steep increase in part-time work and reversed low U-shape in SA months” (5.0%), and “stable part-time work and low SA” (8.2%) across 2009-2019.

Conclusions:

These initial findings indicate that while most employees work full-time without SA, those who transfer from working full-time to part-time during follow-up from 2009 to 2019 seem to have low SA. Thus, part-time work may promote work capacity, and accompanied by part-time work disability benefits, offer a tool for employers to support sustainable working life and to keep older employees at work.

Key messages:

- Part-time work may provide possibility to maintain work participation.
- An important public health message is to provide possibilities for part-time work accompanied with partial work disability benefits to support sustainable working life.

Abstract citation ID: ckac130.093
Risk of first musculoskeletal disorder in Danish occupational fishermen – a register-based study

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Background:

Occupational fishery increase risk of musculoskeletal disorders due to a combination of heavy workloads and strenuous settings. Scarce and inconsistent knowledge exists on work-related risk factors despite high prevalence is evident. The aim was to determine work-related risk factors for the first diagnosis of musculoskeletal disorders in Danish occupational fishermen.

Methods:

This study was a register-based cohort study. We extracted data the from Nationwide Danish registers on work affiliation and health data for all persons registered as occupational fishermen between 1994 and 2017. Job titles were retrieved from the Danish Occupational Cohort with eXposure (DOC*X). Time-to-event analysis using cox regression with age as timescale was applied.

Results:

Among 15.739 fishermen, forty percent (n = 6.218 cases) experienced first musculoskeletal disorder during 82.2 million person-years of follow-up. Adjusted gender-stratified analysis showed that male fishermen, who worked less than 5 years and more than 15 years had the highest significant risks of MSD (HR 2.40 (95%CI: 2.06, 2.80), HR: 2.40 (95%CI: 1.76, 2.35)) respectively, compared to working more than 20 years. In males, more years in workforce, a captain education and working part time significantly protected against first MSD, while shifting trades above three times increased risk. Women had estimates with greater uncertainties due to their small numbers in the industry.

Conclusions:

A high incidence of musculoskeletal disorders was found in Danish occupational fishermen between 1994-2017. Findings suggest a bimodal relationship between occupational fishermen seniority level and their risk of musculoskeletal disorder, where highest risk was seen at five years in trade, afterwards from lower estimate slowly increasing with accumulating years until highest occupational seniority, compared to more than twenty years in trade. Continued development actions of preventive measures are suggested.

Key messages:

- Persons who are working large proportions of their work-life within occupational fishery significantly increase the risk of experiencing first musculoskeletal disorder.
- High incidence of musculoskeletal disorder cases within Danish occupational fishery was shown, therefor further preventive actions towards work-related risk factors is necessary.

Abstract citation ID: ckac130.094
The causal effect of switching from precarious to standard employment on mortality in Sweden

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Background:

Precarious employment (PE) is a well-known social determinant of health and health inequalities, yet the effect of PE on mortality has not been explored sufficiently and high-quality longitudinal studies are lacking. When studying this effect, several methodological factors must be considered, one of them being the immortal time bias or prevalent user bias. A framework that helps us overcome these biases is the target trial. Therefore, the aim of this study is to estimate the causal effect of switching from precarious to standard employment (SE) on the 12-year risk of all-cause mortality among precariously employed workers aged 20-55 in Sweden.

Methods:

We emulated the target trial as a series of 11 target trials (starting at any year between 2005 and 2016), such that each individual may participate in multiple trials using Swedish register data (N = 251274). We classified individuals as: a) workers that at baseline (start) move from PE to SE and then followed while in SE or b) continuation of PE over follow-up. All-cause mortality was measured from 2006 to 2017. We pooled data for all 11 emulated trials and used pooled logistic regression to estimate intention-to-treat effects via hazard ratios and standardized survival curves.

Results:

The following results are preliminary. Individuals that continued on PE were 185,480 and those that initiated SE were 65,794. Over the 12-year follow-up, 1553 individuals died. The estimated observational analogue of the intention-to-treat 12-year survival difference for all cause-mortality between workers that continued on PE and those that initiated SE was of -0.2%, and the HR:0.82, 95%CI:0.72-0.94.

Conclusions:

The following conclusions are preliminary. According to our results, we find indication that shifting from PE to SE decreased the risk of death. Our study highlights the crucial role of decent employment conditions for health.

Key messages:

- Changing from precarious to more decent employment conditions decreases the risk of death by any cause in a cohort of Swedish workers.
- This study provides evidence that precarious employment has also an effect on any cause mortality.

Abstract citation ID: ckac130.095
Social Disparities in Cardiometabolic Health in Czechia and Venezuela Using the Allostatic Load Model

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Background:

Subjects with lower socioeconomic status (SES) are exposed to higher levels of environmental stressors. The cumulative effects of chronic stressors on cardiometabolic health can be evaluated using the allostatic load (AL) score. Despite the accepted social gradient, clear relationships between social determinants and cardiometabolic health in populations with different socio-cultural contexts have been rarely explored. This study aimed to compare the relationships of social determinants with AL in different socioeconomic contexts: unstable Venezuela (VE) and stable Czechia (CZ).

Methods:

25-64 years old subjects from two cross-sectional population-based samples from CZ (2013-2014, n = 1579, 56% females) and VE (2014-2017, n = 1652, 70% females). The AL score (scaled 0-8) was calculated using 8 cardiometabolic biomarkers (BMI, waist circumference, systolic and diastolic blood pressure, total and HDL-cholesterol, triglycerides). Social characteristics included education in both countries, household income in CZ, and composite measure of SES based on source of income, household head's profession, mothers education, and housing conditions in VE. Ordinal regression was performed separately in men and women.

Results:

In CZ, men and women with low education and women with low income were more likely to have higher score of AL compared to those with high education and income (OR 1.45, 2.29 and 1.69). In VE, women with low education and low SES were more likely to have higher AL (OR 1.47 and 1.51), while men with low education and low SES were less likely to have higher AL (OR 0.64 and 0.61), compared to those with high education and high SES. Independently of age, sex, and socioeconomic characteristics, Venezuelans were more likely to have higher AL than Czechs.

Conclusions:

Associations of social position indices and cardiometabolic health (proxied by AL) differed between CZ and VE, most likely reflecting differences in social environment between the countries.

Key messages:

- Social gradients in cardiometabolic health differ among social environments.
- Social gradients in cardiometabolic health differ among sexes.

Abstract citation ID: ckac130.096
Estimating the magnitude of surveillance bias in COVID-19

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Background:

Most European countries implemented COVID-19 surveillance systems based notably on the number of diagnosed infections. Using this number as an indicator of epidemic severity is however problematic since it is influenced by testing modality. Indeed, differences in the frequency of infections are partly due to differences in detection rates rather than to changes in the risk of infection, leading to a ''surveillance bias''. Our goal was to estimate the magnitude of this bias in one region of Switzerland, using population-based seroprevalence as the best marker of epidemic severity.

Methods:

We used data from serosurveys carried out on random samples of the adult population after the 1st (Jul-Oct 2020) and the 2nd wave of the pandemic (Nov 2020-Feb 2021), before the start of the vaccination campaign. To assess the scale of surveillance bias, we assessed the burden of COVID-19 between 2 waves comparing seroprevalence with the number of diagnosed cases (positive PCR or antigen tests).

Results:

Out of 867 participants (46% men), 8% (IC 95%:4%-12%) and 19% (IC:15%-23%) had anti-SARS-CoV-2 IgG after the 1st and 2nd wave respectively, that is, a 11% increase between waves. The cumulative number of SARS-CoV-2 diagnosed cases was 2'355 after the 1st wave and 23'321 after the 2nd, that is, an increase of 20'966 cases between waves. Based on the number of diagnosed cases, the epidemic severity of the 2nd wave was 8-9 times higher compared with the 1st wave (20'966 vs 2'355 cases). Based on seroprevalence estimates, epidemic severity of the 2nd wave was less than 1.5 times higher compared to the 1st wave (11% vs 8%).

Conclusions:

Due to changes in testing modalities, the number of cases is problematic to assess the burden of COVID-19 in different phases of the pandemic. Accounting for surveillance bias is necessary for accurate public health surveillance.

Key messages:

- Accounting for surveillance bias and critically interpreting surveillance data is essential for an accurate public health monitoring activity.
- The number of diagnosed cases cannot be used alone to assess the burden of COVID-19.

Abstract citation ID: ckac130.097
Reporting guidelines for burden of disease studies: why and how?

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Background:

The Disability Adjusted Life Year (DALY) is a frequently used metric to assess burden of disease (BoD). Many independent BoD studies have been performed across Europe, showing wide variations and inconsistencies in the application and reporting of DALY specific methods. The European Burden of Disease Network (burden-eu) aims to develop guidelines for reporting DALY calculation studies which may enhance transparency and comparability of BoD estimates across Europe and beyond.

Methods:

A burden-eu working group of experts generated a list of potential reporting items based on existing literature, guidance for developing guidelines and consultations with BoD experts. To pilot the drafted product, we asked BoD experts and non-experts to apply it to existing BoD studies. We received feedback and we revised the guidelines accordingly.

Results:

The guide for DALY calculation studies comprises about 25 items that should be reported in BoD studies. We included information about the study setting, data input sources including methods for data corrections, DALY-specific methods (e.g., YLL life table, YLD approach, disability weights etc), data analyses, and data limitations. We also included information on how users can compare their new estimates with previously available BoD estimates.

Conclusions:

We introduced a reporting instrument for DALY calculations that can be used to document input data and methodological design choices in BoD studies. The application of such guidelines will enhance usability of BoD estimates for decision-makers as well as global, regional, and national health experts.

Key messages:

- Application of reporting guidelines will increase consistency and transparency in reporting of BoD studies, thus enhancing usability of BoD estimates.
- Reporting guidelines for BoD studies will serve as an educational tool for better understanding the complexity of DALY methodological design approaches.

Abstract citation ID: ckac130.098
Protection against invasive meningococcal disease and vaccination policy in the Netherlands

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Background:

A rise in serogroup C invasive meningococcal disease (IMD-C) led to introduction of MenC vaccination in 2002 in the Netherlands at 14 months of age, accompanied by a mass-campaign for all children between 1 and 18 years (coverage 94%). Due to an IMD-W outbreak in 2016-17, the MenC vaccine was replaced by a MenACWY vaccine and an adolescent booster at 14 years was introduced next to a mass campaign for 14-18 year-olds in 2018.

Aim/methods:

We explored meningococcal antibody status in the Netherlands across the population in 2006-07, 2016-17 and 2020 in consecutive cross-sectional serosurveillance studies. Furthermore, we assessed the vaccine impact and effectiveness of the recent MenACWY vaccination campaign. We determined long-term protection in both adolescents and adults after a MenACWY vaccination and investigated sex-related differences in the vaccine response in adolescents.

Results:

MenC antibody levels were low in 2016-17, except in recently vaccinated toddlers and individuals who were vaccinated as teenagers in 2002. We demonstrated waning of MenC immunity 15 years after the mass campaign and highlighted the lack of meningococcal AWY immunity across the population, which underlined the importance of the recently introduced MenACWY (booster) vaccination. The MenACWY vaccination program was effective in preventing IMD-W in the target population. Long-term protection was achieved for MenC, MenW, and MenY in 94-96% of adolescents five years postvaccination, but in adults only in 32%, 65% and 71% for MenC, W and Y. Adolescent antibody responses were higher in girls than in boys for all serogroups at most timepoints after MenACWY vaccination. The differences in average titers were however small and the percentage of participants with protective titers was very high for both sexes.

Conclusions:

The current meningococcal vaccination policy in the Netherlands provides protection across the population against IMD-ACWY and seems sufficient on the long-term.

Key messages:

- The current meningococcal vaccination policy in the Netherlands provides protection across the population against IMD-ACWY and seems sufficient on the long-term.
- The current meningococcal vaccination policy in the Netherlands provides protection across the population against IMD-ACWY and seems sufficient on the long-term.

5.S. Food, nutrition and diet

Abstract citation ID: ckac130.099
Motivations and strategies underlying the adoption of the front-of-pack labelling scheme Nutri-Score

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Front-of-pack nutrition labellings (FoPL) have gained traction in the European Union as tools to tackle the burden of nutrition-related chronic diseases. Multiple FoPL have been implemented by both governments and private actors. Under the European food labelling regulation, any FoPL is optional to display, although the legal framework is being revised for a harmonized FoPL to emerge. Since the implementation of the Nutri-Score in France in 2017, little data is available to understand the motivations and strategies underlying the adoption of the FoPL from a food business' perspective. A cross-sectional study was conducted in March 2021 on food businesses having adopted the Nutri-Score in France through an online questionnaire. In total, 121 businesses completed the questionnaire, representing 32% of companies adopting the scheme and covering a variety of company types. Engaged businesses had a rather healthier portfolio of products according to the Nutri-Score (on average, 69% of engaged products were A or B and 12% were D or E), with disparities between retailers and national brands. Businesses mostly reported their engagement was motivated by a will to be transparent (76%) and to simplify nutritional information (67%) but still 19% reported that they engaged following external pressures. External pressures were more likely to play a role in the engagement if the company engaged in 2020 compared to those engaged before 2018 ($P = 0.032$), if the company was larger ($P = 0.044$) and if the scope of engagement included D or E products (poorer nutritional quality) ($P = 0.033$). Our study showed that the Nutri-Score, as an optional measure, is mainly used by businesses, especially national brands, as a tool to promote rather healthier products, while companies with products of lower nutritional quality are more likely to engage following external pressure. This highlights the relevance of enforcing a mandatory FoPL system, in line with the Farm to Fork strategy.

Key messages:

- Nutri-Score led to a selective use of the measure by food businesses, especially national brands, to promote rather healthier products.
- The relatively low engagement of companies with low nutritional value products highlights the relevance of enforcing a mandatory FoPL system, in line with the Farm to Fork strategy.

Abstract citation ID: ckac130.100
Assessment of the impact of the Belgian and French food industry on obesity and population nutrition

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Major food industry players make commitments to improve food environments, but it remains unclear how well these commitments translate into practice. This study set out to quantitatively assess the nutrition-related commitments and practices, as well as the correlation between both, of major food companies in Belgium and France. The 'Business Impact

Assessment' (BIA-Obesity) was applied to evaluate nutrition-related commitments and practices regarding product formulation, labelling, promotion and accessibility. Publicly available commitments were collected and companies given the opportunity to complete the information (2019-2020). Practices were evaluated applying following performance metrics: the proportion of products with Nutri-Score A or B, the percentage of products not-permitted to be marketed to children (World Health Organisation) and the proportion of ultra-processed food products (NOVA). Correlations between commitments and practices were calculated applying the Spearman's rank correlation coefficient. Overall BIA-Obesity scores for commitments were lower in France (median: 28%) than in Belgium (35%). Response rates in France (39%) were lower than in Belgium (56%). Median product portfolios in France contained less ultra-processed products (63%) and contained a higher proportion of products with a Nutri-Score A or B (38%) compared to Belgium (75% and 29%, respectively). In both countries a similar proportion of products was not-permitted to be marketed to children (81% in Belgium and 84% in France). Stronger company commitments did not translate into better performance metrics. Belgian food companies obtained a higher score for their nutrition-related commitments. French companies performed slightly better according to the performance metrics. In both countries there was ample room to improve commitments and practices. To improve food environments it is crucial to ensure that commitments are strengthened and translate into improved company practices.

Key messages:

- Food industry players make a range of nutrition and health related commitments, but these don't necessarily result into better practices.
- The BIA-Obesity clearly identifies areas where food industry players can improve the comprehensiveness, specificity and transparency of their nutrition-related commitments and associated practices.

Abstract citation ID: ckac130.101
An exploratory study of the level of folic acid in food staples in Ireland in 2021

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Background:

Ireland previously had widespread voluntary fortification but there has been a major decline in the number of food staples fortified with folic acid in Irish supermarkets in the past 15 years. In this research we set out to examine the level of folic acid in food staples in supermarkets with the leading market share in the Republic of Ireland.

Methods:

The food labels of food staples (breads, spreads, milk, cereals, cereal bars, yoghurt/yoghurt drinks) were photographed in supermarkets with the leading market share in the Republic of Ireland (Tesco's, Dunnes, SuperValu, Lidl, Aldi, and M&S) between 2017 and 2021.The data was extracted and collated in an excel spreadsheet. The data was analysed to examine the level of folic acid in each product. We compared the levels captured at the current times with the levels previously captured in 2017.

Results:

Preliminary analysis suggests that folic acid level in food staples in Ireland continues to decline. Folic acid was not found in any breads (except a number of gluten free breads), milks, spreads but was found in several cereals marketed mainly at children.

Conclusions:

This study reports on the declining levels of folic acid in the food chain in Ireland. The number of food staples fortified with folic acid continues to decline demonstrating that voluntary fortification in Ireland is no longer an effective measure for passively augmenting the folic acid levels of consumers. This is of concern due to the incidence of neural tube defects in Ireland largely preventable by folic acid.

Key messages:

- This study reports on the declining levels of folic acid in the food chain in Ireland.
- The number of food staples fortified with folic acid continues to decline.

Abstract citation ID: ckac130.102
Assessment of maternal dietary patterns and their relationship with c-reactive protein in pregnancy

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Background:

Inflammation during pregnancy including elevated C-reactive protein (CRP) is associated with adverse pregnancy outcomes. Understanding relationships between CRP and modifiable factors such as dietary patterns is key to identifying opportunities for pregnancy intervention. This study assessed change in adherence to the Dietary Approaches to Stop Hypertension (DASH) and Mediterranean diet (MED-diet) from early to late-pregnancy and the relationship between adherence to both dietary patterns at early-pregnancy with plasma CRP at early and late-pregnancy.

Methods:

Women (n = 215) attending antenatal clinics at Monash Health, Melbourne were recruited at 10-20 weeks gestation. Medical history and blood samples were collected at 5 antenatal visits. Adapted DASH and MED-diet scores were calculated from Food Frequency Questionnaires completed at early ([mean±SD] 15±3 weeks) and late (36±1 week) pregnancy. CRP was measured in maternal plasma samples collected at early and late-pregnancy. Adjusted linear regression assessed associations of early-pregnancy DASH and MED-diet scores with early and late-pregnancy plasma CRP.

Results:

DASH score at early (23.5±4.8) and late (23.5±5.2) pregnancy was not significantly different (p = 0.971). There was no statistically significant change in MED-diet score from early (3.99±1.6) to late-pregnancy (4.08±1.8) (p = 0.408), however, MED-diet adherence and plasma CRP at early pregnancy were significantly and inversely associated (β = -0.14 [95%CI = -0.27, -0.01], p = 0.039).

Conclusions:

Adherence to the MED-diet in early pregnancy may be beneficial in reducing inflammatory markers and assisting optimal pregnancy outcomes. Assessment of dietary patterns is important to assist identifying modifiable factors which impact maternal and child health.

Key messages:

- Adherence to the MED-diet during pregnancy may be important in reducing inflammation.
- Assessment of maternal dietary patterns can assist informing early pregnancy intervention.

Abstract citation ID: ckac130.103
Preventing food contamination: preliminary results of a cross-sectional study among food handlers

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Background:
More than 600 million people around the world get sick every year due to eating contaminated food, which is impressive considering that all foodborne diseases (FDs) are preventable. Contamination during food preparation by food handlers (FHs) is one of the main causes of FDs. The aim of this study is to assess the knowledge and behaviors of FHs related to FDs.

Methods:
The cross-sectional study was conducted in two regions (i.e. Calabria and Sicily) of Southern Italy. Data was collected through an anonymous self-administered questionnaire designed to retrieve sociodemographic information, knowledge about food safety, and food-handling behaviors among a randomly selected sample of FHs $\geq$ 18 years of age.

Results:
Findings refer to a sample of 171 respondents with a mean age of 40 years (SD $\pm$ 12.7). A vast majority (63.7%) of FHs did not know the correct procedure for hand washing according to Food & Drug Administration (FDA) guidelines and 28.4% of subjects did not wash their hands after touching raw food, which constitutes a major risk of food cross-contamination. One-third of FHs were unknowledgeable that cross-contamination (e.g. using the same utensils for cooked and raw foods) could lead to FDs. Multiple logistic regression analysis showed a positive correlation ($p < 0.001$) among good knowledge and proper food-handling practices, such as using separate kitchen utensils to prepare cooked and raw foods and storing them in separate areas or fridges. Less than half of the sample (42.1%) reported the need for more information about FDs.

Conclusions:
Preliminary results highlight a lack of knowledge about simple rules to avoid food cross-contamination that could negatively impact on food safety and food-handling behaviors. This study add evidence about areas where intervention are needed to reduce the occurrence of FDs.

Key messages:
- Incorporating knowledge and behavioral-based food safety training programs could be effective to control the risk of FDs.
- Further research is needed on strategies to improve behavior change.

Abstract citation ID: ckac130.104
Individual and food environment factors associated with the diet of disadvantaged adults in Flanders

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Background:
Health inequalities partially remain due to differences in diet between socioeconomic groups. Examining the association between socio-ecological factors and the diet of socioeconomically disadvantaged (SED) individuals can enhance the development of interventions to decrease health inequalities.

Methods:
In total, 278 SED adults residing in two Flemish municipalities completed a survey addressing sociodemographics, diet, health and their perceptions of the food environment. The objective food environment was examined by assessing food retailer information in street network-based buffers of 500m and 1000m around participants' addresses. Linear regression was used to test assumptions.

Results:
Individual factors such as poor subjective health (OR0.58;CI 0.34-0.97), food insecurity (OR0.60;CI 0.38-0.94) and living alone (OR0.86;CI 0.75-0.98) were negatively associated with healthy dietary habits such as daily fruit and vegetable (FV) consumption. Positive perceptions on the availability of FV were positively associated (OR1.09;CI 1.02-1.17) with daily FV consumption. Objective food environmental factors showed a stronger association with unhealthy dietary habits. A greater amount of retailers within 1000m walking distance was negatively associated with fast-food (OR0.96;CI 0.94-0.99) and sugar-sweetened beverages (SSB) consumption (OR0.93; CI 0.88-0.98). More supermarkets within 500m distance was negatively associated (OR0.77;CI 0.58-0.97) with SSB consumption, while more convenience stores within a 1000m distance was positively associated (OR1.48;CI 1.17-1.88) with SSB consumption.

Conclusions:
Our findings suggest that factors associated with the diet of SED adults differ according to food and drink items. Interventions focused on this population should take these differences into account.

Key messages:
- Individual and food environmental factors are both associated with the diet of socioeconomically disadvantaged adults but differ according to food and drink items.
- Individual factors and perceptions of the food environment more likely associated with a healthy diet. Objective factors of the food environment were more likely associated with an unhealthy diet.

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Fed up: a qualitative investigation on the influencing factors of food insecurity in the Azores

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Background:
In 2019, over 1 billion people experienced food insecurity. In the Azores, a 9-island archipelago in the Atlantic Ocean, 13.4% of its population perceived food insecurity, the highest regional rate in Portugal (10.1%). These geographical limitations paired with high unemployment and low education rates, may challenge their access to nutritious food. It is still unclear how these (and other) contextual factors may affect access and availability to food in this remote area, and how they interact with individual determinants.

Methods:
Data collection was conducted in early 2022 with 13, in-depth, 1:1 semi-structured interviews regarding topics of food consumption and supply in the Azores. Non-probability sampling was used, with use of purposive and snowball

sampling. We included key-stakeholders currently living in the islands or working in a role related to the islands (i.e., in healthcare, supply chain, agriculture, etc.). We performed a thematic analysis with an inductive-deductive iterative analysis.

Results:

Participants identified several challenges related to access and availability of food. Vegetables, fruit and fish can be scarce and are subject to seasonal variation. There are clear regional disparities in access to food, with more isolated islands having less variety, quality and quantity of healthy foods available. Its topography and weather limit agricultural practices and transportation, but education, culture, and policies subsidizing the production of meat and dairy were also identified as important barriers to local production of fruits and vegetables.

Conclusions:

Food insecurity is a public health concern in this outermost EU region. If topography and geography limit the production and access of nutritious foods, economic and agricultural policies are a leading theme of concern to highlight. The solution for food insecurity thus demands an interdisciplinary dialogue to better adjust future policies in the Azores and in similar regions.

Key messages:

- Food insecurity is a public health issue in the Azores, a European outermost region. Access to nutritious foods is unstable due to contextual variables such as geography, weather and policy.
- A possible solution to address food insecurity in the Azores islands demands interdisciplinary dialogue to better adjust future policies in this region and within similar contexts.

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Understanding the relationships between dietary risk behaviour and social factors in older adults

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Background:

The relationships between social factors and dietary risk behaviour in older adults have not yet been thoroughly investigated. In this analysis, we aimed to develop a brief index of dietary risk behaviour and examine its associations with sociodemographic, socioeconomic, psychosocial, and behavioural factors.

Methods:

A community-based postal survey was conducted to collect cross-sectional data from German adults aged 65 and older ($n = 1687$; 33% response proportion; 52% female). Using principal component analysis, we developed a 3-item dietary risk behaviour index (DRB), including the food groups vegetables/fruit, whole grains, and dairy products. Dietary risk behaviour was defined as food group consumption frequencies below national dietary recommendations. Multiple linear regression was used to analyse associations between dietary risk behaviour and social factors.

Results:

Physical activity, female gender, education level, and social support were negatively associated with dietary risk behaviour, while alcohol consumption and smoking were positively associated (Adj. $R2 = 0.16$, $p < 0.001$). The brief DRB based on vegetables/fruit, whole grains, and dairy products has proven to be appropriate in analysing dietary behaviour among older adults.

Conclusions:

A better understanding of the relationships between social factors and dietary risk behaviour among older adults can assist in group-specific targeting of dietary-related interventions. Demand-oriented dietary interventions should address underlying social factors to reduce inequities in dietary risk behaviour among older adults. The results may be transferable to municipalities in high-income European countries.

Key messages:

- Dietary risk behaviour among older German adults is associated with sociodemographic, socioeconomic, psychosocial, and behavioural factors.
- Social conditions should be considered when targeting group-specific interventions to reduce socially determined inequities in dietary risk behaviour among older adults.

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Actions to support local charitable organizations in countering the spread of food insecurity

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Background:

According to the Italian Statistic Institute data, in Italy between 2007 - 2020 individual absolute poverty (AP) grew from 4.1 to 9.4%. In 2020 13.5% of minors lived in AP, furthermore in 2017 22.3% of Italians lived in conditions of food poverty or food insecurity (FI), between 2018 - 2019 1 in 7 minors lived in conditions of FI. The scientific literature underlines how inadequate food access is one of the risk factors for the onset of chronic non-communicable diseases. The aims of the project were to evaluate in the 3 main local charitable organizations (LCOs) the qualitative - quantitative profile of the food basket and the content of protective components present in fruits and vegetables (FV) available for socially disadvantaged communities (SDCs); determine the main nutritional critical points (NCPs); and identify possible corrective actions (CAs).

Methods:

The average composition of the food baskets available in 2021 for 1600 users by the 3 LCOs was compared with national nutritional recommendations. In February 2022, 23 samples of FV were collected from the LCOs for chemical analyses by the University of Trieste (UT). The outcomes were compared with the food composition database of the UT.

Results:

The food baskets at the LCOs were characterized by: daily average availability of 50 to 145 g of FV (8 to 22% of the recommended requirement); weekly average availability from 26 to 200g of cheeses, from 0 to 132g of meat. The quantitative profile of the protective molecules present in FV samples was reduced by 11 to 40 % compared to the UT database. The main NCPs were lack of nutrition guidelines on targeted food programmes and of monitor systems to evaluate the food basket balance for SDCs. CAs have been planned to integrate food safety and food security in public health programs to support LCOs.

Conclusions:

The results of the project can significantly support LCOs towards integrated actions in the food and nutritional policies at local and regional level.

Key messages:

- The rapid spread of food insecurity among the population, especially in families with minors, requires new tools to plan rapid and effective actions of food and nutrition policies.
- The analysis of nutritional critical points in the flux of donating food to socially disadvantaged communities is crucial for identifying corrective actions and to support charitable organizations.

6.R. Health care services and systems

Abstract citation ID: ckac130.108
Healthcare accessibility since and during Covid-19 pandemic among older individuals in Europe

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Ensuring access to healthcare is critical to prevent illnesses and maintain health and functional abilities for older individuals. The Covid-19 pandemic is a major global public health threat that challenges healthcare availability and accessibility. The objective of the study was to compare healthcare accessibility for older individuals since and during Covid-19 pandemic. The study was based on a sample of individuals from wave 8 Covid-19 add-on and wave 9 Covid-19-add-on of the Survey of Health, Ageing and Retirement in Europe (SHARE) in the period from 2020 till 2021. The sample size was 44043 respondents from 26 European countries. Descriptive statistics, Chi-square and McNemar test was performed. Overall, in 2021 there is a statistically significant decrease in proportion of respondents who forwent medical treatment (from 12% to 8%, in Latvia from 14,6% to 7%), postponed medical appointment due to Covid-19 (from 27% to 13%, in Latvia from 14,6% to 3,2%) and to whom appointment was denied by healthcare facility due to Covid-19 (from 5,3% to 4,5%, in Latvia from 6.9% to 3,3%) ($p < 0.001$). More often forwent medical appointment in 2021 was reported from females as well as respondents younger than 75 years, with good or very good self-rated health status and with less or no limitations due to health. Forwent medical treatment was reported more often from respondents with diabetes and hypertension. Results indicate that remote consultations are used more often than in 2020 (number of remote consultations varied between 1 and more than 100) and more often were reported by younger respondents (50-74 years). No significant association was found in self-rated health changes since and during Covid-19 pandemic for respondents who reported healthcare accessibility issues. As those issues were reported also by individuals with poor or fair self-rated health status and serious health conditions it can lead to a more rapid decline in health and functional abilities in the future.

Key messages:

- The situation with access to health care has improved during Covid-19, however further research is necessary to analyze how healthcare accessibility has affected health changes of older individuals.
- Telemedicine serves as a viable tool for maintaining patient care and lowering the risk of Covid-19 exposure to patients, however actions to improve digital skills for older individuals are needed.

Abstract citation ID: ckac130.109
Professionals' roles in the hospital discharge of older adults in 3 Nordic cities: a vignette study

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Background:

The hospital discharge process of older adults in need of both medical and social care post hospitalisation requires extensive care coordination. Cooperation and continuity between involved care providers are essential, however, existing care systems including the Nordic care systems, are poorly designed to provide health and social care to patients with complex health and social care needs which increases the risk of certain groups not receiving optimal care.

Aim and methods:

This study aims to examine and compare what roles, responsibility and actions nurses take in the hospital discharge process of older adults with complex care needs in three Nordic cities: Copenhagen (Denmark), Stockholm (Sweden) and Tampere (Finland). A vignette study consisting of three fictive cases was conducted face-to-face with nurses in Copenhagen (n = 11), Stockholm (n = 16) and Tampere (n = 8). Participants were identified through the researchers' networks and snowball sampling. The vignettes represent older patients with age-related medical conditions of which one also has cognitive loss and one looks after their partner with dementia. The cases further include differences in the home help received by their children, physical obstacles in their homes and unwillingness of becoming a burden to the system. A thematic approach is used for the data analysis.

Results and conclusions:

Preliminary results suggest that the informants' roles and engagement in the coordination and collaboration may differ both within and between the systems studied, and that they take responsibility beyond their job roles particularly if the patient has no close relatives. The study is of public health importance as it identifies gaps in how the care is organised in the three welfare states targeted. It also sheds light on the complexities of providing universal care in ageing societies where a growing proportion of older adults have both medical and social care needs.

Key messages:

- This study reveals similarities and differences in how the hospital discharge process is organised in 3 Nordic cities.
- Gaps in the care system are partly filled by nurses who do work beyond their job roles.

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The situation of older Emergency Department patients. Results from a participatory observation study

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Background:

Elderly patients make up a substantial share of Emergency Department (ED) populations which will increase steadily in the coming decades. This poses a challenge for EDs that are not designed to care for multimorbid, frail, and care-dependent older patients. However, too little is known about the current situation of older ED patients and their specific needs. This study seeks to explore ED stays of older and geriatric patients from a patient-centered perspective.

Methods:

Participatory observations of older patients' ED stays were conducted in five different EDs in a central district of Berlin. This included the passive company of ED patients aged 65 years and older, as possible from admission to discharge or referral. The sampling strategy followed the logic of theoretical sampling. Observation notes were captured in a semi-structured protocol and subjected to systematic, comparative analysis based on the Grounded Theory approach.

Results:

N = 71 cases of older ED patients were included. Patients' mean age was 80 years and 52% were female. The total observation time amounted to 332 hours, the mean observation time was 4 hours and 40 minutes. Long waiting hours and uncertainty about the further course turned out to be burdensome for the patients. Other problems were the dependency of patients in their ability to satisfy basic needs such as toileting and hydration. Personnel mostly tried to address these needs but did not always have the capacities.

Conclusions:

Like most health care institutions, EDs need to prepare for the consequences of aging societies. Older patients are more vulnerable to stressful situations such as ED stays and depend on more attention and nursing support. ED staff often lack the resources for this. Strategies are needed to adjust ED structures and processes to the specific needs of older patients. This includes the prevention of ED stays.

Key messages:

- ED stays can be particularly burdensome for elderly patients. There is a need for strategies to develop patient-centered and age-sensitive ED structures.
- Participatory observation is a productive method for patient-centered health research. Its methodological potential and challenges should be further analyzed and discussed.

Abstract citation ID: ckac130.111
The community pharmacy model for colorectal cancer screening: policy insights from Italy

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Background:

Despite its effectiveness, compliance to colorectal cancer (CRC) screening remains low. Different strategies to improve the adherence were identified, such as the involvement of new stakeholders as the community pharmacists. In Italy a recent national project fuelled the development of this strategy, scaling-up the collaboration between screening programmes and pharmacies formerly at the local level up to the national level.

Methods:

The regional representatives of the CRC screening programmes provided to the National Screening Monitoring Centre the agreements arranged between the Regions/Autonomous provinces and their respective pharmacy owners representatives. The agreement decrees were analysed describing the fecal occult blood test pathway (e.g. kit supply and delivery) and supplementary activities provided by the pharmacies together with the CRC screening kit delivery, such as health promotion ones.

Results:

Information was received from 18 Regions and Autonomous provinces (86% of the total). Regarding the economic compensation, the amount of money paid for each kit varies a lot, with a range from 0 to 18 EUR. The number of process phases covered by the agreements ranged from a maximum of 16 (out of 18) to a minimum of 0. The processes that were included most often were the supply of the kit, the delivery of the kit, and education/awareness of CRC screening (68.8%), followed by sample transfer to the laboratory, test tube tracing and counselling (62.5%). Among the processes less covered there were the warehouse management and awareness of other healthcare initiatives (12.5%), and only in one case a supplementary agreement on delivery of preparation for intestinal cleansing was included.

Conclusions:

The arrangements between pharmacies and CRC screening programmes in Italy are very diverse and unique model is missing. Collaboration between programs and pharmacies is promising and quality standards of the service should be set at international level.

Key messages:

- Collaboration between organized colorectal cancer screening programmes and community pharmacies can improve the quality of the service and adherence to screening.
- Quality standards of the pharmacy service in colorectal cancer screening should be set at international level.

Abstract citation ID: ckac130.112
Quality of life and social contacts in old age

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Background:

Changes in lifestyle, housing and social relationships have a verifiable impact on aging. Older adults of today have different ideas about housing and residential mobility than previous generations. Consequently, the importance of innovative types of housing for senior citizens, which allow largely independent housekeeping and provide integration into preexisting social structures, is increasingly in the focus of public health debates.

Methods:

Face-to-face interviews with 32 tenants of Wohnoase Robert Stolz in Graz were conducted between July 2018 and December 2020. The subjects were interviewed twice (T1: at move-in, T2: 6-12 months after moving-in). WHOQOL-BREF and WHOQOL-Old were used to assess health-related quality of life. Furthermore, the ego-centered social network map and a questionnaire to assess subjective sense of safety at home were applied.

Results:

Tenants' health-related quality of life improved by an average of 11% after 6-12 months in the area of environmental conditions for health promotion ((T1: 3.83; T2: 4.25). Residential satisfaction (T1: 3.44; T2: 4.3; +25%) as well as subjective feeling of safety in their own homes (T1: 4.19; T2: 4.81; +14.8%) rose significantly. Tenants on average had about 6 more social contacts than before moving in (52.2%). In contrast, no significant changes were evident in tenants' self-assessment of their physical, mental, and social health.

Conclusions:

Results indicate that moving into assisted living can lead to psychosocial stabilization and an increased sense of security. Over time, deteriorations in physical health can be observed, which can most likely be attributed to advanced ageing. Conducting an evaluation study with a higher number of participants and a control group is recommended.

Key messages:

- Moving into an assisted living facility led to psychological stabilization and a heightened sense of security among the participants.
- Further, the amount of social contacts increased over time.

Abstract citation ID: ckac130.113
Social capital and STIs testing among young men in Stockholm, Sweden: A cross-sectional study

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Background:

Testing for sexually transmitted infections (STIs) is highly accessible in Sweden, but young men's testing rate is considerably lower than young women's. Social capital (SC) might shape people's STIs testing patterns. However, such association has not been studied among young men before. This study assessed the prevalence of different forms of SC and if they increase STIs testing among young men in Stockholm, Sweden.

Methods:

This population-based cross-sectional study was conducted in 2018 and included 523 men aged 20-29 years living in Stockholm. Bonding SC (having helped someone; having received help; having someone to share inner feelings with), institutionalized trust SC (in school; healthcare; media) and STIs testing behavior (never tested, tested only in the last 12 months, only more than 12 months ago, or both before and after the last 12 months) were assessed. Weighted adjusted multinomial logistic regression tested the associations between SC and STIs testing.

Results:

High levels of bonding SC (range: 86.5 - 95.5%), as well as trust in healthcare (76.7%) and school (64.8%) were reported. Having helped someone (aRRR 6.1, 95% CI 1.7 - 21.6), having received help (aRRR 8.1, 95% CI 2.6 - 24.7) and having someone to share feelings (aRRR 4.0, 95% CI 1.7 - 9.2) were associated with being tested for STIs more than 12 months ago. Trust in media was the only institutional trust significantly associated with STIs testing (tested in the last 12 months: aRRR 2.5, 95% CI 1.1 - 5.4; both before and after: aRRR 3.8, 95% CI 1.6 - 8.9).

Conclusions:

Peer-to-peer interventions using bonding SC should be used to promote STIs testing. More studies are needed to understand how trust in media increases testing for STIs. Although trust in healthcare and school were not statistically associated with testing, the high overall trust in these institutions reported in our study could be harnessed to implement sexual education programs promoting STIs testing among young men.

Key messages:

- Higher level of bonding social capital, as well as trusting in media, were positively associated with being tested for STIs among young men in Stockholm.
- The participants' reported high institutional trust in healthcare and media could be harnessed to implement sexual education programs promoting STIs testing among young men.

Abstract citation ID: ckac130.114
Influence of occupation on the subjective health of forced migrant doctors-a qualitative study

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Background:

With the refugee movement in 2015, also forced migrated female and male medical professionals have arrived in Germany. The effect of occupation on the subjective health status of these physicians working in the German health care system was investigated on the basis of Antonovsky's sense of coherence (SOC) and the occupational science models of Siegrist and Karasek&Theorell.

Methods:

Using a semi-structured interview guide, nine forced migrated physicians were interviewed before and nine forced migrated physicians were interviewed during their professional medical activity. Both interview groups had an Arabic cultural background. The transcribed interviews were analyzed according to Kuckartz's content structuring qualitative content analysis using the MAXQDA 2020 software tool.

Results:

The SOC of migrated physicians is favorably influenced by meaningful occupational activity and the newly gained manageability of life. Positive influences are seen in professional appreciation and collegial support at all hierarchical levels. Negative effects are perceived in experiences of discrimination, insecurity and experienced injustice in the recognition of foreign qualifications. Physical stress results from occupational overload, unfamiliar work and time pressure.

Conclusions:

The salutogenic effect of the work, the recognition in the profession and the collegial support are essential contributions to the promotion of especially mental health among forced migrated doctors. This speaks in favor of rapid and stringent integration into professional life. However, organizational barriers inherent in the German health care system should not be disregarded, which is why both legal and structural improvements should be made to the existing integration procedure before and during professional activity.

Key messages:

- Expediting the integration of migrant doctors back into their professions is of salutogenic importance.
- Therefore, coordinated and corrective measures should be taken to this end by those responsible for this process.

Abstract citation ID: ckac130.115
Integrated health and social care evaluation framework for mental health and drug addiction care

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Background:

Guiding the decision-making process in mental health investments is advisable. The objective of the study is to develop a framework for evaluating the quality of integrated health and social care in Mental Health and Drug Addiction (MH&DA)

Methods:

A literature review helped to establish a definition of integrated care specific to MH&DA and to identify potential indicators for its evaluation. The quality of integrated care was assessed through focus groups (FGs) and interviews (INs) with three different profiles: professionals (2FGs & 2 INs), patients (3 FGs & 2 INs) and families/carers (2FGs & 2 INs). Additional indicators were also obtained from them.

Results:

Out of 2,226 publications identified, 87 (4%) were reviewed in full. According to the literature, integrated care in MH&DA is based on four main components: case management, comprehensive assessment, individualised care plan and care coordination among different providers. Based on these components, an operational definition of integrated care was developed and validated in the FGs and INs. Positive aspects identified were a respectful approach and positive experiences of coordination between social and community network. Regarding indicators about 400 were identified, after screening were reduced to 60: 25% corresponded to accessibility, 20% person-centred care, 16% each to care coordination and to effectiveness. In general, the main threats to the quality of care, identified in FGs and INs, matched the dimensions with the highest proportion of indicators (i.e., limited care resources, poor coordination and communication among professionals and services, and barriers in accessing specialized treatment).

Conclusions:

According to literature, integrated care in MH&DA seems to be mainly evaluated in terms of accessibility and person-centred care. In a following phase, a large group of experts will be key to select the most relevant dimensions and indicators for the evaluation in a Delphi study.

Key messages:

- A quality integration of Health and Social Care is paramount for people with mental disorders and/or drug addictions.
- A framework for assessing the quality of integrated Health and Social Care in Mental Health and Addictions would help guide necessary investments in mental health.

Abstract citation ID: ckac130.116
Caregiver burden in professionals working in different settings for persons with dementia

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Introduction:

Professionals caring for persons with dementia (PwD) have to meet demands from various sides. Considering today's high standards put on institutional care with respect to ‘‘person centred care’’ and the skills related to specific needs of PwD, caring for care staff is one of the major challenges.

Objectives:

The aim of this study was to investigate the caregiver burden in professional dementia care and its work related differences.

Methods:

The study was carried out from September 2021 to February 2022 among 105 professionals working in different settings for PwD in Slovakia including home care and day care centres. The Professional Care Team Burden scale (PCTB) and the Zarit Burden Interview (ZBI-12) were chosen to measure caregiver burden. Length of work in the organisation (< 3, 3 to 6, > 6 years), job position (domiciliary and other care worker), and current dementia care intensity (≤ 8, 9 to 39, > 40 hours/week) were also measured. Independent samples T-tests and ANOVA were used to analyse the differences (IBM SPSS 27).

Results:

87.6% of professionals were women (mean age 48.6±9.8 years). 52.5% worked more than 6 years in the organisation, 53.3% were in the job position of domiciliary care workers, and for 52.1% the current dementia care intensity was 9 to 39 hours/week. Caregiver burden mean scores achieved were 26.7±4.0 (PCTB) and 9.7±6.2 (ZBI-12). The significant difference was found in the PCTB by job position with the higher burden in domiciliary care workers (mean score 26.0 + 4.2, $p < 0.05$). No significant differences were observed in the PCTB and the ZBI-12 by the length of work in the organisation and current dementia care intensity.

Conclusions:

Specific scales for assessing professionals' caregiver burden are useful to uncover areas for intervention. Structuring the interventions by taking the care staff subjective feelings of burden into account is important for future improvements in institutional care. (Grant support: VEGA no. 1/0372/20).

Key messages:

- Caring for professionals is one of the major challenges to improve health and social services for persons with dementia.
- Structuring the tailored interventions should take the caregiver burden into account.

Abstract citation ID: ckac130.117
The impact of depression on satisfaction with prenatal care in Kazakhstan during COVID-19 pandemic

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Background:

Depression and anxiety are common during perinatal periods, representing a considerable public health concern during global pandemic. Only few studies have examined the influence of emotional disturbances on satisfaction with maternity care. This study aimed to assess the prevalence of satisfaction with prenatal care and to examine its association with depression and anxiety among pregnant women in Kazakhstan.

Methods:

Participants were recruited to this online cross-sectional survey in the outpatient clinic in Novoshamalgan, Almaty region (n = 174) in December-January, 2022. A single-item measure of satisfaction was used by asking a question ‘‘How satisfied are you with health services?’’, scored on a 5-point Likert scale. A simplified 2-item Edinburgh Postpartum Depression Scale and 2-item Generalized Anxiety Disorder scale were used to measure depressive and anxiety symptoms.

Results:

Majority of women were very satisfied or satisfied (n = 128; 74%), while less than a third of the sample (n = 46; 26%) were dissatisfied with the received care. The prevalence of depression in the total sample was higher, compared to the prevalence of anxiety (34% versus 18%). Multivariable logistic regression showed that dissatisfaction with prenatal care was associated with older age, not attending check-ups regularly, and being employee of private company or student. Depression increased the odds of being dissatisfied by 2.6 times (95% CI 1.19∼5.79); while obstetric issues and anxiety were not associated with satisfaction. Perception of women about inadequate solution of the problem of antenatal depression was a significant predictor of dissatisfaction (AOR 6.87; 95% CI 1.81∼26.12).

Conclusions:

Depressed women in our study were less satisfied with prenatal care. Further investigation of the perception of women about specific aspects of perinatal health services is suggested. Providing a quality, patient-centered care is needed to support pregnant women during the current pandemic.

Key messages:

- To improve the quality of prenatal care, health providers should address not only physical concerns, but also psychosocial issues and symptoms of depression of pregnant women during current pandemic.
- Although prenatal care is accessible to all pregnant women in Kazakhstan, development of patient-centered perinatal care is needed, focusing on communication skills and quality of interaction.

Abstract citation ID: ckac130.118
A questionnaire to measure the impact of ICT-based coordination mechanisms on clinical coordination

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Background:

In national health systems based on primary care, cross-level clinical coordination (CC) is a priority, as it may improve quality of care. Evidence on the impact of information and communication technology (ICT)-based coordination mechanisms on CC is inconclusive. The implementation of those mechanisms increased during the pandemic. The aim is to adapt the validated COORDENA-CAT questionnaire, for measuring CC, to analyse the implementation of ICT-based coordination mechanisms and its impact on CC in three regions of Spain.

Methods:

The COORDENA-CAT questionnaire underwent a two-stage adaptation process:1) contents revision based on literature review, expert discussions, and pretest to adapt the contents and language and produce a version for each region; and 2) piloting the adapted version by self-administration of the questionnaire to primary and secondary care doctors in the health systems of two of the participating regions.

Results:

The adapted version (COORDENA-TICs) kept most of the original contents. Main changes were on coordination mechanisms section. Pretest showed an adequate level of comprehensiveness, comprehension, sequence of themes and questions, and length. A low non-response rate was observed, with little variability or unexpected responses. The question on any difficulties encountered in answering the questionnaire revealed no relevant difficulties. The Shared Electronic Medical Record of each region was the most frequently used ICT-based coordination mechanism. Limited access to information and technical issues related to its use were the most common difficulties encountered. Suggestions for improving its use were receiving specific training on its use.

Conclusions:

COORDENA-TICs questionnaire is a useful tool to assess utilization of ICT-based coordination mechanisms and its impact on CC from the perspective of primary and secondary care doctors. It will allow comparisons across areas, regions and to evaluate changes over time

Key messages:

- Evidence on the impact of ICT-based coordination mechanisms on clinical coordination is inconclusive.
- COORDENA-TICs questionnaire could be useful to measure the impact of ICT-based coordination mechanisms on clinical coordination.

Abstract citation ID: ckac130.119
Analysing hospital travel times in central Athens using Google Maps services

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Introduction:

The importance of timely care is well documented for numerous emergency conditions, including STEMI and ischemic stroke, where low symptom-to-balloon/symptom-to-needle times are crucial for mortality and disability. The study of all potential delays helps us understand the constraints we have to work under. Here, we use Google Maps services to map the travel times from central Athens areas to on-duty hospitals

Methods:

We built our code in the Python programming language, using the Google Maps Distance Matrix API to perform real-time trip duration calculations based on real-life data. As reference points, we used a set of Athens neighbourhoods provided by the Municipality as open data; we considered only public secondary and tertiary health facilities as valid destinations, and based our calculations based on the available daily duty schedules.

Results:

Our algorithm collected 43,200 data points in total over two weeks, using 144 starting points. The average trip durations to reach an on-duty department formed a right-skewed distribution (-0.424), with a mean of 19.55 minutes and a median of 19.95 minutes. The maximum average time was 26.78 minutes, and the overall maximum was 44 minutes. Average travel times to cardiology, general surgery, neurology and internal medicine ERs, which experience a heavy patient load, were higher than the total mean (20.60/22.06/21.31/20.51 mins respectively). We found no correlation between the average travel time and average distance from a hospital or the geographical location, but we were able to create a map with hotspots of high/low travel times.

Conclusions:

Our approach to collecting accurate trip data has shown the impact of time-of-day and location on trips to hospitals, even for patients within the same larger area. As acute care can be time-sensitive, similar wide-scale modelling could be used to create systemic solutions, e.g. data-guided spatial distribution of facilities or transportation.

Key messages:

- Public APIs can be used to gather useful data about the context around our health systems.
- In Athens, a difference in position can mean up to 100% longer travel times to a hospital.

6.S. Health at work

Abstract citation ID: ckac130.120
Fostering mental health and chronic diseases self-management among professional truck drivers

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Most passengers and goods in Canada travel by road. The trucking industry is the backbone of the tangible goods economy. However, the health and well-being of this aging workforce is in jeopardy. Recent data reveals that 86% of the truckers' community are 50 years old and over, 4% are female and 5% are immigrants. Moreover, 75% of the male truckers self-reported one or more health condition (54% obesity, 19% hyperlipidemia, 18 % high blood pressure, 11 % type II diabetes). Despite, the high prevalence of risk factors (e.g. stress, depression/anxiety, lower level of education, social isolation and financial challenges) and preventable chronic diseases among truckers, in New Brunswick and elsewhere in Canada, there is a lack of on-the-road accessible lifestyle change programs. Therefore, tailored interventions are needed to appropriately support them adopt healthy behaviors. Using the Re-AIM Framework, we carried out 23 semi-structured interviews to inform the development of tailored educational material. The aims were: to describe the needs and challenges and to design a truckers-sensitive educational intervention. The theoretical foundation of this qualitative study is articulated around concepts extracted from cognitive and behavioural theories (transtheoretical model of behaviour change). Qualitative analysis of verbatims identified four major themes: Lifestyle challenges, Social and individual representation of healthy behaviors, Health education strategies and communication and Motivational and engagement strategies. Drawing upon these findings we developed tailored educational material and pre-validated them with a small group of professional truck drivers. Our findings informed the development of an educational intervention to support truckers manage and improve their mental health and self-management of chronic diseases. The next step is to implement a randomized clinical trial to test and assess acceptability, feasibility, and effectiveness of our intervention.

Key messages:

- Improving mental health of professional truck drivers is an urgent public health issue.
- Format and content of mental health and chronic disease self-management need to be adapted at the cognitive (health liercy) and capacity (resources, time) level.

Abstract citation ID: ckac130.121
The economic value of informal long-term care

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Informal care makes up a significant share of long-term care (LTC) and is likely to become even more important in the near future because of the ageing population, rising numbers of chronic patients and shortages of formal carers. At the same time, informal care is under pressure because of societal developments (shrinking family sizes, increased participation of women on the labour market, rising retirement age and geographical dispersion of families). These developments may further enhance the effect of informal care in terms of individuals' quality of life and opportunity costs caused by work absence and productivity losses. Against this background, Ecorys has performed studies, to empirically estimate the social value of informal LTC and increase the awareness on its importance. The results of the study, commissioned by the European Commission, demonstrate that informal caregivers represent about 80% of all caregivers (measured in FTE). If paid for, these hours would cost between 2.4 and 2.7% of EU GDP. Currently, these costs are not paid and the actual costs of informal care are estimated at 1.05% of EU GDP, mostly in lost tax revenues. European countries vary greatly in the extent to which informal carers are supported by public policies. Only some countries have cash benefit schemes to compensate for the loss of income from employment. Specific benefits and leave entitlements to support informal caregivers are often insufficient or lacking. In several studies in the Netherlands, Ecorys found that total social costs of informal care are estimated at 2.54% of NL GDP (€22 billion/year) and informal caregivers perceive increasing economic and psychological burden and are at higher risk of depression and burn out. Government policies are developed to better support informal caregivers.

Key messages:

- Throughout the EU, most long-term care is provided by informal caregivers. Social costs of informal care represent 2.4 – 2.7% of EU GDP, actual financial costs are 1.05%.
- Informal caregivers suffer negative effects in terms of income and quality of life. Public policies to support informal caregivers vary widely throughout the EU.

Abstract citation ID: ckac130.122
Determinants of Homelessness (SODH) in North West England in 2020

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Background:

Poverty creates social conditions that increase the likelihood of homelessness. These include exposure to traumatic life experiences; social disadvantages such as poor educational experiences; being raised in a broken family, care homes or foster care; physical, emotional, and sexual abuse; and neglect at an early age. These conditions reduce people's ability to negotiate through life challenges.

Methods:

This cross-sectional study documents the clustering and frequency of adverse social conditions among 152 homeless people from four cities in North West England between January and August 2020.

Results:

Two-step cluster analysis showed that having parents with a criminal record, care history, and child neglect/abuse history was predictive of homelessness. The cluster of indicator variables among homeless people included sexual abuse ($\chi2$ (N = 152) = 220.684, $p < 0.001$, Cramer's V = 0.7), inappropriate sexual behaviour ($\chi2$ (N = 152) = 207.737, $p < 0.001$, Cramer's V = 0.7), emotional neglect ($\chi2$ (N = 152) = 181.671, $p < 0.001$, Cramer's V = 0.7), physical abuse by step-parent ($\chi2$ (N = 152) = 195.882, $p < 0.001$, Cramer's V = 0.8), and physical neglect ($\chi2$ (N = 152) = 205.632, $p < 0.001$, Cramer's V = 0.8).

Conclusions:

Poverty and homelessness are intertwined because of the high prevalence of poverty among the homeless. Poverty sets up a chain of interactions between social conditions that increase the likelihood of unfavourable outcomes: homelessness is at the end of the interaction chain. Interventions supporting families to rise out of poverty may also reduce entry into homelessness.

Key messages:

- Being poor is associated with so many childhood adversities that it may be considered an ACE in itself.
- Reducing poverty might be one strategy to reduce both ACEs and homelessness.

Abstract citation ID: ckac130.123
Sickness absence and disability pension in white-collar workers in the trade and retail industry

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Background:

Very little is known about sickness absence among white-collars workers in the trade and retail industry, despite being a large and important group on the labour market. The aim was to investigate future sickness absence (SA) and disability pension (DP) in a cohort of privately employed white-collar employees in the trade and retail industry.

Methods:

A prospective population-based cohort study of all 192,077 such white-collar workers (44% women) in Sweden in 2012, using linked microdata from three nationwide registers covering 2012-2016. Prevalence and mean number of SA and/or DP net days/year in general and by diagnoses categories were calculated for all and also stratified by sex. Logistic regression was used to calculate odds ratios (OR) and 95% confidence intervals (CI) between sociodemographic and work-related factors and future SA/DP.

Results:

The proportion who had SA and/or DP was higher in women (10-13%, depending on year) than men (4-6%) each year. Each studied year, women had more mean SA/DP net days than men in the entire cohort, however, among those who had SA and/or DP, there were no gender differences regarding the mean number of net days. The mean number of SA/DP net days increased for both women and men each year, especially SA due to mental diagnoses. SA in 2012 was the strongest factor associated with SA/DP in 2016 (OR women 3.28, 95% CI 3.09-3.47; men 4.10, 95% CI 3.76-4.48). Work-related factors were only weakly or insignificantly associated with future SA/DP. The ORs for most factors were stronger for men than for women.

Conclusions:

More knowledge about the mechanisms behind these results are needed. Some SA/DP measures showed large sex-differences, others not - it is important to use different measures to show the complexity of these phenomena. Several factors were more strongly associated with SA/DP among men than among women, indicating that there are other factors of importance for women.

Key messages:

- Most white-collar workers in the trade and retail industry had no SA/DP in any of the six studied years. SA due to mental diagnoses was the largest and fastest-growing SA/DP diagnostic group.
- Sickness absence in 2012, female sex, and low education were associated with future SA/DP. Most other socio-demographic and job-related factors were not, or only weakly, associated with future SA/DP.

Abstract citation ID: ckac130.124
Hustle: Experiences of making work 'work' for non-standard and precariously employed workers in NYC

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Background:

Precarious and non-standard employment (NSE) has negative implications for workers' health. As part of a six-country comparative mixed methods case study, this research explores US-based workers' experiences in NSE and its influences on their health and well-being in a context of weak labor regulations and social welfare programs.

Methods:

To understand US policy context, we analyzed country-level labor regulatory and social protection frameworks using 2019 Organization for Economic Cooperation and Development data. To understand workers' experiences, we conducted in-depth interviews with NSE workers in various occupations in New York City (N = 40) between January and May 2021. We recruited and screened eligibility via Facebook advertisements and an online questionnaire, respectively. We used deductive and inductive thematic analysis for interview data.

Results:

With heavy reliance on market competition in the US, minimal state regulation and flexible labor markets create less secure employment along with limited government-funded social supports. Workers' experiences center on the Hustle, i.e., figuring out how to make NSE work for them and their families. They lack healthcare coverage and have low expectations of other supportive employment and social protections (e.g., paid leave). While NSE payoffs (e.g., perceived flexibility) were common for most, almost all experience NSE tradeoffs (e.g., job insecurity and instability) that create stress and overwork, negatively implicating overall health and well-being. These impacts differ by access to resources associated with social location (e.g., immigration status). COVID-19 exacerbated these experiences.

Discussion:

Low expectations of supportive policies of US workers in NSE are linked to the individualized hustle, as they attempt to counter NSE tradeoffs often relying on family to fill those gaps. Over-reliance on privatization for social supports such as healthcare coverage can be detrimental to workers' health.

Key messages:

- US workers in NSE experience stress and overwork with low expectations of support from the state.
- We caution against increasingly market-based policies in Europe, which may jeopardize public health.

Abstract citation ID: ckac130.125
Managers' sick-leave recommendations - a video vignette study on common mental disorders

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Background:

Sick leave due to common mental disorders (CMD) in Sweden is higher among women than men. Since the Swedish labor market is highly sex segregated a contributing factor might be managers' attitudes towards CMD and sick leave. This video vignette study tests three hypotheses on managerś sex and recommendation for sick leave. The hypotheses are: (1) there is an association between negative attitudes towards CMDs and recommending sick leave, and (2) there is an association between educational level and recommending sick leave, and (3) there is an association between workplace factors and managerś recommendation of sick leave.

Methods:

The study sample consisted of 2703 Swedish managers, female (34%) and male (66%). The online survey included a randomized female and male video vignette played by actors and specifically designed for the study. Associations were investigated by means of logistic regression. The covariates were attitudes towards depression, educational level, labor sector, size of company, proportion of women/men at the workplace, and sex of the person in the video vignette.

Results:

The bi-variate crude analysis showed an OR of 1.28 (95% C.I. 1.08-1.51) for female vs. male managers' recommendation of employee sick leave to the video vignette. Negative attitudes towards CMD did not add to the model, whereas educational level did, OR 1.34 (95% C.I. 1.13-1.59). The final, fully adjusted model showed an OR of 1.39 (95% C.I. 1.16-1.66) for female vs. male managers' recommendation of employee sick leave.

Conclusions:

The likelihood of a manager recommending sick leave after watching a CMD-labelled video vignette was slightly higher for female managers compared to male, and it remained in the final adjusted model. The results resonate with the registered sick leave and the sex segregation among managers and industries in the Swedish labor market.

Key messages:

- Female managers were slightly more likely to recommend sick leave to a video vignette case compared to male managers.
- Negative attitudes towards CMD were not associated with recommending sick leave.

Abstract citation ID: ckac130.126
The various insecurities experienced among non-standard workers across different policy-contexts

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Background:

Over the last decades, the prevalence of non-standard employment (NSE) has increased in many countries, with negative implications for worker health and well-being. Research at the micro level, mostly quantitative, has linked NSE with poor health through insecurity. Macro-level studies investigating whether political economic factors buffer the harms of NSE have generated mixed results. This study describes how various types of insecurity are experienced by workers in NSE, in general and during COVID-19, and how this influences their health and well-being, in six countries with different welfare states: Belgium, Canada, Chile, Spain, Sweden and the United States.

Methods:

In-depth interviews with 250 workers in NSE were analysed using a multiple-case study approach and using the welfare state typology as a macro-level framework.

Results:

Despite differences in welfare states, workers in all six countries experienced multiple forms of insecurity as well as relational tension with employers or clients, with clear negative effects on their well-being, in ways that were shaped by broader social inequalities (e.g., related to gender, age, and access to family support). Simultaneously, differences in welfare states were reflected in the level of workers' exclusion from social protections, the temporality of difficulties they faced in planning their lives (e.g., threats to daily survival or to longer-term life planning), and their ability to derive control from NSE despite the insecurity it created. Workers in less generous welfare states experienced heightened insecurity and greater stress from the COVID-19, but the severity of the health and economic crisis was felt by workers in all study countries.

Conclusions:

This study sheds light on the ways that welfare regimes can support - or fail to support - workers in NSE, and suggests the need in all six countries for stronger state responses to NSE, a pressing social determinant of health.

Key messages:

- Employment insecurity is a central dimension of the experience of non-standard employment across the six countries.
- Differences in state approaches to labour market regulation and social welfare influence how non-standard workers experience insecurities.

Abstract citation ID: ckac130.127
Sickness absence due to common mental disorders among precarious and non-precarious workers

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Background:

Mental health disorders have become one of the leading diagnoses causing sickness absence. Previous studies have examined the impact of single employment characteristics or working conditions on sickness absence. However, few studies have investigated the effect of a multidimensional construct of precarious employment on sickness absence. Therefore, this study aims to describe sickness absence due to common mental disorders (CMD) as a proxy for access to social security benefits among precarious and non-precarious workers with mental health problems.

Methods:

Cohort register-based study of the total Swedish population aged 27 to 61 years residing in Sweden in 2016 and having mental health problems defined as being prescribed Selective Serotonin Reuptake Inhibitors (SSRI) in 2017 (N = 19,691). Individuals were classified as precariously employed or not based on a precarious employment score measured multi-dimensionally in 2016 (i.e., employment insecurity, income inadequacy, and lack of social protection). The outcome was the incidence of the first sickness absence episode due to CMD co-occurring with SSRI treatment in 2017. Logistic regression models will be performed.

Results:

The following results are preliminary. Precariously employed treated with SSRI were 8,68% in 2017. The distribution of a first sickness absence episode due to common mental disorders was similar in precarious and non-precarious workers (12.35% and 12.42%, respectively). Individuals directly employed (12.20%), with multiple jobs holding (14.62%), and low-medium income levels (14%) had higher sickness absence incidence due to common mental disorders. There were slight differences by gender.

Conclusions:

In these preliminary results, no differences were found between precarious and non-precarious workers with mental health problems in the distribution of sickness absence due to CMD. Further analysis will be conducted to investigate whether precarious employment is associated with sickness absences.

Key messages:

- Sickness absence due to common mental disorders is similarly distributed among precarious and non-precarious workers.
- Individuals with multiple jobs, low-income levels, and directly employed show higher sickness absence incidence due to common mental disorders.

Abstract citation ID: ckac130.128
Prior sick leave with mental or somatic diagnoses and being in work in ages 66–71; a Swedish cohort

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Background:

As longevity and retirement ages are increasing, knowledge is needed on factors hindering extended working lives. The aim of this study was to explore how sickness absence (SA) and disability pension (DP) due to mental and/or somatic diagnoses before age 65 were associated with being in paid work when aged 66-71.

Methods:

A 6-year prospective population-based cohort study of all 98,551 people (48% women) in Sweden who turned 65 years in 2010 (baseline year) and had been in paid work at any point when aged 60-64. Microdata from nationwide registers were used. Exposure variables were SA (spells >14 days) and/or DP in 2005-2009, and the outcome variable was paid work at any point in 2011-2016. Logistic regression was used to calculate odds ratios (OR) with 95% confidence intervals (CI) for associations between exposures and outcome, controlling for sociodemographic factors in 2010, stratified by sex.

Results:

Most women (56.0%) and men (66.3%) had no SA or DP when aged 60-64. Of the women, 42.7% and of the men 53.3% were in paid work after the age of 65. Those with SA due to mental diagnoses had lower OR of being in paid work (women 0.76; 95% CI: 0.69-0.84; men 0.74; 0.65-0.84). This association was weaker for SA due to somatic diagnoses (women 0.87; 0.84-0.91; men 0.92; 0.89-0.96). Having had SA due to both mental and somatic diagnoses was associated with lower OR for men (0.77; 0.65-0.91) but not women (0.98; 0.88-1.09). Full- or part-time DP had the strongest association with not being in paid work regardless of diagnosis group and sex (e.g., women mental DP 0.39; 0.34-0.45; women somatic DP 0.38; 0.35-0.41; men mental DP 0.36; 0.29-0.43; men somatic DP 0.35; 0.32-0.38).

Conclusions:

SA due to mental diagnoses had a stronger association with not being in paid work after age 65 than SA due to somatic diagnoses. The results highlight the importance of identifying factors that hinder older workers with mental disorders to extend their working lives.

Key messages:

- Many were in paid work after age 65, also among those with previous SA. However, this was less likely among those who had been on SA due to mental diagnoses compared to somatic diagnoses.
- More knowledge is needed on how older people with different types of mental and somatic morbidities can extend their working lives, what hinders and what promotes this in different European countries.

Abstract citation ID: ckac130.129
Employment at the onset of partial disability retirement and four years later

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Background:

Increasing the labour market participation of people with a reduced ability to work is a big labour market challenge in many countries. In Finland, one third of all new disability pensions are granted as partial pensions. It is also known that most partial disability pensioners continue working while receiving a pension. There is only limited research about the length of employment of partial disability pensioners and the factors associated with employment in retirement. The aim of this study was to examine the employment at the onset of partial disability retirement and four years after retirement, and to examine how age, gender, educational level, employment sector, diagnosis and type of pension are associated with employment after partial disability retirement.

Methods:

Our Finnish register data comprised 7,617 partial disability pensioners aged 20-58 who retired in 2013 or 2014. Logistic and multinomial logistic regression analysis were used to estimate OR:s and 95 percent CI:s for employment at the onset of partial disability retirement and four years after retirement.

Results:

81 percent of partial disability pensioners were employed when retiring on a partial disability pension. Four years later, 50 percent were still drawing a partial disability pension, of whom 77 percent were working. 11 percent were employed but no longer drawing a partial disability pension. The partial disability pensioners who were more often employed were younger, female, more highly educated, working in the public sector and receiving a temporary disability pension.

Conclusions:

Many sociodemographic factors are associated with employment at the onset of partial disability retirement and with continued working while drawing a partial disability pension.

Key messages:

- Employment after partial disability retirement is common and relatively stable. After four years of retirement, more than 70 percent of partial disability pensioners were still working.
- Many sociodemographic factors are associated with employment after partial disability retirement.

Abstract citation ID: ckac130.130
Impact of COVID-19 on psychosocial work factors and emotional exhaustion among healthcare workers

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Background:

Healthcare workers are at risk to develop mental health problems and to experience adverse psychosocial working conditions during the COVID-19 pandemic. This study aims to investigate across subgroups of healthcare workers i) differences in psychosocial working conditions and emotional exhaustion, ii) changes in psychosocial working conditions and emotional exhaustion during the pandemic compared to the situation before, and iii) impact of different stages of the COVID-19 pandemic in terms of hospital pressure on psychosocial working conditions and emotional exhaustion.

Methods:

Data on psychosocial working conditions and emotional exhaustion of five measurements from 1,915 healthcare workers participating in the longitudinal study 'the Netherlands Working Conditions Survey- COVID-19' were used. Three subgroups were defined: working with COVID-19 patients, working with other patients, and not working with patients. For each measurement, hospital pressure was determined. Linear mixed models were fitted to analyze the differences across subgroups of healthcare workers.

Results:

Healthcare workers working with patients, in particular COVID-19 patients, had more unfavorable psychosocial working conditions than those not working with patients. Psychosocial working conditions deteriorated among those working with patients compared to pre-COVID-19, but no changes were found for emotional exhaustion. An increasing hospital pressure resulted in improved job autonomy and emotional demands among healthcare workers working with COVID-19 patients, but did not result in differences in other working conditions and emotional exhaustion.

Conclusions:

Psychosocial working conditions deteriorated for healthcare workers working with (COVID-19) patients during the pandemic compared to the situation before the pandemic, while emotional exhaustion did not change in these subgroups. This shows the importance of interventions to improve working conditions of healthcare workers.

Key messages:

- Healthcare workers working with (COVID-19) patients experience unfavorable psychosocial working conditions, which deteriorated during COVID-19. No changes were found for emotional exhaustion.
- An increase in hospital pressure did not further deteriorate psychosocial working conditions.

Abstract citation ID: ckac130.131
Cardiovascular risk in young healthcare workers: results from a cross-sectional study

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Background:

Cardiovascular diseases represent the main cause of mortality worldwide. While cardiovascular risk (CVR) has decreased in grown adults and elderly in the last years due to innovative therapies and prevention, it seems to be rising among young adults. The aim of our study was to map the 10-year CVR in healthcare workers (HCWs) at the teaching hospital Policlinico Umberto I of Rome and identify possible determinants in order to design and implement preventive strategies.

Methods:

A cross-sectional study was carried out between January 2019 and July 2020. 525 HCWs aged 20-40 years were recruited. All participants underwent, after informed consent, medical history collection, physical examination and blood tests. CVR was measured using Framingham Risk Score (FRS) and CUORE score (CVR score developed by the Italian National Institute of Health). Univariate, bivariate and multivariate analysis were performed.

Results:

CVR evaluated with FRS correlated positively with age ($\beta = 0.104$, $p < 0.001$), being a shift worker ($\beta = 0.06$, $p = 0.037$), and negatively with female gender ($\beta = -0.757$, $p < 0.001$). No differences were found between being a doctor or a nurse. CVR evaluated with CUORE score correlated positively with age ($\beta = 0.698$, $p < 0.001$), and negatively with female gender ($\beta = -0.332$, $p < 0.001$) and being a doctor ($\beta = -0.220$, $p < 0.001$). Inferential analysis showed low correlation between FRS and CUORE Score ($R2 = 0.340$).

Conclusions:

Our study demonstrates that females have a lower CVR among HCWs. On the contrary, 15% of male HCWs show a CVR above the average. FRS and CUORE score indicate that advancing age determines an increase in CVR. There is a low correlation between the scores used, in fact CUORE score underestimates the CVR of shift workers while it is known that this particular category is at higher risk.

Key messages:

- Some of the HCWs have higher risk of cardiovascular events despite their young age. Further research is needed in order to design appropriate prevention strategies.
- FRS is more accurate in the prediction of CVR among HCWs compared to CUORE score.

Abstract citation ID: ckac130.132
Occupational hazards and early retirement: German National Cohort (NAKO) baseline distributions

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Background:

Despite measures to ensure occupational safety, harmful workplace conditions that negatively impact worker health persist. The baseline assessment of the German National Cohort (NAKO) provides a basis for determining the prevalence of occupational hazards and early retirement (due to health reasons).

Methods:

From 2014 to 2017, the NAKO examined 205,141 participants aged 20-69 years at 18 study centers across Germany. Working participants were asked about exposure to airborne particulates, occupational noise, evening and night work, sick days, presenteeism, and personal safety equipment use (respiratory masks, hearing protection). The assessment also included questions on retirement. We examined the distributions descriptively.

Results:

A total of 84.2% (n = 172,766) participants were ever employed. Of these participants, 7.9% reported ever working in a job with dust or air particulate exposure where a respiratory mask was required for at least one year. However, nearly one-third (31.6%) of the particulate-exposed workers reported not having worn a mask. 11.4% worked at least a year in a job that required hearing protection, but 27.2% of noise-exposed workers did not comply with this safety measure. Over half of the workers sometimes worked between 6 and 10 pm, and 18.7% sometimes worked at night (11 pm to 6 am) in the last three months. On average, participants used 10.5 sick days in the previous year, and the 12-month prevalence of going to work sick at least one day (presenteeism) was 64.9%. Nearly one-fourth (24.4%; n = 9043) of retirees reported early retirement due to health reasons.

Conclusions:
Hazardous working conditions were common, and there was only partial compliance with the use of available personal safety equipment and measures. The NAKO provides a basis for examining the distribution of occupational exposures in Germany, and future prospective data will permit an evaluation of the effectiveness of preventative regulations.

Key messages:
- The NAKO cohort provides essential information on the prevalence of hazardous working conditions in Germany.
- In the future, trend observations from the prospective data can help evaluate the efficacy of preventive regulations.

7.R. Health promotion interventions

Abstract citation ID: ckac130.133

This abstract has been withdrawn

Abstract citation ID: ckac130.134
Psychometric Properties of the Turkish Version of the Coronavirus-Related Health Literacy Scale

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Background:
This study aims to assess the validity and reliability of the Coronavirus-Related Health Literacy Questionnaire adapted to Turkey and examine the levels of coronavirus-related health literacy among the adults.
Methods:
This cross-sectional study was carried out in Turkey. The tools were applied to a total sample population of 452 people. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were calculated to determine the construct validity of the questionnaire with the IBM SPSS Amos program version 24.0.
Results:
The validity and reliability analyses of the Coronavirus-Related Health Literacy (HLS-COVID-Q22) questionnaire were adapted to Turkish. Internal consistency was very high ($\alpha = 0{,}963$) and construct validity suggests a sufficient model fit, making HLS-COVID-Q19 a feasible tool for assessing coronavirus-related health literacy in population surveys. The findings show that the questionnaire is a valid and reliable tool consisting of 19 items and 3 subdivisions. The mean coronavirus-related health literacy score of the participants was found to be 2.92 (±0.51), meaning that it was on average. The coronavirus-related health literacy level of 18.8% of the participants was found to be 'inadequate' while 37.8% had 'problematic' and 43.4% 'sufficient' health literacy. The HLS-COVID-Q19-TR scores of those in the young age group (18-29 years old), married, employed, university graduates, and vaccinated against COVID-19 were found to be higher, and a statistically significant difference was found ($p = 0.049$, $p = 0.009$, $p = 0.029$, $p = 0.012$ and $p = 0.051$, respectively).
Conclusions:
The results of the research reveal that the HLS-COVID-Q19-TR is a valid and reliable tool. In this study, more than half of the participants were found to have "inadequate" or "problematic" coronavirus-related health literacy levels. For this reason, studies aimed at improving society's coronavirus-related health literacy should be conducted.
Key messages:
- There is now a valid tool to assess the Covid 19 health literacy level of individuals in Turkey. It will contribute to the determination of Covid 19 health literacy level in Turkey.
- An adequate level of health literacy helps people make informed decisions by combating misinformation about COVID-19 and supporting individuals' self-management.

Abstract citation ID: ckac130.135 Coronavirus-related Health Literacy in elderly and adult population during COVID pandemic in Italy

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Background:

The COVID-19 pandemic caused an overabundance of valid and invalid information rapidly spread via traditional media, by internet and digital communication. Health Literacy (HL), as the ability to access, understand, appraise, apply health information, is fundamental for finding, interpreting, correctly using COVID-19 information.

Methods:

In 2021, in the framework of the participation to the WHO M-POHL (Measuring Population and Organizational Health Literacy) network, a survey was conducted in a representative sample of the Italian general population aged 18+ years (N = 3,500). The validated HL questionnaire included coronavirus-related HL (HL-COVID, 16-items), general HL, sociodemographic characteristics, risk factors, lifestyles sections. For the HL-items, a 4-point Likert scale was applied: very easy, easy, difficult, very difficult. HL-COVID levels were defined as Good: very easy+easy>81.3% (more than 12 of 16 answers); Sufficient: 50.0%<very easy+easy < = 81.3% (9-12 of 16 answers); Limited: very easy+easy < = 50.0% (fewer than 9 of 16 answers). Elderly were responders aged 65+ years, the remaining ones were defined as adults. Ordinal Logistic Regression analysis was performed to assess the association of HL-COVID with sociodemographic characteristics (sex, age-group, educational level, financial deprivation).

Results:

Good HL-COVID prevalence was lower in elderly than in adults (44.8% vs. 51.0%, p-value = 0.001); the opposite for both sufficient (22.8% vs. 19.9%) and limited (32.5% vs. 29.1%) levels, but not statistically significant. The odds of a low HL-COVID (sufficient/limited) increased by 31% in the elderly and by 50%, 92%, and almost triple in persons with a low, considerable, and severe financial deprivation level, respectively.

Conclusions:

The COVID-19 pandemic highlighted the need to improve HL and to prepare the general population for future emergency and non-emergency situations, confirming that HL can be considered a social vaccine.

Key messages:

- Low coronavirus-related HL level is mostly associated to elderly and to increasing deprivation level.
- The COVID-19 pandemic confirmed that Health Literacy can be considered a social vaccine.

Abstract citation ID: ckac130.136 Participation in prevention measures during the corona pandemic in Germany in 2020/21

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Background:

The availability and use of preventive measures such as diet courses, sports groups, and counselling services were hindered by containment measures set by the German government and local authorities to reduce the spread of the COVID-19 pandemic. Regulations on contact restriction, closure of sport and leisure facilities made it difficult to use prevention programs in 2020 and 2021. So far, no information is available to what extent the participation of the population in prevention programs has changed as a result of the pandemic and whether there are group differences regarding socio-demographic characteristics.

Methods:

We used standardized telephone interviews of the adult German-speaking population to ask for changes in the participation in prevention measures in the last 12 months as a result of the corona pandemic. The data were collected between 17.3.2021 and 18.08.2021 in four cross-sectional surveys and is representative of the population aged 18 years and older in Germany. Analyses of the weighted and pooled data were conducted for n = 3,998 individuals by gender, age and education.

Results:

Almost one third of the respondents reported a lower use of programs (28.3%). An unchanged use of the programs was stated by 6.5%, a higher use by 2.1%. 63.2% said they did not use such programs. More women (33.6%) than men (22.7%) reported reduced pandemic-related use ($p < 0.0001$). For women, we observed a difference between age and education groups, but not for men: Lower participation was reported by a higher proportion of older than younger women ($p < 0.0001$). More women with high education reported an increased use than ones with low education ($p = 0.003$) (preliminary results).

Conclusions:

The observed differences indicate to different barriers to use prevention measures during the pandemic, especially for women. To promote equal opportunities, resilient structures of prevention and health promotion should be built for future crises in advance.

Key messages:

- The use of prevention measures was seriously reduced by the corona pandemic.
- To be prepared for further crises, concrete barriers to use prevention programs under crisis conditions should be identified and addressed through public health actions.

Abstract citation ID: ckac130.137 Predictors of physical activity and smoking among German teachers during the SARS-CoV-2 pandemic

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Background:

The SARS-CoV-2 pandemic has influenced the social and health-related behavior due to significant changes and constraints in the professional and private life. Especially in the school context, there were considerable changes, which may have promoted positive and negative health behaviors. Therefore, the aim of our study was to identify the predictors of physical activity and smoking of teachers during the SARS-CoV-2 pandemic.

Methods:

In March 2021, a nation-wide online survey was conducted among teachers in Germany. A total number of 31,089 participants entered analysis. Data on smoking and physical activity as well as sociodemographic, workplace-related, psychological, SARS-CoV-2-related, and health-related items were collected using established instruments and if necessary self-developed items. Two binary logistic regressions with block wise inclusion of the different variable groups were performed to predict physical activity and smoking.

Results:

Among all surveyed teachers, 70.1% did not comply with the WHO recommendation of being physically active for at least 150 minutes per week and 13.9% reported to smoke. The regression analyses revealed significant predictors for physical activity (e.g., time requirement) and smoking (e.g., work schedule).

Conclusions:

Recommendations to improve teachers' health can be derived from the predictors for physical activity and smoking that were identified in our study. Given the alarming result that more than two thirds of the teachers did not comply with the WHO recommendations, a special focus should be placed on improving physical activity, as this is a crucial factor for somatic and mental health.

Key messages:

- Teachers in Germany showed alarmingly low compliance regarding the WHO recommendations on physical activity during the pandemic.
- To improve teachers' health, it is important to take into account significant predictors of health behavior when planning interventions.

Abstract citation ID: ckac130.138
Domestic violence in indian women: status of husbands' alcohol consumption as a determinant factor

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Background:

Domestic violence continues to be a major public health issue that affects millions of individuals worldwide. According to the 2015-2016 India National Family Health Survey, 33% of married women had been victims of spousal physical, sexual, or emotional violence. It was also revealed that spousal abuse differs depending on the level of the husband's alcohol consumption. In this case, determining the link between this consumption and domestic violence is critical.

Methods:

The effects of husbands' alcohol use on the occurrence of domestic violence and associated risk factors were investigated using data from the 2015-2016 India Individual Record Database (DHS) A binomial logistic regression model was used for the analysis.

Results:

62554 married women aged 15 to 49 were chosen for this study, of which 31.2% have experienced some form of marital violence. Women with husbands who drink alcohol account for 31% of the sample, with 49.5% of those committing domestic violence against their wives. In a multivariate analysis, women whose spouses drink have a 3.11 times higher chance ($p < 0.01$; adjOR = 3.11, 95%CI 3-3.23) of experiencing domestic violence than women whose husbands don't drink.

Conclusions:

The effect of the husband's alcohol use on the occurrence of domestic violence can be used to guide evidence-based targeted intervention.

Key messages:

- Domestic violence is a public health issue with potential for targeted intervention.
- Targeted interventions in husbands' alcohol consumption of women who suffer domestic violence might guide useful interventions to address this problem.

Abstract citation ID: ckac130.139
An interdisciplinary intervention for health prevention and promotion in a Roman neighborhood

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Influencing behavioral patterns through primary prevention, possibly addressing more risk factors at a time, is the most effective means to tackle cardiovascular diseases. Many interdisciplinary prevention activities have been coordinated by community nurses outside of specialist centers, resulting in a more effective control of risk factors. Our study aims at describing the impact of an 18-month prevention and promotion, interdisciplinary intervention on lifestyle habits and cardiovascular risk. From December 2018 to May 2020, patients were recruited by 4 General Practitioners (GPs) in the Roman neighborhood of Torresina and received nutritional, physical and psychological counselling to learn healthy lifestyles. Until May 2020 patients had to self-manage their new healthy habits, but during this phase the SARS-CoV-2 pandemic broke out. Patients were assessed at baseline, 6, 12 and 18 months by a nutritionist, a physiotherapist, a psychologist, the 4 GPs and community nurses, and the cardiovascular risk score (CRS) was estimated at every examination. 76 patients were included, with a mean age of 54,6 years. Mean CRS showed a significant reduction between baseline and 12 months (from 4.9 to 3.8, $p < 0.001$), but this trend was not maintained at 18 months. As for variables included in the calculation of the cardiovascular risk score, both total cholesterol and systolic blood pressure significantly decreased at 6 months of follow up (respectively, from 211.1 to 192 ($p < 0.001$) and from 133.1 to 123.1($p < 0.001$)). Nontheless, the reduction was maintained in the remaining points in time only for systolic blood pressure. Our interdisciplinary educational intervention in a primary care setting resulted in a CRS improvement at 12 months, but this changes where not maintained at 18 months. Community nurses were facilitators in improving health outcomes and patient's satisfaction in the described primary care setting.

Key messages:

- Our interdisciplinary educational intervention in a primary care setting resulted in a CRS improvement at 12 months, but this changes where not maintained at 18 months.
- Community nurses are facilitators in improving health outcomes and patient's satisfaction in the described primary care setting.

Abstract citation ID: ckac130.140
Health literacy in higher education students: findings from a Portuguese study

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Background:

Health literacy (HL) concerns the knowledge and competences of people to meet the complex demands of health in modern society. It is essential for health promotion, disease prevention and healthcare. Young adults can perform a very important role in taking a more active role in managing and protect their health, so this study aimed to identify the HL levels in the population of higher education students, according to the European Health Literacy Survey (HLS-EU-PT) and to evaluate its association with social and academic determinants.

Methods:

A quantitative, observational, and cross-sectional study was carried out based on an online survey disseminated in Portuguese universities. Data were analysed using binary logistic regression, adjusted for age, income, parents' education, gender, and chronic disease report.

Results:

In total, 4801 students were surveyed, 76% female. Of those, 44% revealed a problematic or inadequate level of HL. Those students with higher income levels (OR (95% CI), OR = 4.5 (3.4; 5.9) and whose parents had higher education levels (OR = 1.3(1.1; 1.5) had higher odds of achieving sufficient or excellent levels of HL, even after adjusting for confounders. In what concerns academic determinants, data revealed that HL tends to be sufficient or excellent among those students from health-related courses (OR = 2.0 (1.6; 2.5). In the subgroup of students from non-health-related courses, it was found that HL levels do not differ in 1st year and last year's students. However, in students from health-related courses, data revealed that a last yeaŕs students had higher odds of having sufficient or excellent HL levels compared to a 1st-year student (OR = 1.7 (1.4; 2.2).

Conclusions:

This study reveals low HL levels and addresses that socio-economic and familiar context are determinants of HL in higher education students. Future intervention studies are needed, focused on these determinants so that adequate levels of HL are achieved in higher education students.

Key messages:

- Almost half of the higher education students had inadequate or problematic levels of health literacy.
- Both socioeconomic, familiar, and academic contexts are significantly associated with health literacy levels among higher education students.

Abstract citation ID: ckac130.141
A qualitative study on newly settled migrants' perceptions of civic and health orientation in Sweden

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Background:

Migrants face structural, socio-political barriers in their resettlement processes that affect their health. Migration also impacts resources such as social capital and health literacy that are of importance for health and integration in society. Hence, there is a need for health promotion in the post-migration phase. The aim of the study was to explore participants' perceptions and experiences of civic orientation with added health communication.

Methods:

Six focus group discussions were performed with 32 men and women. Two were held in Arabic, two in Farsi and two in Somali, with native speaking moderators. Participants were recruited from civic orientation classes in the county of Stockholm. An interview guide with semi-structured questions was used. The data were analysed using a method for content analysis of focus group discussions.

Results:

Three main categories were identified: 'The course gives valuable information but its delivery needs adjustments', which includes that the civic and health orientation is valuable and needed earlier, during asylum phase, and that planning and course content need adjustments. 'The health communication inspired participants to focus on their health', includes that the health communication was useful and inspired uptake of healthier habits. 'Participation in the course promoted independence and self-confidence', which includes that the course gave insights into society and values in Sweden and promoted independence and new social contacts.

Conclusions:

This study adds knowledge of the users' perspectives on the potential of civic orientation to promote health and integration of newly settled migrants, describing ways in which civic orientation with added health communication prompted health and empowerment. However, the content and delivery of the course needs adjustment to better fit the migrants' life situations and varying pre-existing knowledge.

Key messages:

- The civic and health information is needed early in the resettlement phase.
- Participation in the course promoted health awareness, independence and self-confidence.

Abstract citation ID: ckac130.142
Evaluation of culturally sensitive educational video for informed screening decisions among migrants

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Background:

In the Netherlands, especially Turkish- and Moroccan-Dutch women show low cervical cancer screening participation and limited informed decision-making in this regard. To meet the needs of these women, a culturally sensitive educational video was developed. The objective was to evaluate the effect of the video on informed decision-making regarding cervical cancer screening participation among Turkish and Moroccan women aged 30-60 years in the Netherlands.

Methods:

Initial respondents were recruited via several social media platforms and invited to complete an online questionnaire. Following respondent-driven sampling, respondents were asked to recruit a number of peers from their social network to complete the same questionnaire. Respondents were randomly assigned to the control condition (current information brochure) or intervention condition (brochure and video). We evaluated the added effect of the video on knowledge, attitude, intention, and informed decision-making using intention-to-treat analyses.

Results:

The final sample included 686 Turkish- and 878 Moroccan-Dutch women. Of this sample, 793 were randomised to the control group (350 Turkish and 443 Moroccan) and 771 to the intervention group (336 Turkish and 435 Moroccan). Among Turkish-Dutch women, 33.1% of the control respondents and 40.5% of the intervention respondents consulted the brochure (not statistically significant). Among Moroccan-Dutch women, these percentages were 28.2% and 37.9%, respectively (P = 0.003). Of all intervention respondents, 96.1% (Turkish) and 84.4% (Moroccan) consulted the video. The video resulted in more positive screening attitudes among Moroccan-Dutch women, in comparison to the brochure (74.3% versus 68.4%, P = 0.07).

Conclusions:

Our short, easily implementable video resulted in more positive screening attitudes in Turkish- and Moroccan-Dutch women and can thus contribute to informed cervical cancer screening decisions.

Key messages:

- Audio-visual interventions lead to a greater reach and impact in informed decision-making among immigrant women, compared to the currently implemented textual information materials.
- Culturally sensitive educational videos, tailored to the needs of vulnerable populations, contribute to informed decision-making and participation in European preventive healthcare programmes.

Abstract citation ID: ckac130.143

A systematic review of the effectiveness of community interventions to improve parent health literacy

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Background:

Many community-based interventions have been developed to increase parent/caregiver health literacy, yet no systematic review of their effectiveness has been published. Therefore, the aim of this systematic review was to examine the effectiveness of community-based health literacy interventions in improving the health literacy of parents/caregivers.

Methods:

A systematic review of six databases; MEDLINE, PsycINFO, CINAHL, Cochrane Library, Embase, and Education Source were conducted to identify relevant articles. Risk of bias were assessed using version two of the Cochrane risk of bias tool for randomised controlled trials or the Cochrane Collaboration Risk of Bias in Non-Randomised Studies of Interventions. The study findings were grouped and synthesised following the Synthesis Without Meta-analysis framework.

Results:

Eleven community-based health literacy interventions for parents/caregivers were identified. Study design included randomised controlled trials (n = 4), non-randomised studies with comparison group (n = 4), and non-randomised studies without a comparison group (n = 3). Interventions were delivered digitally, in person or a combination of the two. The main findings of the studies showed some potential for both in person and digital interventions to increase parental health literacy. The risk of bias was high in over half the studies (n = 7) Studies were heterogeneous preventing a meta-analysis.

Discussion:

Although no definitive conclusion of the effectiveness of community-based interventions can be drawn there are suggestions of improvement in many of the studies included in this review. The review has brought into question whether the health literacy measurement tools used met the needs of assessing the interventions outcomes. When comparing the cost and resources needed for digital with in person interventions, the findings of this review have implications for both practise and research.

Key messages:

- Methodologically stronger primary research, informed by theory, is needed to capture the components of effective health literacy intervention for parents.
- Researchers in the field of health literacy need to consider the suitability of using screening tools to measure change in health literacy post intervention.

7.S. Health workforce

Abstract citation ID: ckac130.144

"Laboratorium Repository": a training tool for the Healthcare Workforce

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Background:

The COVID-19 pandemic highlighted the need to redefine the healthcare workforce (HCW) competencies to face future emergencies linked to emerging infectious diseases, environmental, climate and social crises. As recently stated by WHO, there is a need to identify standards for education and competencies training for HCW in emergency and preparedness (E&P). The Italian National Institute of Health, in agreement with the deliberation of the G20 Health Ministers under the Italian Presidency, is developing an educational program named "Laboratorium" which includes a free access digital repository aimed to share selected documents and tools at the International Public HCW (PHCW) to increase the competencies in E&P response.

Objectives:

A range of web domains selected according to their reliability was monitored using a keyword search tool for any relevant material published from February 14th up to April 28th, 2022. We included any publications, training materials, epidemiological data, initiatives, and communication items that addressed the topic of interest. Each item was submitted for approval by a scientific board and, if appropriate, classified by typology, language, topic, and country before publication.

Results:

To date, out of 6197 items, 418 fulfilled the inclusion criteria. For the type of content, we included guidelines/recommendations (75), epidemiological data (58), websites (34), online courses (15) and books (16). PHCW was the most representative target group (361), followed by other stakeholders (127), hospital practitioners (90), primary care (87). The most represented topic was infectious diseases/SARS-CoV-2 (277) followed by vaccines (88), emergency interventions (34), emerging diseases (17), policies (26), public health preparedness (32).

Conclusions:

Future training for PHCW should be designed with a modular approach with different levels of usability. The Laboratorium Repository provides a core of items for learning according to one's training needs

Key messages:

- The Laboratorium repository offers to PHCW a tool for updating their emergency and preparedness competencies.
- This repository has a user-friendly interface, accessible also through mobile devices.

Abstract citation ID: ckac130.145
Mental well-being of healthcare workers in two hospital districts with differing COVID-19 incidence

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Objectives:

Healthcare systems and healthcare workers have been under considerable strain during the COVID-19 pandemic in many countries. Our study aimed to assess the mental well-being of Finnish healthcare workers from two hospital districts with differing COVID-19 incidence rates (HUS, Hospital district of Helsinki and Uusimaa/Helsinki University Hospital; and Kymsote, Social and Health services in Kymenlaakso region) during the first wave of the COVID-19 pandemic in spring 2020.

Material and methods:

The data of this prospective survey study was collected during summer 2020, and a total of 996 healthcare workers (HUS N = 862, Kymsote N = 134) participated. Mental health symptoms were self-reported, and symptom criteria followed ICD-10 classification, excluding duration criteria. We divided participants into symptom categories "often/sometimes" (those who met the diagnostic criteria), and "rarely/never" (those not meeting the diagnostic criteria), and compared these groups to sociodemographic factors and factors related to work, workload, and well-being.

Results:

Despite differences in COVID-19 incidence, the degree of mental health symptoms did not differ between HUS and Kymsote districts ($p = 1$). A significant relationship was found between self-reported diagnostic mental health symptoms and experiences of insufficient instructions for protection against COVID-19 (in HUS cohort, $p < 0.001$), insufficient recovery from work ($p < 0.001$), and subjective increased workload ($p < 0.001$).

Conclusions:

These findings show the importance of sufficient, well-designed instructions for protection from SARS-CoV-2 for healthcare workers, indicating their need to feel safe and protected at work. The workload of healthcare workers should be carefully monitored to keep it moderate and ensure their adequate recovery from work. Sufficient control of the epidemic to keep the burden of the healthcare system as low as possible is essential for healthcare workers' well-being.

Key messages:

- Workload of healthcare workers should be carefully monitored during a pandemic to keep it moderate and ensure adequate recovery in all regions, regardless of the local disease burden.
- The importance of sufficient, well-designed instructions for healthcare workers and their need to feel safe and protected at work.

Abstract citation ID: ckac130.146
Interprofessional collaboration in Austrian primary care: an analysis of requirements and challenges

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Background:

Primary health care (PHC) is built on interprofessional collaboration (IPC) between health and social professions. According to international frameworks, interprofessional communication, client-centred care, collaborative leadership, role clarification, team functioning and interprofessional conflict resolution are essential for IPC. As of April 2022, 36 PHC units were registered in Austria. This study aims to explore the perspectives of health care professionals on IPC in PHC in Austria.

Methods:

Between October 2021 and March 2022, 15 guided group interviews were conducted with a total of 57 representatives of the professional groups biomedical analytics, dietetics, medical training therapy, medicine, midwifery, nursing, occupational therapy, office assistance, orthoptics, pharmacy, physiotherapy, psychotherapy, radiology technology, social work and speech therapy. The data was analysed using qualitative content analysis according to Mayring.

Results:

Interdisciplinary counselling and prevention services, monitoring, acute interventions and treatment of chronic diseases are seen as fields of action for increased IPC in PHC. Interprofessional relationships are established during joint home visits and weekly multiprofessional meetings, when communication is collegial. Challenges mentioned for the IPC in PHC were i.e. role ambiguity, lack of time for networking or unclear legal regulations. Taking over responsibility as well as the ability to delegate and to deal with conflict, a sense of justice and willingness to accept criticism are core competences required for IPC in PHC.

Conclusions:

The interviewees aim to get more involved in PHC, but not all feel optimally prepared for the necessary collaboration in this setting. In their view, specific training content, focusing on the unique structure of PHC, the roles of all the involved professional groups and conflict management, is necessary to successfully shape IPC in the interest of the clients.

Key messages:

- Austrian health care professionals desire specific training content for interprofessional collaboration in primary health care.

- Austrian health care professionals see opportunities but also challenges for their professional group in primary health care.

Abstract citation ID: ckac130.147
Dealing with staff diversity in German hospitals: A comparative analysis of doctors and nurses

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Background:
Germany is increasingly recruiting foreign healthcare staff due to the shortage of skilled workers. This diversity of professional and cultural backgrounds poses a challenge to everyday life in inpatient care. Previous studies have focused on the renegotiation of professional identities and competencies in nursing or medicine. In contrast, this study sheds light on group-specific mechanisms through a comparative analysis: How do doctors and nurses deal with diversity in the workplace? Where do profession-specific differences emerge and what does this mean for future interventions?
Methods:
Eight group discussions (June 2019 to October 2020) were conducted with groups of doctors and nurses with and without a migration background in four hospitals in two federal states in Germany; including 22 nurses and 10 doctors (n = 32). The data were analysed using the documentary method to examine professional meaning-making processes. The results were validated intersubjectively.
Results:
The respective handling of diversity in the workplace is influenced by different professional group identities. The situation is precarious for nurses with a migration background - especially for those with an academic degree, as nursing is still an apprenticeship profession in Germany. In the medical profession, on the other hand, diversity does not lead to significant controversies, even if cultural differences are discussed.
Conclusions:
Dealing with diversity is negotiated within professional groups. As nursing or medical 'communities of practice' (E. Wenger), these have a mediating role through which they can mitigate institutional and individual barriers to the integration of migrants in the workplace.
Key messages:
- Physicians and nurses need more specific, iterative cross-occupational and cross-cultural education.
- Management should support in accommodating different expectations and abilities.

Abstract citation ID: ckac130.148
Diversity Competence in Healthcare: A minimal definition

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Background:
Health professionals face a variety of professional challenges in today's plural societies. Sciences propose a specific skill set can help to meet those challenges. Various terms and sometimes extensive concepts are provided for diversity competence. The related learning processes are time-consuming and demanding to implement in hectic clinical realities, so that a basic, easy to deplore training package of essential skills would be desirable in order to enable health professionals to take equally good care of all patients including migrants and minorities.
Methods:
A two-round Delphi study was conducted to prioritise teaching objectives; 31 clinical and academic migrant health experts from 13 European countries participated. A round of open questions was followed by a standardised rating round of 65 items. Data was descriptively analysed (m, M, SD) and consensus defined as 80% of experts assigning high importance to a competence.
Results:
The process identified essential competences as well as high priority cognitive, affective and pragmatic competences, leading to a minimal definition of diversity competence for health professionals which includes respectfulness, empathy, diversity awareness and reflection, knowledge on social determinants as well as ethics and human rights; Further skills are: being able to listen, observe and communicate understandably, including professional usage of interpreters, shared decision-making and individual, need-based care.
Conclusions:
The panel reached consensus on many of the competences. In general, attitudes and practical skills were considered essential. Basic trainings that meet the needs of professionals and help them cope with everyday challenges can be designed on the grounds of these findings.
We provide a working definition of 'diversity competence of health professionals' for scientific exchange and investigation and propose the conscious use of a 'diversity' instead of 'intercultural'' terminology.
Key messages:
- In the light of various diversity and cultural competence definitions, we need to specify essential competences for health workers to meet the needs of diverse patient populations.
- Experts' prioritisations of key diversity competences can be used to prioritise teaching objectives to train health professionals to take equally good care of all patients.

Abstract citation ID: ckac130.149
General paediatrics: motives and concerns of medical students on the career pathway

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Child public health is dependent on preventive care provided by primary care physicians for children and adolescents. Nevertheless, their accessibility in Czechia is exceedingly endangered by their ageing (the average increased by 1.5 years to 57.5 in eight years). This study aims to (1) identify medical students who opt for paediatric residency and explore the effect of undergraduate training on their decision, (2) detect factors that would persuade them to become practitioners, and (3) factors influencing their choice of a medical facility. The analysis builds on our survey's unique data exploring students' views on training and occupational preferences. Students in the fourth to the sixth year of all medical faculties in Czechia were addressed in two waves (2020 and 2021) of this cross-sectional study, resulting in 2,283 complete questionnaires (response and coverage rate of

25.3%). Out of these, 306 respondents have already decided on or shortlisted paediatrics as a residency speciality, with a strong over-representation of women (85.3%). The evaluation of undergraduate paediatric training's quality (in terms of its organisation, number of students and teachers' feedback) is mildly correlated with considering the paediatric residency (Cramer's V < 0.1). Fewer administrative obligations represent the most frequent factor necessary to lean towards primary care, reported by 54% of respondents preferring hospital paediatrics (or yet undecided); a financial entry bonus is less convincing (only 27% of them). To attract graduates, medical facilities need to provide favourable conditions for residency (good supervisor, employer's support in the training); financial offers might not be an adequate decoy in less-attractive areas. This survey sheds light on medical students' views and decision-making processes, which are essential to consider in the public discussion on the future accessibility of primary care for children and adolescents.

Key messages:

- To captivate graduates, medical facilities need to provide favourable conditions for residency (good supervisor, employer's support in the training); financial offers might not be sufficient.
- Fewer administrative obligations laid upon primary care physicians are necessary to attract medical students to general paediatrics to reverse the ageing trend of practitioners in Czechia.

Abstract citation ID: ckac130.150
Nurse understaffing and short work experience as predictors of healthcare-associated infections

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Background:

Healthcare-associated infections (HAIs) are a serious risk factor for hospital patients leading to more than 90 000 deaths each year in European countries. It has been evaluated that 7% of patients in European acute care hospitals acquire an HAI, and that a large part of cases could be prevented. Good hand hygiene is central in preventing HAIs, which may be compromised under high work pressure. The aim of this study was to analyse the associations between nurse understaffing and short work experience with the risk of HAIs at patient-level. Prior evidence on this topic remains inconclusive due to a reliance on imprecise measurement of these exposures.

Methods:

We utilized administrative data on employees' working hours and patient records from one hospital district in Finland from years 2013-2019. The data included in total 281,672 inpatient periods. We used mixed-effects survival analyses to predict the overall risk of HAIs, and four types of HAIs: bloodstream, Clostridium difficile, surgical-site and pneumonia. To consider the incubation time, exposure to nurse understaffing and short work experience were measured in preceding days in moving time windows when the patients were in the hospital.

Results:

Preliminary results showed that exposure to nurse understaffing within two days, measured as low nursing hours relative to planned hours, was associated with increased risk of HAIs (hazard ratio was 1.23, 95% CI 1.05-1.45). Additional analyses showed that this risk was especially pronounced in surgical-site infections, which were also carefully monitored in the hospital district. We did not find associations between exposure to short work experience among nurses and HAI risk.

Conclusions:

This study showed that nurse staffing below planned levels was associated with an increased overall risk of HAIs, particularly surgical-site infections, among patients. Adequate levels of nursing staff in hospitals may be important for preventing HAIs.

Key messages:

- Nurse understaffing may increase particularly the risk of surgical-site infections among patients.
- Nurse understaffing can be approximated based on nursing hours relative to planned hours.

Abstract citation ID: ckac130.151
Training needs assessment of European healthcare workers on vaccinology and vaccine acceptance

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Background:

Healthcare workers (HCWs) are at the frontline of interaction with those that are taking decisions around vaccination. They need adequate training. The general aim of this systematic review is to assess HCWs' training needs on vaccinology and vaccine acceptance. This work was performed for the European Centre for Disease Control (ECDC) under the specific contract No 1ECD.12108 ID.12922 implementing the framework contract number ECDC/2021/005.

Methods:

The search was performed using MEDLINE, Scopus and Google Scholar databases in February 2022. The following inclusion criteria were used: date (from 01/01/2011 to 24/02/2022); language (English, Italian, Portuguese, Spanish, French and Romanian); geographic location of the study (Europe). Appraisal tool for Cross-Sectional Studies (AXIS checklist) was used to assess the methodological quality of the included papers.

Results:

The scientific literature search retrieved 640 results on PubMed, 556 on Scopus and 15 on Google Scholar. In total, 1211 records were identified. After the duplicate removal and the title/abstract assessment, 132 publications were assessed for eligibility. Finally, after the full-text assessment, only 25 articles were included. As regards for the quality assessment, all studies were judged of moderate-good quality. The majority of studies stressed the need to deepen general knowledge of vaccine preventable diseases, vaccine efficacy, vaccination schedule and adverse effects of vaccines.

Conclusions:

Considering their role in the community, especially as source of information and trust for vaccine acceptance, educational initiatives in vaccinology and vaccine hesitancy should be prioritized for HCWs, aimed at increasing their knowledge, awareness, and attitudes. An important heterogeneity of educational backgrounds, activities performed and training needs of the HCWs involved in vaccination at European level was one of the main critical issue to be addressed for future actions.

Key messages:

- HCWs need appropriate training and constant updates on immunization.
- General knowledge of vaccine preventable diseases, vaccine efficacy, vaccination schedule and safety are main HCWs' learning needs.

Abstract citation ID: ckac130.152
The role of 'satellite crash training' in capacity building for migration health out of Europe

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Background:

In spite of the significant shortage of migration health professionals in and out of Europe, higher education institutions are not really likely to accept WHO repeated calls for developing/ strengthening 'migrant sensitive' health care. Following the Syrian crisis in 2015/16, and now in Ukraine, millions of refugees have left their home country.

Objectives:

University of Pécs Medical School (UPMS) - based on its broad experience in migration health training -, has developed a 'crash training' package, easy to implement in other higher education institututions.

Results:

Within the frame of the program of the Hungarian Ministry of Foreign Affairs aiming to increase the migration health capacity in the Jordanian Kingdom, UPMS has established a bilateral cooperation with the Jordanian University in Amman and has offered to implement and monitor a seven-day satellite crash training on migration health.

- The program was developed in a form of 'problem-based learning', aiming to strengthen the self-activity of the students, while solving the task: how to establish a refugee camp addressing the challenge of high and rapid influx of migrants from the region.

- The necessary theoretical background provided by the expert team was set up around the territories as follows: international guidelines and experiences, epidemiological and public health challenges, the role of cultural competence, mental health aspects including the need for 'helping the helpers' as well.

Conclusions:

The program included a pre- and post-test component, aiming to monitor the change in knowledge, attitude, and commitment. Detailed results will be introduced during the presentation.

Key messages:

- Health assistance of migrants is a key public health as well as economnical interest.
- Experience of institutions on the field of migration health shoulod be utilzed globally.

Abstract citation ID: ckac130.153
Racism-critical self-reflection of professors of public health in Germany

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Background:

In public discourse, universities are rarely understood as places of institutionalized discrimination, but rather as places of enlightenment and intercultural cosmopolitanism (Nghi Ha 2016). Existing studies focus on students' perspectives on institutionalized discrimination. In this context, the critical self-reflection on racism is particularly relevant for people who are in positions of power, as their attitudes and actions have a direct impact on many other people, such as in the case of professors on students, academic and non-academic staff. The study reconstructs to what extent conscious or unconscious attitudes in terms of critical whiteness manifest themselves in the attitudes and, in the actions of professors in health sciences and co-constitute the realities of staff and students.

Methods:

Based on the critical whiteness concept according to Dietze (2009) a reconstructive, qualitative-empirical analysis (Bohnsack 2000) of eight episodic interviews (Flick 2011) with public health professors in Germany was conducted. Attitudes of professors are examined with regard to the critical reflection of their own power position in dealing with employees and students.

Results:

Interviewees have heterogeneous reflective skills and few structurally anchored opportunities for racism-critical self-reflection in their professional environment. The spaces are demanded by students or staff or initiated by themselves, expecting resistance from colleagues. Unconscious racism is sometimes present even with a high degree of reflexivity.

Conclusions:

Criticism of racism must be systematically addressed in schools of public health in order to create spaces for reflection where staff can reflect on and identify their racisms and develop collective action for racism-sensitive teaching and workplace.

Key messages:

- Universities need to address and work on structural racism in their institution. Structures must be the responsibility of the management level and developed participatively with staff and students.
- Spaces of reflection for university staff must be created to enable a continuous confrontation with own (often unconscious) racist actions to develop a racism-sensitive place for work/study.

8.R. Health promotion: innovative approaches

Abstract citation ID: ckac130.154
Physical activity change across retirement by device measured work-related and commuting activity

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Background:

Work-related and commuting physical activity before retirement may contribute to changes in physical activity and sedentary time after retirement, and the aim of this study was to examine these associations.

Methods:

Study population consisted of participants of the Finnish Retirement and Aging study (n = 119). Activity behaviour was measured with GPS and accelerometer devices. The participants provided 637 measurement days before and 557 days after retirement. Work-related physical activity was defined as physical activity accumulated at workplace. Commuting activity was dichotomised based on the speed of trips between home and workplace to active (<20 km/h) and passive (≥20 km/h) commute. Participants were divided into four groups: non-active workers and commuters, non-active workers but active commuters, active workers but non-active commuters, and active workers and commuters. Linear regression analysis with generalized estimating equations were used for statistical analysis.

Results:

The change in physical activity during retirement transition markedly varied by the activity group. Lower work-related activity was associated with an increase in light physical activity and a decrease in sedentary time. Conversely, higher work-related activity was associated with a decrease in light physical activity and an increase in sedentary time, except among those active workers who were active commuters. Particularly the active workers but non-active commuters increased their sedentary time (48 min, 95% Cl 20 to 76) and decreased their light physical activity (54 min, 95% Cl -80 to -29). No statistically significant changes in moderate-to-vigorous physical activity were observed.

Conclusions:

Our results suggest that work-related physical activity is associated with changes in physical activity behavior when retiring. Special attention should be targeted to active workers who are non-active commuters to maintain physical activity and decrease sedentary time after retirement.

Key messages:

- Lower work-related physical activity before retirement was associated with an increase in light physical activity and a decrease in sedentary time after retirement.
- Active workers but non-active commuters showed an increase in sedentary time and a decline in light physical activity after retirement, and might be a suitable group for physical activity promotion.

Abstract citation ID: ckac130.155
Determinants of cigarette and e-cigarette use among youth and young adults-PolNicoYouth study results

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Identifying predictors of e-cigarette use initiation is important for preventing young persons from becoming smokers. Because of the addictiveness, harmful effects but on the other hand attractiveness and fashion for e-cigarettes among young people, teen use of tobacco related products is a significant public health concern. This study evaluated the determinants of susceptibility to e-cigarette use to both e-cigarettes use and traditional cigarettes in secondary school students in Poland. This study examined a sample of Polish youths aged 13-19 (n = 19241) attending 192 schools, 12 on average in each voivodship. Logistic regression and multi-variable logistic regression models were used to calculate crude and adjusted odds ratios. The profile of susceptibility to e-cigarettes use among never e-cigarette users included: pocket money available per month (more than 150 PLN) (OR = 1.7; p = 0.001), 16-17 years old (OR = 1.9; p = 0.001), parental tobacco smoking and e-cigarette usage (OR = 2.0; p = 0.01 and OR = 1.7; p = 0.001 respectively), maternal secondary education (OR = 1.1; p = 0.04) and living in big cities >500 thou. inhabitants (OR = 1.4; p = 0.04). E-cigarette susceptible persons among ever users were similar to never cigarette users in their opinion that e-cigarettes use are less harmful than conventional smoking (OR = 1.6; p = 0.0012) and living with both parents smoking cigarettes (OR = 1.3; p = 0.02). Additionally, the determinants were: female gender (OR = 1.5; p = 0.009) in the age group less than 15 years of age (OR = 1.3; p = 0.007). The results revealed that such basic predictors as: parental smoking and opinion of lower harmfulness of e-cigarettes use are the most important determinants of smoking susceptibility among never or ever e-cigarette users. The intervention should be focused on educating the young people and their parents on the addictiveness and harmful effects of e-cigarette use and smoking.

Key messages:

- Such basic predictors as: parental smoking and opinion of lower harmfulness of e-cigarettes use are the most important determinants of smoking susceptibility among never or ever e-cigarette users.
- The intervention should be focused on educating the young people and their parents on the addictiveness and harmful effects of e-cigarette use and smoking.

Abstract citation ID: ckac130.156
Trust in societal factors and vaccine hesitancy in Western Balkans

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Background:

Countries in the Western Balkans are facing vaccine hesitancy, trying to bring vaccine acceptance and ways to improve it into the focus. Trust in science and institutions, namely political trust, plays an important role and can significantly affects vaccine acceptance.

Methods:

Cross-sectional research was carried out from July to September 2021 in five countries of the Western Balkans (Albania, Bosnia and Herzegovina, North Macedonia, Montenegro and Serbia) and included adult population aged 18 and older (1605 individuals). Convenience sampling was applied using anonymised online questionnaires and Likert scales, shared through online social media, and asking, among others, for trust in societal factors.

Results:

In all countries people had more confidence in health authorities than in political officials. There are no gender differences found in showing trust in societal factors, except in Serbia where women compared to men showed greater trust in health authorities (50.6% vs. 34.4%), as well as in political officials (42.8% vs. 28.2%). The lowest trust in pharmaceutical companies was found in Albania where 34,9% respondents believe that vaccination against COVID-19 is largely promoted by pharmaceutical companies due to financial profits. People who put more trust in societal factors were vaccinated to a greater extent. In Serbia and Albania, the older respondents in general put more trust in societal factors. People who assessed themselves as more religious in Serbia and North Macedonia demonstrated less trust towards societal factors.

Conclusions:

The study demonstrated moderate trust in societal factors in all countries, with greatest trust in health authorities. This implies that health authorities should have a pivotal role, together with physicians in primary health, in promoting vaccination and educating the general public in the Western Balkans.

Key messages:

- Vaccine hesitancy is identified as one of the crucial contributors to the decline in vaccine coverage in the Western Balkans.
- Vaccine hesitancy is associated with the global crisis of trust in science and institutions.

Abstract citation ID: ckac130.157
Development and early results of a comprehensive sexuality education experience in Italian schools

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Background:

Comprehensive sexuality education (CSE) is an integrated approach to sexual health and wellbeing promotion, especially effective when performed in school settings, but it is not included in Italian school curricula. This study describes the creation and early results of a pilot experience targeting students attending 20 lower secondary schools (LSS) in 4 Italian regions within EduForIST project, funded by the Ministry of Health.

Methods:

A literature review and a national survey were used to collect guidelines and best practices in the field of sexuality education (SE), along with focus groups and multisectorial expert consultations. The results informed the development of 4 modules of 2 hours each, addressing: changes in adolescence; emotions and relationships; sexual identities and diversity; sexual consent, pregnancy and sexually transmitted infection (STI) prevention, sexual health services. A final session was dedicated to evaluation.

Results:

The pre-test results referred to 14 classrooms of 5 schools within 2 Regions, for a total of 266 students. A high level of uncertainty was reported, regarding the topics of personal identity development (37,4%), experiencing intense emotions during adolescence (18,1%), the definitions of gender identity, sexual orientation and stereotype (42,1%), STI symptoms (58,7%) and prevention (43,4%). The post-test results were available for 153 students. Pre/post analysis showed an increase of correct answers ($p<.05$) for 12/15 items investigated. A total of 102 students responded to the satisfaction questionnaire, with positive results.

Conclusions:

Preliminary results revealed knowledge gaps and high levels of uncertainty among LSS students. Early pre/post evaluation suggested that the pilot activity was effective in enhancing knowledge and decreasing uncertainty in all domains. Evidence collected through this study will foster awareness among policy makers on the value and urgency of introducing CSE in Italian school curricula.

Key messages:

- School-based CSE is the most effective way to positively impact on young people's behaviour and attitudes towards sexuality. However, it is not yet included in Italian school curricula.
- EduForIST pilot activity represents a first step towards the implementation of an evidence-based approach to sexuality education, to be promoted and implemented equally across Italian schools.

Abstract citation ID: ckac130.158
Health literacy and gender differences in colorectal cancer screening

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Introduction:

Colorectal cancer (CRC) is one of the major causes of death worldwide. Previous research reported differences in screening adherence both by gender and socioeconomic determinants. However, little is known about the extent to which Health Literacy (HL) may affect gender differences in CRC screening rates. Here, we aimed to assess HL levels in both genders and their relations with CRC screening adherence.

Methods:

The study was performed within the Tuscan population sample selected in the Italian Behavioral Risk Factor Surveillance System (PASSI - Progress by local health units toward a healthier Italy) in 2017-2019. Socioeconomic status was measured by education level, occupation, financial status, and nationality, while HL by the Italian version of the 6-items European Health Literacy Survey Questionnaire (HLS-EU-Q6). Multivariate analysis was performed to investigate associations between CRC screening rates, social determinants, and HL.

Results:

Among 4,268 people aged 50-69 years included in PASSI, 64% undergo to CRC screening in the 2 years preceding the interview. No statistically significant differences in screening adherence were found by gender. In the multivariate analysis, the odds of adherence to CRC screening increased in both genders for being aged 60-69 years (Males: OR 1.43, 95% CI 1.12-1.82; Females: OR 1.72, 95% CI 1.37-2.14) and high education level (Males: OR 1.34, 95% CI 1.08-1.66; Females: OR 1.30, 95% CI 1.05-1.60). Males with a poor financial status and females with a low HL level were less likely to undergo CRC screening (OR 0.71, 95% CI 0.57-0.88 and OR 0.68 95% CI 0.49-0.95 respectively).

Conclusions:

Our findings suggest that adherence to CRC screening is associated with HL in females only, while it depends on financial status in males. Therefore, gender specific interventions, tailored on different factors, are needed to increase the CRC screening rates.

Key messages:

- The association between Health Literacy and colorectal cancer screening adherence differs according to gender.
- Gender specific interventions are needed to increase the colorectal cancer screening rates.

Abstract citation ID: ckac130.159
Implementation, home mediators and children's sugary drink consumption - results from DAGIS study

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Background and objectives:

The effectiveness of a health behavior intervention can depend on the extent to which the intervention is implemented; higher degree of implementation (DOI) might associate with larger intervention effects. This study examined whether the parental DOI of an health behavior intervention had an effect on children's consumption of sugar-sweetened beverages (SSB) and was the effect mediated by home factors.

Methods:

the DAGIS preschool intervention was conducted in 2017-2018 in Finland among 3-6-year-olds with valid data from 476 children. At baseline and follow-up parents reported 1) children's SSB consumption in a semi-quantified food frequency questionnaire, 2) availability of SSB at home, parental role modelling of drinking SSB, and norm (parental view on the suitable amount of SSB for children), and 3) DOI: a dichotomized sum variable on several aspects of parental program implementation. In the analyses, high and low DOI were compared to control group. Mediation analysis of the effect of DOI on the change in children's SSB consumption via change in availability, role modelling and norm was conducted with R statistical software.

Results:

High DOI was associated with reduced consumption of SSB (B -27.71, 95% CI -49.05, -4.80). No mediated effects were found. All studied mediators impacted the change in SSB consumption, but the DOI had no effect on the change in mediators.

Conclusions:

Intervention effect on the consumption of SSB was only found in the high DOI group, which supports the importance of assessing intervention implementation. Since the found effect was not mediated by the studied mediators, other possible mediators should be examined, as understanding intervention mediators is crucial in developing successful interventions.

Key messages:

- The consumption of SSB reduced only among children whose parents implemented the intervention to a large degree.
- The effect was not mediated by availability of SSB, parental role modelling, or norm.

Abstract citation ID: ckac130.160
Health literacy of organisations – a cornerstone for fair health outcome

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Unhealthy food habits are included in the factors behind several severe health conditions. Their unequal distribution in the population has a complex background. Putting the problem "How can we make our resources more reachable?" instead of "How can we reach these groups?" changes focus from individual to organisational health literacy which opens windows of opportunity. A public health unit with commission to contribute to close health gaps identified a need to systematically develop its own health literacy. Critical examining was conducted by the quan/qual tool Health equlibrium methodology. Reflections on accessability and acceptability of resources offered by the unit were documented and used for methodolocigal development. Aims were to develop professional judgment on how to contribute to fair health outcome and to improve support for healthy habits. Data used were collected 2019-2021.What hinders people from healthier food habits? How can we adjust our practice? Documentation included organised breakfast-talks, food-talk with cultural interpreters, lectures with sports-club health ambassadors, health groups with people of different maternal language, meetings with parents at open pre-school, staff in health promotion commissions and elderly. Problems identified were high costs on healthy food and on travels to vending points, traditional large sugar-intake, marketing of unhealthy food to children, failure to understand information from Swedish Food Agency (except the Keyhole food labelling which was much appreciated). A model for shop-walks with cultural interpreters, more accessible versions of leaflet-materials and dialogue-meetings about food in different settings were developed. Reflections on the unit's communication lead to change of settings for meetings and refined ways to talk about parenthood, women's role and aspects of ethnicity. Systematic self-reflection strenghtens organisational health literacy and may contribute to fair health outcomes

Key messages:

- Organisational health literacy need to be developed purposedly.
- Scarcity is a barrier for a healthy diet also in a welfare state like Sweden.

Abstract citation ID: ckac130.161
Health sciences students' Covid-19 digital health literacy – information reliability evaluation

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Background:

In the Shanghai Declaration on promoting health in the 2030 Agenda of the UNs for Sustainable Development highlighted the importance of health literacy (HL) to empower individual citizens and enable their engagement in collective health promotion action. The aim of this study was to demonstrate the COVID-19 digital HL and the information-seeking behavior among students in Medical University - Sofia.

Methods:

For the purpose of the study a web-based questionnaire was distributed among medical students from the Faculty of Medicine, and health sciences students from the Faculty of Public Health and the Medical College-Sofia, all from Medical University - Sofia in Bulgaria. The study was conducted between February and April 2022. In total 239 respondents participated, all anonymously and voluntarily. In data analysis established statistical methods were used.

Results:

Data collected show that when students searched the Internet for information on the coronavirus or related topics, nearly two thirds (66%) of the respondents could either easy or very easy decide whether the information is reliable or not, and (81%) could easy or very easy decide whether the information is written with commercial interests. In addition among the respondents 82% find easy or very easy to check different websites to see whether they provide the same information.

Conclusions:

From the presented analysis the following conclusion can be made: when navigate the social media platforms and forums, it is significant for health sciences students to obtain the appropriate searching skills, in order to be confident to identify the validity of the information and make informed decisions, as well as decide whether commercial interests are in focus of the provided information. Furthermore it is important to emphasize that searching competencies help to cross check the provided information.

Key messages:

- In emergency situations like the global COVID-19 pandemic, digital health literacy is an important factor when search and use reliable and crosschecked information in daily clinical practice.
- Health sciences students should be educated aiming to maximize their digital literacy, to acquire the competencies and skills and to be confident when search, and use digitally provided information.

Abstract citation ID: ckac130.162
Supporting patient involvement in health service research: development of a methodological guidance

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Background:

The Belgian Health Care Knowledge Centre (KCE) issued a Position Paper in 2019 regarding the Patient Involvement (PI) in its researches as stakeholders. After previously investigating the organizational culture of the KCE, a key element for a successful implementation of PI was providing methodological guidance to the researchers.

Objectives:

The objective of this study was to develop a methodological guidance for implementing PI into the practices of researchers at KCE.

Methods:

In order to build a practical and effective process note, reflecting the needs and points of attention of all involved participants, different methods were combined: a literature review, workshops with the umbrellas of patient associations, patients and patient representatives, Delphi survey and a pilot project involving patients as research partners.

Results:

The resulting guidance identified 5 prerequisites and conditions for implementation of patient involvement at the organisational level. The guidance also focused on how to involve patients (which patients, how, when, what for) and included general recommendations to researchers during the collaboration (communication, relational aspects, animation techniques, specific needs of patients). Recommendations for the reporting and evaluation of PI were also formulated. Alongside the guidance for researchers, supports for patients were also developed and validated by the patient associations.

Conclusions:

The KCE guidance for PI in research could inspire other agencies willing to implement PI in their practices. Implementation will therefore require additional human and financial resources.

Key messages:

- Patient involvement into resarch needs methodological guidance to be successful.
- Cocreated guidance for patient involvement could help other researchers.

Abstract citation ID: ckac130.163
The use of digital tools to promote health in children: A systematic review of intervention studies

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Background:

Early childhood health interventions and educational programs are key to keeping children healthy and preventing disease during adulthood. Since several preventive strategies and campaigns targeting children have been proposed, the aim of this systematic review is to evaluate the effectiveness of digital-based interventions (e.g., cartoons, videos, video games, mobile apps, etc.) in promoting healthy behaviours in primary school-aged children.

Methods:

Following PRISMA guidelines, we searched three electronic databases (Medline, Embase, and Scopus) up to April 11, 2022. We included randomized and non-randomized experimental studies quantifying the effectiveness of digital or audio-visual-based health promotion interventions in childhood (up to 12 years of age).

Results:

The search strategy yielded a total of 1640 articles. Retrieved studies covered a wide range of health interventions - including a healthy diet, physical activity promotion, oral hygiene, skin cancer prevention, and different educational approaches (such as cartoons, interactive video games, etc.), mainly implemented in a school setting and comparing digital interventions to teacher-led interventions or no intervention at all. Data pooling suggests that digital and audio-visual-based health promotion interventions targeting children are effective in improving health literacy and healthy behaviours.

Conclusions:

This systematic review adds to the body of knowledge on health promotion in children and provides actionable measures to implement straightforward educational approaches in this specific population, empowering them to adopt preventive behaviours, and ultimately promoting health at the household and societal level.

Key messages:

- Health promotion has to be delivered during childhood and evidence is needed to identify effective interventions in this population.
- Digital and audio-visual tools have great potential to convey effective health promotion interventions in children and adults to be.

Abstract citation ID: ckac130.164
Recreational walking and the perceived local environment among socioeconomic disadvantaged adults

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Background:

Insufficient physical activity (PA) is a risk factor for obesity and non-communicable diseases and seems more prevalent among socioeconomically disadvantaged (SED) adults. Recreational walking (RW) is an important type of leisure time PA which can be done for free and without specific equipment or facilities. Environmental factors influencing PA may be particularly important for SED adults who are more reliant on their direct environment. The objectively measured environment is not always congruent with the perception of residents, and this may differ by socioeconomic group. This study aims to identify the local environmental factors important for RW as perceived by SED adults.

Methods:

This study is part of the CIVISANO project. Purposeful convenience sampling was used to recruit 38 SED adults (25-65 y/o) in two Flemish semi-urban municipalities. Individual walk-along interviews have been performed in the participants' neighborhood. 20 participants joined the focus group discussion (n = 4) that were intended for member checking, to categorize identified environmental factors and to identify local actions to promote recreational walking. MaxQDA was used for content analysis.

Results:

The way the environment is perceived by SED adults plays an important role in their RW behavior. Results demonstrate the interrelation of different environmental types (physical, sociocultural, economic, political and information) and sizes (micro, meso, macro). Improving communication and knowledge transfer, stimulation of physical, sociocultural, and economic accessibility, and promotion of physical and social safety are identified most important action points for the local government to facilitate RW.

Conclusions:

Our findings indicate that the perceived local environment can play an important role in promoting RW among SED adults. Future studies should investigate if changes in these environments and in residents' perception lead to changes in RW behavior of SED adults.

Key messages:

- The way the environment is perceived by socioeconomic disadvantaged adults plays an important role in their recreational walking behavior.
- Participation of community members allows to integrate novel and community-sourced ideas for practical intervention planning with high external validity.

Abstract citation ID: ckac130.165
Implementation gaps of the Portuguese National Health Plan: a stakeholders' perception analysis

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Background:

The Portuguese National Health Plan (PNS) 2012-2016, extended to 2020, was the strategic health document shaping the direction of intervention within the Health System. The National Institute of Health Doutor Ricardo Jorge (INSA) is the institution responsible for carrying out its final evaluation. To underpin PNS final evaluation a multistep process was designed.

Methods:

A mixed methods study using a convenience sample was implemented to assess stakeholders' perception about five PNS dimensions: dissemination, communication, implementation, impact, and evaluation. For this purpose, two different tools were used. Semi-structured interviews with former health policy managers were conducted. In addition, an online survey was designed and widely distributed to additional stakeholders. From October 2019 to February 2020, data was collected using two separate instruments. Integral transcriptions of the interviews were made. Qualitative content analysis and quantitative descriptive analysis were used.

Results:

A total of 12 interviews and 179 valid surveys were obtained. Regarding stakeholders' perception about PNS implementation process, there was an overall positive recognition about the strategic and operational relevance of the PNS, as a common dialogue platform and a tool for health improvements both for health status and health system function in Portugal. Among pointed implementation barriers, management was mentioned as the major constraint, mainly due to shortage of human and financial resources to carry out the recommended interventions within the PNS timeline.

Conclusions:

As part of the evaluation process the research team found relevant gain knowledge of the wider context in which PNS was developed and implemented, based on stakeholders' perception. Their considerations are important not only to support the definition of the questions and criteria for PNS final evaluation, but also to highlight key issues for the future policy cycle.

Key messages:

- Gain knowledge about the wider context in which the Portuguese National Health Plan (PNS) was developed and implemented was considered a crucial step towards its final evaluation.
- Stakeholders' perception about PNS can inform about implementation gaps, key enablers and barriers and further support the definition of the questions and criteria for PNS final evaluation.

8.S. Migrant health

Abstract citation ID: ckac130.166
Exploring barriers to vaccine delivery in adult migrants: a qualitative study in primary care

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Background:

The COVID-19 pandemic has highlighted shortfalls in the delivery of vaccine programmes to older migrant groups. Guidelines exist, however, little is known around care pathways and engagement of these older cohorts in routine vaccinations in primary care, including catch-up programmes. We explored the views of primary care professionals around barriers and facilitators to catch-up vaccination in adult migrants (defined as foreign born; 18+ years) with incomplete or uncertain vaccination status.

Methods:

We did a qualitative interview study with purposive sampling and thematic analysis in UK primary care (50 practices included nationally; 1 hour qualitative interviews) with 64 primary care professionals (PCPs): 48 clinical staff including GPs, Practice Nurses and healthcare assistants (HCAs); 16 administrative staff including practice managers and receptionists (mean age 45 years; 84.4% female; a range of ethnicities).

Results:

Participants highlighted direct and indirect barriers to catch-up vaccines in adult migrants who may have missed vaccines as children, missed boosters, and not be aligned with the UK's vaccine schedule, from both a personal and service-delivery level, with themes including: lack of training and knowledge of guidance around catch-up vaccination among staff; unclear or incomplete vaccine records; and lack of incentivization (including financial reimbursement) and dedicated time and care pathways. Adult migrants were reported as being excluded from many vaccination initiatives, most of which focus exclusively on children. PCPs noted that migrants expressed to them a range of views around vaccines, from positivity to uncertainty, to refusal.

Conclusions:

Vaccine uptake in adult migrants could be improved through implementing new financial incentives, strengthening care pathways and training, and working directly with local community groups to improve understanding around the benefits of vaccination at all ages.

Key messages:

- There are direct and indirect barriers to catch-up vaccines in adult migrants who may have missed vaccines as children, missed boosters, and not be aligned with the UK's vaccine schedule.
- Primary care teams have a key role to play in implementing WHO's new Immunization Agenda and to better consider catch-up vaccination to under-immunised groups across the life-course.

Abstract citation ID: ckac130.167
The Italian Roma, Sinti and Travellers Health Project for equity in access to care

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Issue:

In 2015, Italy approved the National Action Plan for Health for and with Roma, Sinti and Travellers (RSC); however, it is still not fully applied at a local level. The INMP (funded by the National Operational Programme for Social Inclusion), implemented the "Health Project - Promotion of strategies and tools for equity in access to health care for RSC", aimed to support the implementation of the Plan by Local Health Authorities (ASL).

Description:

The project lasted from March 2019 to December 2021. INMP worked with 7 ASL to design interventions and develop tools to address RSC health needs. The SODA (Strategic Options Development and Analysis) method as a participatory process aimed at identifying strategies and models for the execution of the Plan among relevant stakeholders was used. Moreover, RSC communities' engagement strategies and a community-based Proximity Public Health (PPS) approach were adopted in designing and developing health promotion interventions.

Results:

INMP performed 38 interviews with ASL health operators highlighting barriers and strategies in the local implementation of the Plan. Tools orienting to social and health services and health education materials for hard-to-reach groups were produced. A training course for 14 RSC facilitators and 5 training courses attended by over 200 NHS operators have been organized. ASL were supported in developing health promotion initiatives, based on the engagement of both local RSC communities and third sector entities.

Lessons:

The project has enabled the ASL to develop local protocols for the implementation of the Action Plan. In line with this capacity-building activity, the project trained both health operators and RSC facilitators fostering the dissemination of the PPS culture in designing and providing care for hard-to-reach groups. Given the positive results obtained, INMP is still collaborating with both ASL and the Third Sector on additional activities related to the Project in 2022.

Key messages:

- The project has strongly promoted the Proximity Public Health (PPS) approach and the enrollment of RSC communities in designing equity-oriented health interventions.
- The SODA methodology and the training of operators have resulted effective in capacitating ASL in the implementation of the Plan.

Abstract citation ID: ckac130.168
The vulnerability of migrants living in large urban areas to COVID-19: Exacerbators and mitigators

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Background:

Even though large urban areas have been researched in the context of COVID-19, evidence on how COVID-19 impacted migrants -a particularly vulnerable group- in these settings is still limited.

Objective: To explore exacerbating and mitigating factors of large urban areas on migrants' vulnerabilities during the COVID-19 pandemic.

Methods:

We conducted a systematic review of peer-reviewed literature published between 2020-2022 and focused on migrants (foreign-born individuals who have not been naturalized in the host country, regardless of immigration status) in urban areas with a population >500.000. After screening 880 studies, 29 studies were included and categorized within the following thematic framework: 1) Underlying structural inequities, 2) governance and economic structure, 3) urban design, and 4) engagement of civil society organizations (CSO).

Results:

Exacerbating factors include pre-existing inequities (e.g., unemployment, financial precarity, and barriers to healthcare access), exclusionary government responses (e.g., relief funds or unemployment benefits), and residential segregation. Mitigating factors include the engagement of CSOs and the implementation of innovative governance strategies such as e-governance and use of teleservices. Recommendations: We recommend increased attention to pre-existing social inequities faced by migrants, inclusive governance strategies, and partnerships between government and CSOs to improve the design and delivery of services to migrants in large urban areas. More research is needed on how urban design can be utilized to mitigate the COVID-19 impacts on migrant communities.

Conclusions:

The factors identified in this systematic review should be considered as part of migrant-inclusive emergency preparedness to address the disproportionate impact of similar public health crises on migrant communities.

Key messages:

- Pre-existing inequities, exclusionary governance strategies, and residential segregation led to a disproportionate impact of COVID-19 on migrants living in large urban areas.

- Mitigators of cities on the COVID-19 impacts among migrants include the engagement of civil society, implementation of innovative governance strategies, and use of teleservices in these settings.

Abstract citation ID: ckac130.169
(Un)safety of LGBT+ asylum seekers in asylum accommodations in Germany

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LGBT+ asylum seekers face multiple challenges in their countries of origin as well as in their host countries. Violence and structural discrimination against this community are common and affect their whole asylum process. Violence and structural discrimination based on sexual orientation and gender identity stress the needs of LGBT+ asylum seekers in particular in regards to reception accommodations. In this study we investigated factors that contribute to the (un)safety of reception accommodations for LGBT+ asylum seekers in Germany. Qualitative semi-structured interviews were conducted with 11 participants from two groups, namely, professionals, and former and current LGBT+ asylum seekers. Thematic analysis was used to analyze the data and revealed multiple factors influencing the safety of LGBT+ asylum seekers in accommodations. These were clustered according to the used frameworks in the categories individual level, physical and social environment, and policies. The factors for (un) safety included amongst others interpersonal violence based on sexual orientation and gender identity, gender-neutral sanitary areas or lockable rooms, community support, and policies that govern where asylum seekers are accommodated, and which protection measures are set up in accommodations. Applying an intersectional lens, transgender asylum seekers were described as more vulnerable than other LGBT+ individuals. The analysis concluded that binding policies are necessary to guarantee safer accommodations for LGBT+ asylum seekers in Germany. Besides, the social cisheteronormative structures that manifest in discrimination of LGBT+ asylum seekers must be structurally deconstructed by, among others, training staff on LGBT+ needs and increase inclusivity among the asylum seeker community and in the host country.

Key messages:

- In Germany, the European country with the highest number of refugees, LGBT+ asylum seekers face many challenges related to their sexual orientation and gender identity.
- Several factors interplay in the (un)safety of accommodations for LGBT+ asylum seekers.

Abstract citation ID: ckac130.170
Social support and poverty alleviation among asylum-seekers and refugees in Wales

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Background:

Wales is working toward being a Nation of Sanctuary for asylum-seekers and refugees and has resettled between 6,000 and 10,000 refugees since 2001. Uprooted social support networks during the period of asylum-seeking process predispose this population to poverty. The aim of this research was to explore the role of social support among asylum-seekers and refugees in alleviating poverty and its adverse impact on their health and wellbeing. Understanding the importance of social support in promoting the health and wellbeing of asylum-seekers and refugees is a critical factor for informing public health interventions and policies to improve outcomes for tackling poverty among this population in Wales.

Methods:

A qualitative research method, based on social support framework, was adopted. Semi-structured interviews were utilised to collect data from a purposive sample of 8 participants. All the participants were recruited through a refugee support organisation in Cardiff, Wales and were interviewed in the community hub of this organisation. The interviews were digitally recorded, transcribed and analysed using Interpretative Phenomenological Analysis (IPA).

Results:

Results show two formal (government, charities) and three informal (family, friends, and peers) sources of social support as the potential pathways that alleviate the impact of poverty on the health and wellbeing of asylum-seekers and refugees. These sources provide access to language courses, education, employment, housing, food, and sense of belonging in the new communities of resettlement.

Conclusions:

Enhancing access to formal and informal sources of social support is of vital importance to tackling the pernicious impact of poverty on the health and wellbeing of asylum-seekers and refugees. Providing social support for this population should be given uttermost consideration for public health interventions and policy decisions in an effort to protect and promote their health and wellbeing.

Key messages:

- Public health interventions and policies should consider access to social support resources by asylum-seekers and refugees.
- Access to, and quality of, social support resources will alleviate the impact of poverty and improve the health and wellbeing of asylum-seekers and refugees in the host country.

Abstract citation ID: ckac130.171
Do newly arrived migrants represent a COVID-19 burden? Data from the Italian information flow

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Background:

Migrants who reach host countries irregularly are often perceived as increasing the COVID-19 burden. Italy is a transit and destination country for migrants who cross the Central Mediterranean route. During the pandemic, all migrants who disembarked on the Italian shores have been COVID-19 tested and quarantined. To investigate the incidence of SARS-CoV-2 infection in this population, the INMP, together with the Italian Ministry of the Interior, set a specific information flow collecting data about the infection and possible outcomes.

Methods:

The observation period was from January 2021 to January 2022. COVID-19 tests used were molecular and antigenic. Positive cases detected both at the arrival and during the quarantine period, have been registered on an ad hoc INMP online platform. Migrants' SARS-CoV-2 incidence rate (per 1,000) - with 95% CI - was therefore calculated. The Incidence Ratio (IR) was used to compare the migrants' incidence rate with that of the resident population in Italy, in the same period and corresponding age group.

Results:

Among 70,512 migrants (91% males and 9% females, all <60years old) who landed in Italy during the observation period, 2,861 tested positive, with an incidence rate of 40.6 (39.1-42.1) cases per 1,000. In the same period, an incidence rate of 177.6 (177.5-177.8) has been recorded in the resident population, with an IR of 0.22 (0.22-0.23). 89.9% of cases were males and almost half (49.6%) belonged to the age group 25-39years old. 99% of cases reported no symptoms, no relevant comorbidity has been reported and no cases have been hospitalized.

Conclusions:

Our findings clearly highlight the low rate of SARS-CoV-2 infection in migrants reaching Italy by sea with an incidence rate that is roughly a quarter of that of the resident population, encouraging the opportunity to investigate the reasons for such an observation. Moreover, our study confirms the ''healthy migrant effect'' in migrants reaching Italy by sea.

Key messages:

- Irregular migrants arriving in Italy did not increase the COVID-19 burden in the country, thus alarmism is not justified.
- Further studies are needed to investigate the reasons for the lower incidence observed.

Abstract citation ID: ckac130.172
Assessment of mental health and psychosocial support in Ukrainian refugee minors resettled in Norway

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Background:

The recent invasion of Ukraine has forced millions of civilians, especially women and children, to leave their country. Although the European Union offers guidance on individual health assessment of refugees fleeing the war in Ukraine, assessment practice varies across host countries and even on national basis. Thus, the aim of this project was to identify and prioritize procedures for mental health assessment of Ukrainian refugee minors in Norway.

Methods:

This project applied a modified three-round-Delphi method. In a first step, the leading public health nurse and community physician in 40 municipalities across Norway were contacted via e-mail and asked to state who is in charge of health assessment, what is current assessing practice and what are the problems and needs. Answers were analysed and condensed and will be presented for rating in a second and third round.

Results:

Preliminary results from the first round suggest that most municipalities are currently in a planning phase with uncertainties surrounding who and how future assessments will be done. Public health nurses or general practitioners are often in charge of health assessments, but it is unclear if this includes age-adjusted mental health assessments.

Conclusions:

Preliminary results show that current practice in assessing mental health and psychosocial support for Ukranian refugee minors in Norway is very diverse. There is a need to evaluate and prioritize current procedures to assure an equal and age-adjusted procedures for all refugee minors, regardless of where they have resettled.

Key messages:

- Current practice in assessing mental health and psychosocial support among Ukrainian refugee minors is very diverse.
- Assessment of mental health in Ukrainian refugees depends on infrastructure and local municipal resources.

Abstract citation ID: ckac130.173
Knowledge of HIV prevention biomedical tools among African immigrants in France: the Makasi project

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Background:

In France, post-exposure prophylaxis (PEP) and pre-exposure prophylaxis (PrEP) have been available for several years. However, there is still no evidence on the level of knowledge of these HIV prevention tools among immigrants from sub-Saharan Africa living in precarious situations, a population particularly affected by HIV. The aim of this study is to describe the knowledge of these tools in this population and analyse the factors associated with this knowledge.

Methods:

The data mobilized are from the Makasi interventional research that was conducted between 2018 and 2020 among immigrants from sub-Saharan Africa in precarious situations in the greater Paris area. Using data collected from 601 participants, we described levels of knowledge of HIV treatment effectiveness, treatment as prevention (TasP), post-exposure prophylaxis (PEP), and pre-exposure prophylaxis (PrEP), by sex with a chi2 test. We investigated factors associated with their knowledge with logistic regressions adjusted for sociodemographic characteristics, living conditions and sexual behaviors ($p \leq 0.2$).

Results:

The population surveyed was predominantly men (76%), from West Africa (61%) and in a precarious situation: 69% were unemployed, 74% were undocumented, 46% had no health coverage and 13% were homeless. In this population, knowledge of antiretroviral treatments for HIV prevention was heterogeneous: the effectiveness of HIV treatment was well known (84%), but only half of the respondents (46%) were aware of TasP and very few knew about PEP and PrEP: 6% and 5% respectively. Multivariable-adjusted models showed that these tools was better known by educated people, those who had a social network in France, those who have had access to the health system and those who were exposed to sexual risks.

Conclusions:

While sub-Saharan African immigrants know the effectiveness of HIV treatment and use certain prevention tools such as HIV testing, they are not aware of PEP and PrEP.

Key messages:

- PEP and PrEP are two HIV prevention tools that are not well known by sub-Saharan African immigrants.
- There is an urgent need to disseminate information about these prevention tools to immigrants.

Abstract citation ID: ckac130.174
Breast cancer screening adhesion among migrants: a matter of communication strategy?

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Background:
Migrants' engagement to cancer screening programs is a relevant issue for universalistic health systems. To increase breast cancer screening coverage among migrant women, a public-private partnership involving a multidisciplinary team of Primary Care, Public Health, Hospital and private social workers has been built up in a district in Italy. The team worked in two steps, planning health promotion (HP) meetings addressing women in refugees' reception programs and a web-based workshop involving intercultural mediators (IMs) and community health promoters.

Objectives:
The workshop, involving 10 professionals among IMs and community health promoters, realized in 3 online meetings during March '22, aimed at identifying communication tools to enable migrants' participation to breast cancer screening and increasing health literacy (HL) and cultural competence (CC) among the team. A participatory approach, supported by learning methods, such as storytelling and role-play, has been adopted to identify the major barriers to access to screening and public health messages. Participants worked on critical words and concepts, highlighted during HP meetings, accounting for HL, literacy, language skills, communication techniques and different perspectives about health and prevention.

Results:
Several barriers, such as lack of knowledge on preventive initiatives and different approaches to health, decrease the perception of cancer risk. Others, like family and work duties, influence the adhesion. Fear or shame about the exam and linguistic issues are further hampering factors. Participants pointed out text, audio and video messages, in Italian and native plain language, as useful tools to explain the screening procedure and give relevant and practical information supported by simple and clear illustrations to diffuse via WhatsApp.

Conclusions:
The intervention enabled the team to improve HL and CC defining suitable communication strategies for cancer screening programs.

Key messages:
- Within the team building process, professionals, from health and private sectors, improved communication skills and awareness of the role played by HL and CC in reducing health disparities.
- Active learning methods, such as role-play and storytelling, resulted to be strategic for the participatory approach and to achieve the objectives.

Abstract citation ID: ckac130.175
Occupational role and Covid-19 among foreign-born healthcare workers: a registry-based study

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Background:
Studies have shown an elevated risk of Covid-19 among foreign-born healthcare workers (HCWs), but data on the distribution of the risk in different occupational roles are lacking. Such data are needed for the effective control of Covid-19 risk among HCWs. Here, we examined the risk of Covid-19 infection and hospitalization in foreign-born HCWs in different occupational roles in Sweden.

Methods:
We prospectively linked occupational data (2018-2019) of 783950 employed foreign-born (20-65 years) workers to Covid-19 data registered between 1 January 2020 and 30 September 2021. We used Cox proportional hazards regression to estimate the risk of Covid-19 infection and hospitalization in foreign-born HCWs in eight different occupational groups compared to non-HCWs, and to assess whether the associations varied by region of birth. The analyses were adjusted for sociodemographic and socioeconomic factors, comorbidities, and Covid-19 vaccination.

Results:
All HCWs had a higher risk of Covid-19 outcomes than non-HCWs, but the risk differed by occupational role. Assistant nurses had the highest risk both for Covid-19 infection (HR 1.80; 95%CI 1.74-1.87) and hospitalization (HR 1.85; 95%CI 1.57-2.18); other allied HCWs had the lowest risk (infection: HR 1.23; 95%CI 1.11-1.36; hospitalization: HR 1.02; 95%CI 0.63-1.67)). In some healthcare occupations, the relative risk of Covid-19 varied by region of birth. For example, physicians and dental nurses/hygienists of African and Asian origin had a higher risk of Covid-19 infection than European-born in the same occupation. In contrast, European-born assistant nurses had a greater risk of both outcomes than non-European-born in the same occupation.

Conclusions:
The risk of Covid-19 among foreign-born HCWs varied by occupational role and region of birth. Public health efforts that target occupational exposures as well as incorporate culturally responsive measures may help to reduce Covid-19 risk among foreign-born HCWs.

Key messages:
- Risk of Covid-19 among foreign-born healthcare workers varied by occupational role and region of birth.
- Multiple approaches are needed to protect this population group against Covid-19.

Abstract citation ID: ckac130.176
Health Status and Self-Perception of Health in Czech Roma Community

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Background:
The Roma population is reported to have a lower life expectancy in several European countries. The reasons for this are not well described, which limits the development of effective health promotion programs. This report investigates some possible reasons: self-perception of health risks and discrimination in a sample of Czech Roma. The study is a part of a complex health awareness program.

Methods:
This is a pilot descriptive, cross-sectional survey conducted in Brno, Czech Republic in March 2022. Respondents were identified by community gatekeepers using quotas of gender and education. Data on disease incidence, lifestyle, attitudes to health care and risk perception were collected.

Results:
In the sample of 30 participants, 60% were female, average age 42±5, 60% primary education. 57% daily smokers, with an average 17 cigarettes daily during 18 years. 35% had 1 chronic disease, another 38% had 2 and more. The most prevalent diseases were hypertension (43%) and obesity (41%). 60% of

respondents with hypertension as compared to 23% without hypertension considered their stroke risk as medium. 43% smokers as compared to 21% non-smokers consider their risk of COPD as medium (for lung cancer 41% vs. 0%). Roma report not visiting a doctor due to a lack of time (33%), expecting the problem to resolve itself (33%), long waiting time (33%), but not discrimination (0%).

Conclusions:

The Roma with risk factors correctly identify their risk of stroke, COPD, lung cancer as higher. None of them feel discriminated from physicians, but they limit contact with them due to other reasons. It appears that the prevalence of risk factors is higher in the Roma when compared to Caucasians based on the European Health Interview Survey (16% female, 31% male hypertension; 14% female, 29% male obesity). Self-perception of health and feeling of discrimination in Roma communities should be taken into account when designing health interventions.

Key messages:

- Roma people evaluate their risk of diseases adequately to their health status.
- The reasons for not using healthcare are not connected to discrimination.

Abstract citation ID: ckac130.177
The use of social media platforms by migrant populations during the COVID-19 pandemic

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Background:

The rapid expansion of internet and social media use has meant that both useful and potentially harmful health information can spread rapidly. Groups experiencing barriers to health systems may be more reliant on social media as a source of health information. We did a systematic review to determine the extent and nature of social media use in migrant and ethnic minority communities for COVID-19 information, and implications for preventative health measures including vaccination intent and uptake.

Methods:

We reviewed published and grey literature following PRISMA guidelines (PROSPERO registered CRD42021259190). Global research was included that reported on the use of social media by migrants and/or ethnic minority groups in relation to COVID-19.

Results:

1849 unique records were screened, and 21 data sources included in our analysis involving studies from the UK, US, China, Jordan, Qatar, and Turkey. We found evidence of consistent use of a range of social media platforms for COVID-19 information in some migrant and ethnic minority populations (including WeChat, Facebook, WhatsApp, Instagram, Twitter, YouTube), which may stem from difficulty in accessing COVID-19 information in their native languages or from trusted sources. There were positive and negative associations with social media use reported, with some evidence suggesting circulating misinformation and social media use may be associated with lower participation in preventative health measures, including vaccine intent and uptake, findings of which are likely relevant to multiple population groups.

Conclusions:

Urgent actions and further research are now needed to better understand the use of social media platforms for accessing health information by groups who may be marginalised from health systems, effective approaches to tackling circulating misinformation, and to seize on opportunities to make better use of social media platforms to support public health communication.

Key messages:

- We found evidence of consistent use of a range of social media platforms for COVID-19 information in some migrant and ethnic minority populations.
- Further research is needed to better understand the use of social media platforms for accessing health information by groups who may be marginalised from health systems.

Abstract citation ID: ckac130.178
Navigating to support: experiences of forced migrant survivors of sexual and gender-based violence

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Background:

Sexual and gender-based violence (SGBV) is a severe human rights violation as well as a widespread global health problem with several negative consequences for emotional-psychological, sexual-reproductive and physical health. People who have experienced forced migration have a heightened exposure to SGBV, yet face several challenges to access support. Increased understanding of the help seeking processes of forced migrants who have experienced SGBV can help improve access to adequate support.

Methods:

Interviews with thirty forced migrants in Sweden who have experienced SGBV have been analyzed using thematic analysis to generate an understanding of their help-seeking processes. The participants were recruited through a broad range of service providers, nongovernmental organizations and community sites.

Results:

The disempowerment experienced after arrival to Sweden exacerbated health needs, increased the risk of violence, and prevented help seeking. Increased independency and more stable circumstances ameliorated the anticipated risks of seeking help and improved well-being. Activities and places providing a platform for social interactions as well as opportunities to acquire needed knowledge, such as language, were highlighted as valuable and could become a pathway to specialized services through a process of increased trust.

Conclusions:

Help-seeking processes for SGBV can be promoted by early access to support services and social networks, as well as language classes and information about the society. Access to support can be facilitated by increased collaboration between non-violence-related service providers working close to forced migrants, such as language schools, and specialized services. The societal factors influencing help seeking processes are being further explored in an ongoing analysis of interviews with 29 service providers. The findings will inform the co-development of a new service model.

Key messages:

- Forced migrants describe that current services are not meeting their need of support for SGBV.
- There is a need to co-develop an enhanced service model involving both service users and providers.

9.R. Mental health 1

Abstract citation ID: ckac130.179
Depression among survivors of 1988 Spitak earthquake in Armenia: a prospective cohort study

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Background:

Mental health-related consequences of disasters can be very long lasting. Depression is one of the most prevalent psychopathologies among disaster survivors. Yet, compared to PTSD, it is studied much less among disaster victims. Studies of depression decades after the exposure are extremely rare. This study evaluated the prevalence and predictors of depression in a prospective cohort of Spitak earthquake survivors 23 years after the event.

Methods:

A geographically stratified urban sub-sample of 1785 individuals underwent all three baseline waves of the cohort study during 1990-1992 and provided detailed sociodemographic, earthquake exposure and physical and mental health-related information. In 2012, 83.3% (n = 1487) of this subsample was traced and 40.6% (n = 725) interviewed. Depression status was measured via validated and adapted Armenian-language CES-D scale. A fitted linear regression model identified predictors of depression score in 2012.

Results:

Twenty-three years after the exposure, the rate of depression in this cohort was 25.4%. Depression was highly comorbid with anxiety (62.0%) and PTSD (36.8%). Factors positively associated with depression score included number of stressful life events (95% CI 0.33, 1.20), poor self-rated health (95% CI 2.45, 5.40), earthquake-related deaths in the family (95% CI 0.12, 3.80), and strong phobia and fear at baseline (95% CI 0.51, 2.96). Age (95% CI -0.15, -0.06), social support score (95% CI -0.83, -0.55), quality of life score (95% CI -15.83, -10.77), and being married (95% CI -2.61, -0.35) were protective for depression. The fitted model explained 46.6% of the variance in the depression score.

Conclusions:

This study found an increased prevalence of depression among earthquake survivors over two decades after the exposure. The identified potentially modifiable predictors of long-term depression create prerequisites for planning better targeted mental health recovery interventions among disaster survivors.

Key messages:

- Traumatic deaths in the core family, strong emotional response to the event, and lack of social support predicted depression over two decades after the disaster.
- A considerable proportion of survivors reported long-term depressive symptoms highly comorbid with anxiety and PTSD, underscoring the need for screening of all three traits and intervening early-on.

Abstract citation ID: ckac130.180
Change in the financial situation of students during COVID-19 and its impact on depressive symptoms

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Background:

Students faced unique challenges during the COVID-19 pandemic that may have affected their financial situation as well as their mental health. This study sought to examine whether changes in financial situation before and during the COVID-19 pandemic were associated with depressive symptoms among German university students.

Methods:

The cross-sectional COVID-19 German Student Well-being Study (C19 GSWS; N = 7,267) was implemented at five German universities between 27.10. and 14.11.2021. Students were asked if they had had sufficient financial resources to cover monthly expenses before the pandemic, as well as during the first and third waves of the pandemic. Depressive symptoms were assessed using the CES-D 8 (score ranges 0-24) and the PHQ-2 (0-6); higher scores indicating more severe depressive symptoms. Linear regression models were used to examine associations between variables.

Results:

A worsened financial situation between the first and the third wave of the pandemic was associated with a one point (0.95) increase on the CES-D 8 scale (95% CI: 0.61, 1.29) and an improved financial situation with a decrease by 0.81 points (95% CI: -1.20, -0.42). A worsened financial situation was associated with a 0.26-point increase in PHQ-2 (95% CI: 0.14, 0.37) and an improved financial situation with a -0.12-point decrease (95% CI: -0.25, 0.01). Similarly, worsened financial situation in the third wave compared to prior to the pandemic, was also associated with an increase in CES-D 8 score and PHQ-2 and an improved financial situation with a decrease in CES-D 8 and PHQ-2.

Conclusions:

Our findings suggest associations between students' financial situation during the COVID-19 pandemic and their mental health. Due to their instable financial situation, students are a vulnerable group in need of mental and financial support during pandemic crises.

Key messages:

- This study revealed associations between students' financial situation and depressive symptoms.
- A comprehensive approach in efforts to address mental health, including financial support is required.

Abstract citation ID: ckac130.181
COVID-19 impact on familial relationships and mental health in a representative sample of adults

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Background:

Benefits of the stay-at-home order imposed in Italy to prevent SARS-CoV-2 transmission need to be weighed against its impact on citizens' health. In a country with a solid familial culture and where welfare relies on households, confinement drastically decreased support provided by elder relatives, which may have worsened mental health.

Methods:

A web-based cross-sectional study (LOST in Italy) was conducted on a representative sample of Italian adults during lockdown (27th of April-3rd of May 2020). We asked 3156 subjects to report on reduced help in housework and childcare from retired parents to assess confinement impact on mental health through validated scales before and during the lockdown.

Results:

Overall, 1484 (47.0%) subjects reported reduced housework help from parents, and 769 (64.0%, of the 1202 subjects with children) diminished babysitting support. Subjects reporting reduced housework help had worsened sleep quality (multivariate odds ratio, OR 1.74, 95% confidence interval, CI 1.49-2.03) and quantity (OR 1.50, 95%CI 1.28-1.76), depressive (OR 1.32, 95% CI 1.14-1.53) and anxiety symptoms (OR 1.53, 95%CI 1.32-1.78), compared to those reporting unreduced help. Worsening in sleep quality (OR 2.32, 95%CI 1.76-3.05) and quantity (OR 1.80, 95%CI 1.36-2.37), depressive (OR 1.79, 95%CI 1.39-2.31) and anxiety symptoms (OR 1.90, 95%CI 1.48-2.46) was also associated with reduced babysitting help. In subjects with poorer housing and teleworking, mental health outcomes were worse.

Conclusions:

Confinement came along with reduced familial support from parents, negatively impacting mental health. Social networks and support within families provided by older relatives act as a resilience factor and a potential vulnerability that affects mental health outcomes. Health and social services response should be designed to address mental health needs and mitigate long-term health costs caused by the pandemic's unprecedented stressfulness and unknown duration.

Key messages:

- National lockdown measures came along with reduced housework help supply for a large proportion of adult parents who presented increased mental health symptoms with unsatisfactory quality of life.
- A global, multi-level socioeconomic interdisciplinary approach is needed to inform evidence-based family and welfare policies and prevention strategies centred on population wellbeing.

Abstract citation ID: ckac130.182

Country-level determinants of gender differences in major depression and alcohol use disorder

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Background:

Major depressive disorder (MDD) and alcohol use disorder (AUD) are leading causes of disease burden in Europe, with MDD disproportionately affecting women and AUD being more prevalent among men. However, it is unclear how country-level political and socio-cultural characteristics contribute to gender differences in these conditions.

Methods:

Data for 30,416 participants from 16 countries were obtained from the 2014 European Social Survey. Depressive symptoms were ascertained using the 8-item CES-D scale, and alcohol use was assessed with items on past-year alcohol use frequency and quantity, as well as frequency of heavy episodic drinking. Country-level data for attitudes to gender equality, needs-adjusted public social expenditure, and other covariates came from the 2012 International Social Survey Programme and the OECD. Modified Poisson and linear regression with log link examined additive and multiplicative interactions of country-level characteristics with gender for MDD, AUD, and their specific symptoms/dimensions.

Results:

Public social expenditure was not associated with gender differences in MDD (CES-D>10), but with greater differences in the prevalence of the loneliness and sadness symptoms; support for gender equality was associated with smaller differences in loneliness ($p < 0.05$). For AUD, there was evidence of increased alcohol use frequency and quantity among women, and decreased frequency and quantity among men associated with support for gender equality, resulting in lower gender differences in predicted probabilities (from 23% to 5% across exposure levels; $p < 0.001$). Heavy episodic drinking was strongly positively associated with support for gender equality among women ($p < 0.001$), but not among men.

Conclusions:

Country-level characteristics appear to exert differential impact on the prevalence of AUD and certain psychological symptoms of MDD among men and women in Europe. Pending replication, future research should examine underlying mechanisms.

Key messages:

- Country-level characteristics appear to influence the magnitude of gender differences in prevalent alcohol use disorder and certain psychological symptoms of major depression across Europe.
- Favourable country-level attitudes towards gender equality appear to be associated with lower overall prevalence of alcohol use disorder, but higher prevalence among women.

Abstract citation ID: ckac130.183

An analysis of hospital-treated attempted hanging and drowning in Ireland, 2007-2019

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Background:

Highly lethal of methods of self-harm, such as attempted hanging and drowning, are a major public health concern due to their high associated risk of completed suicide. This study aims to describe hospital presentations for attempted hanging and drowning in Ireland and explore the factors associated with self-harm and repeat self-harm by these methods.

Methods:

Data on all self-harm presentations to Irish hospitals (2007-2019) were obtained from the National Self-Harm Registry Ireland, a national surveillance system of hospital-treated self-harm. Multivariable logistic regression was used to explore factors associated with any presentation for attempted hanging and drowning and factors associated with repetition of attempted hanging and drowning.

Results:

There were 9,719 and 4,637 attempted hanging and drowning hospital presentations, respectively, in Ireland in 2007-2019. The odds of presentations being due to hanging, rather than due to any other self-harm method, were highest for males (aOR 2.88, 95% CI: 2.76-3.02), children aged <15 (aOR 1.32, 1.17-1.48) and in summer (aOR 1.09, 1.02-1.14). The odds of presentations being due to drowning, rather than due to any other self-harm method, were highest for those aged ≥ 55 (aOR 1.60, 1.43-1.78), homeless individuals (aOR 2.59, 2.32-2.89) and in autumn (aOR 1.15, 1.06-1.25). Repetition of attempted hanging was positively associated with homelessness (aOR 2.47, 2.02-3.04) and acute alcohol ingestion (aOR 1.12, 1.02-1.23). Similar associations were observed for repetition of attempted drowning.

Conclusions:

This study identifies key population groups for whom the risk of self-harm, or repeat self-harm, by hanging and drowning is greatest. Universal, targeted and indicated interventions are needed to address the determinants of highly lethal methods of self-harm. Biopsychosocial assessments of those presenting after attempted hanging and drowning are essential, in view of their high risk of repeat self-harm and suicide.

Key messages:

- Compared with other self-harm methods, the risk of self-harm by hanging and drowning may be highest among males and children aged <15 years and adults aged ≥55 and homeless individuals, respectively.
- A combination of interventions are needed to address self-harm by highly lethal methods.

Abstract citation ID: ckac130.184

Risk factors for internet addiction among Croatian university students during the COVID-19 pandemic

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Background:

Following the increased internet use due to the COVID-19 pandemic there have been concerns regarding an elevated risk of developing internet addiction (IA). University students are especially prone to develop IA and risk factors for its development in this population during pandemics are not fully investigated nor understood. This study aimed to identify possible risk factors of IA in the studied population during the ongoing pandemic and to compare it with risk factors in pre-pandemic time.

Methods:

In April 2016 and April 2022 a validated, anonymous questionnaire that contained questions regarding demographic data, as well as Young's Internet Addiction Test, was self-administered to a cross-faculty representative student sample of the University of Osijek, Croatia.

Results:

The study included 1602 university students median age of 21 years (interquartile range 20-22), 34.5% males, and 65.5% females. There was no statistically significant difference in the median age between the two student samples ($p = 0.234$). The main reason for internet use (social networking and entertainment and online gaming) was considered the significant risk factor for IA in a studied population in pre-pandemic time (the year 2016) and pandemic time (the year 2022) ($p < 0.001$). In pre-pandemic time the IA was more frequent in males ($p = 0.046$) while the difference in IA prevalence between sexes did not exist during pandemics ($p = 0.160$). During pandemics, the students who did not work during their study had higher proportions of IA ($p = 0.021$) while there was no difference in IA prevalence among students regarding their working status during the study in pre-pandemic time ($p = 0.251$).

Conclusions:

During the COVID-19 pandemic working status of students has been recognized as the new risk factor for IA in the Croatian university students population. Further studies are needed to identify other possible risk factors for IA in the studied population during pandemics.

Key messages:

- The COVID-19 pandemic has changed the set of risk factors for IA among Croatian university students.
- Better understanding of risk factors for IA among university students during the COVID-19 pandemic will enable the development of successful preventive programs for this behavioral addiction.

Abstract citation ID: ckac130.185

Preoperative anxiety and health literacy in patients applying to the anesthesia outpatient clinic

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Background:

Evaluation of preoperative anxiety and health literacy is important for healthcare professionals to understand the needs and expectations of patients and provide them with the necessary support. The study aimed to evaluate the preoperative anxiety levels of patients who applied to the anesthesia outpatient clinic and its relationship with health literacy.

Methods:

A cross-sectional study was conducted on patients who applied to the anesthesia outpatient clinic of Eskişehir Osmangazi University Medical Faculty Hospital in March 2022. The questionnaire form, which was prepared by making use of the literature, was filled in by face-to-face interview method after obtaining the participants' verbal consent. The 6 item Amsterdam Preoperative Anxiety and Information Scale (APAIS) in which the scores that can be taken range from 6 to 30 and higher score means higher anxiety was used to assess the level of anxiety, and the 16 item European Health Literacy Scale Short Form was used to assess health literacy. Descriptive statistics, Chi-Square test and Logistic Regression analysis were used to analyze the data.

Results:

In the study group, 197 (50.3%) were female. Their ages ranged from 18 to 86, with a mean of 45.7 ± 17.2 years. The median (min-max) APAIS score was 15 (6-30). There was a moderate negative correlation between the scores obtained from the APAIS and the European Health Literacy Scale Short Form ($r = -0.50$, $p < 0.01$). According to the logistic regression analysis, preoperative anxiety was found to be 1.53 (%95 CI; 1.01-2.30) times higher in women, 3.49 (%95 CI; 1.23-9.94) times higher in those with low family income, and 1.61 (%95 CI; 1.07-2.42) times higher in those with type A personality.

Conclusions:

More than half of the patients had preoperative anxiety. The level of preoperative anxiety decreased as the health literacy level increased.

Key messages:

- Necessary support should be given for the preoperative anxiety of the patients.
- Public health policies should be developed in order to increase health literacy.

Abstract citation ID: ckac130.186

The association of loneliness and social isolation with healthcare utilization in Denmark

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Objectives:

The present prospective cohort study investigated the association of loneliness and social isolation (SI) with healthcare utilization (HCU) in the general population over time.

Methods:

Data from the 2013 Danish "How are you?' survey (n = 29,472) were combined with individual-level register data from the National Danish Patient Registry and the Danish National Health Service Registry over a 6-year follow-up period (2013-2018). Negative binomial regression analyses were performed while adjusting for baseline demographics and chronic disease.

Results:

Loneliness measured at baseline was significantly associated with more GP contacts (incident-rate ratio (IRR) = 1.03, 95% confidence interval (CI) [1.02, 1.04]), more emergency treatments (IRR = 1.06, 95% CI [1.03, 1.10]), more emergency admissions (IRR = 1.06, 95% CI [1.03, 1.06]), and hospital admission days (IRR = 1.05, 95% CI [1.00, 1.11]) across the 6-year follow-up period. No significant associations were found between social isolation and HCU with one minor exception, in which SI was associated with fewer planned outpatient treatments (IRR = .97, 95% CI [.94, .99]).

Conclusions:

Our findings suggest that loneliness is a risk factor for certain types of HCU, independent of social isolation, baseline demographics, and chronic disease.

Key messages:

- The findings suggest that lonely individuals are slightly overrepresented within the healthcare system. In contrast, social isolation does not affect the use of health care services.
- The association between loneliness and health care utilization is complex and there is a need for future studies to investigate the mechanisms underlying the association.

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Care obligations, employment and mental health

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Background:

The presentation is dedicated to employees who care for others in addition to their work. The starting point is the representative cohort study on mental health at work (S-MGA), which covered both care at home and care outside the home in the second wave of the survey. In this regard, cross sectional associations with exhaustion and work-life balance as indicators of mental health were examined taking into account full-time and part-time employment.

Methods:

The sampling frame consisted of all German employees being subject to social security contributions and born between 1951 and 1980. The baseline sample consisted of 4511 survey participants of whom 1279 males and 1358 females were asked for informal care at the follow-up interview. Employment conditions as well as work-life balance were obtained by personal interview; exhaustion was obtained in a paper and pencil questionnaire. Statistical analysis was conducted descriptively and in linear and logistic regressions stratified by gender and controlled for age.

Results:

Informal care at home was reported by n = 74 individuals (2.8%) and care outside of their home by n = 236 (8.9%). The association between both types of care with exhaustion was below the level for significance. There was an increase of work-life-imbalance for females caring at home but not for those who were caring outside. For males there were no effects of both types of care. Including the part-time/full-time distinction indicator within the regression models showed that women who cared at home had lower exhaustion scores and lower work-life imbalance when they were employed part-time.

Conclusions:

The results show that caring at home for females leads to work-life imbalance and that part-time employment mitigates the negative effects on work-life imbalance and exhaustion. However, there are strong limitations by the sample size and the number of observations at the second wave of assessment.

Key messages:

- The results show that caring at home among females seems to lead to work-life imbalance.
- Part-time employment seems to mitigate the negative effects on work-life imbalance and exhaustion.

Abstract citation ID: ckac130.188
Risk factors associated with depression among French university students during covid-19 lockdown

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Background:

During the COVID-19 pandemic students' lives changed drastically, especially regarding their mental health. Social isolation, induced by lockdown, could be the cause of the development of mental disorders in this population. Therefore, the aim of this study was to identify factors associated with depression during French first Covid-19 lockdown among university students.

Methods:

This cross-sectional study, which is a part of the COVID-19 International Student Well-Being Study (ISWS consortium), used the validated CES-D 8 score (Center for Epidemiologic Studies - Depression Scale) to measure depression levels. Data on socio-demographics, curriculum, living condition, academic environment and social interactions were collected few days after the first lockdown in France, from 13 to 31 May 2020. The potential impact of risk factors on depression was studied by multinomial logistic regression.

Results:

A total of 3593 students were included. The CES-D 8 mean score was 8.65 (SD = 5.08). Literature students had the highest average CES-D 8 score (9.47, SD = 5.16). Independent factors associated with the higher scores of depressions included having limited financial resources (AOR = 2.49, 95% CI = 1.84-3.38) having academic concerns, including students worried about not completing the academic year (AOR = 2.93, AOR = 2.37-3.64) and stressed with changes in teaching methods (AOR = 3.55, 95% CI = 2.82-4.46). Otherwise, living with parents during lockdown and being in a relationship were significant protective factors against depression.

Conclusions:

This study highlights the impact of changing social network, living conditions, and academic environment on depression among university students. Preserving students from social isolation must be a critical priority for universities. Future universities' policy strategy could combine on-site teaching with online courses and consider the role of students' social contacts, with a particular emphasis on mental health.

Key messages:

- Social isolation is an important risk factor of depression in students.
- Implications for policy makers demonstrating the need for effective mental health programs and guidance as a public health strategy in universities.

Abstract citation ID: ckac130.189
Burden of Depressive disorders in Balkan countries

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Background:

Depressive disorders are one of the leading causes of disability and are significant contributor to total Global Burden of Disease (GBD). Globally, according to the 2019 GBD study, the 1.85% of all Disability adjusted life years (DALYs) was associated with depression. The aim of this study was to describe the age-standardized DALYs in ten Balkan countries and the changes observed between 1990 and 2019.

Methods:

The study included the data on age-standardized DALY rate per 100,000 for depressive disorders in the period between 1990 and 2019 for ten Balkan countries (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Montenegro, North Macedonia, Romania, Serbia and Slovenia) from the Institute of Health Metrics and Evaluation. We acknowledge the support from the COST Action 18218 - European Burden of Disease Network.

Results:

The highest age-standardized DALY rate/ 100,000 throughout the observed period was in Greece in the 1990- 914.48 (95% CI: 620.19-1287.16) and 927.75 (95% CI: 626.5-1295.7) in 2019, while the lowest age-standardized DALY rate per 100,000 was in Albania in the entire observed period (1990- 369.032, 95% CI: 253.52-518.04 and 2019- 386.42, 95% CI: 266.46-536.31). Greece and Albania are only two countries in the Balkans in which the age-standardized DALY rate per 100,000 increased in the period between 1990 and 2019, in all other countries there was a slight decrease in age-standardized DALY rates in the period between 1990 and 2019.

Conclusions:

Age-standardized DALY rates per 100,000 decreased in eight out of ten countries in the Balkan region. However, age-standardized DALY rate per 100,000 increased in the country with the highest burden of depressive disorders in the region-Greece. In the period between 1990 and 2019 the lowest burden of depressive disorders measured in age-standardized DALY rate /100,000 was in Albania, but Albania also recorded the increase in burden.

Key messages:

- Burden of depressive disorders in Balkan countries is significant.
- Key public health stakeholders in Greece should address the increasing trend of DALY and its association with economic crisis.

Abstract citation ID: ckac130.190
Burden of alcohol use disorder in Balkan countries

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Background:

Alcohol use is recognized as an important risk factor for more than 200 different diseases and injuries. In the Diagnostic statistic Manual- 5 (DSM-5) it is defined as 'impaired control over alcohol consumption with chronic, heavy and often escalating pattern of alcohol use despite significant detrimental consequences to their overall health, the lives of their family members and friends and society in general'. The aim of this study was to describe the disability adjusted life years (DALY) associated with the alcohol use disorder in the Balkan countries in the period between 1990 and 2019.

Methods:

The study included the data on age-standardized DALY rate per 100,000 for alcohol use disorder in the period between 1990 and 2019 for ten Balkan countries (Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Montenegro, North Macedonia, Romania, Serbia and Slovenia) from the Institute of Health Metrics and Evaluation. We acknowledge the support from the COST Action 18218 - European Burden of Disease Network.

Results:

The highest age-standardized DALY rate in 1990 was in Romania 484.03 per 100,000 (95% CI: 394.68-594.99), while the highest age-standardized DALY rate per 100,000 in 2019 was in Slovenia 427.75 (95% CI: 332.28-543.83). Along with Slovenia, only country that recorded the increase in the age-standardized DALY rates in the period between 1990 and 2019 was Albania, but the increase was only marginal (DALY per 100,000 increased from 174.24, 95% CI: 115.07-244.76 to 187.92, 95% CI: 127.26-262.41). The lowest burden measured in age-standardized DALY rates per 100,000 in 1990 was in Albania, and in 2019 was in Greece- 174.68, 95% CI: 113.66-251.34.

Conclusions:

In the majority of the Balkan countries the age-standardized DALY rates per 100,000 for alcohol use disorder decreased in the observed period. The increase is observed for Slovenia and Albania, with the more apparent increase in Slovenia.

Key messages:

- The age-standardized DALY rates for alcohol use disorder decreased in the majority of Balkan countries between 1990 and 2019.
- The age-standardized DALY rate increased in Slovenia and Albania between 1990 and 2019.

9.S. Public health monitoring and reporting

Abstract citation ID: ckac130.191
Sexual and Contraceptive Behaviour of Adolescents and Young Adults in Germany

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Background:

For 40 years the Federal Centre for Health Education in Germany has been analysing the contraception behaviour of young people. The current Survey is the ninth iteration, carried out in 2019. This continuous monitoring generates insights on the sexual and reproductive health of young people in Germany. The survey provides an important basis for the development of sexuality education and family planning measures.

Methods:

A total of N = 6032 adolescents and young adults participated in the survey. Date collection was conducted by computer-assisted personal interviewing (CAPI). The current sexual and contraceptive behaviour of adolescents and young adults will be summarized using descriptive results. In addition, the association between contraception non-use and sociodemographic factors, characteristics of sexuality education and situated factors of first sexual intercourse is analysed by multivariate logistic regressions.

Results:

A key finding of this iteration is that with regards to the age of the first sexual intercourse, the proportion of adolescents younger than 17 years has been declining for several years. For contraception, adolescents most frequently used condoms, and use of the pill has decreased. 9% of the participants reported non-contraception use at first sexual intercourse. This is significantly associated ($p < .01$) with unexpected and only unilaterally desired sexual intercourse and the absence of sexuality education in School. In addition, the younger the adolescence were at first sexual intercourse the greater the risk for contraception non-use.

Conclusions:

The data from the current iteration indicate safe and responsible contraceptive behaviour among young people in Germany. It is important to maintain the commitment in the field of sexual health promotion and expand prevention measures for young people. This is the only way to ensure the sexual and reproductive health also in the next generation.

Key messages:

- Data from Youth Sexuality Study indicate safe and responsible contraceptive behaviour among young people in Germany.
- Commitment in the field of sexual health promotion needs to be continued.

Abstract citation ID: ckac130.192
Temporal trends in adolescent sport participation in the south-east of France from 2001 to 2019

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Background:

Adolescents playing sport are more likely to reach the recommended levels of physical activity. In 2001, 2006, 2011 and 2019, four successive French national plans were launched to "develop physical and sports activity and limit sedentary living". Monitoring sport participation rates (SPR) is one of the essential components to evaluate these plans. To date, information on temporal trends in SPR has mainly come from the national population. However, due to sample size, it was impossible to measure trends among adolescents on the territory level. Given the various economic and geographical disparities between territories, it is likely that territory specific trends exist. The main objective of this study was to measure temporal trends in adolescent SPR in the third biggest French department (South-East of France).

Methods:

Four retrospective studies were conducted in high-schools between March and April 2001, 2008, 2015 and 2019 (n = 4367). A quota sampling design was used to obtain geographically and socially representative samples. They were invited to report their sex, their socioeconomic status (SES) and their sport participation. A sports player was defined as an adolescent playing sport for at least one hour a week. SPR were calculated by sex and SES with 95% confidence interval (95% CI).

Results:

A decline in SPR, from 79.0% (95% CI = 76.4-81.7) to 64.5% (95% CI = 61.7-67.3), accompanied with a growth of social inequalities, were observed. SPR of low-SES adolescents declined from 67.7% (95% CI = 61.1-74.3) to 42.6% (95% CI = 36.7-48.4). SPR also declined from 72.5% (95% CI = 66.2-78.8) to 69.9% (95% CI = 64.5-75.3) for high-SES girls, from 87.2% (95% CI = 82.5-92.0) to 65.2% (95% CI = 59.6-70.9) for low-SES boys and from 91.0% (95% CI = 87.0-95.0) to 83.0% (95% CI = 78.5-87.4) for high-SES boys.

Conclusions:

Temporal trends in adolescent SPR in this territory are in decline since 2001. Governmental plans to improve SPR seems to have had a limited success in this territory.

Key messages:

- Weekly sport participation is declining among adolescents in the South-East of France.
- Social inequality in weekly sport participation are increasing over time.

Abstract citation ID: ckac130.193
Trends and serotype distribution of human Salmonella strains in central Italy (2015-2021)

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Introduction:

Salmonella enterica (S.) is one of the most common agents of foodborne infections and a risk for children, elder people and immunocompromised patients. S. is the first cause of foodborne outbreaks in the EU, the majority being caused by S. Enteritidis. We report S. serovars prevalence and trends in clinical isolates in central Italy from 2015 to 2021.

Methods:

S. strains of patients from Lazio and Tuscany regions isolated by hospitals and private laboratories were sent to the Regional Reference Centre for Pathogenic Enterobacteria (CREP) at IZSLT (Rome) for serotyping. All metadata and a selection of isolates were shared with ISS according to the National Surveillance Enter-Net Italia program.

Results:

A total of 2395 strains were collected from 2015 to 2021, with a mean value of 342 strains per year. Notably, reported cases did not decrease during the pandemic in 2020. A total of 116 different serovars were identified. The most common ones were S. Typhimurium var. monophasic, which increased from 2015 to 2021, S. Enteritidis, which peaked in 2018 doubling its average, and S. Typhimurium with a reverse trend compared to the monophasic variant, followed by S. Infantis, S. Napoli and S. Derby. Afterwards, S. Brandenburg showed a constant increase (from 2 cases in 2015 to 18 cases in 2021). S. Strathcona showed a significant peak during 2019 with 23 cases, correlated to a European reported outbreak. The average age of patients was stable (mean 28.5, median 12.8), except for an increase in 2021 (mean 35.2, median 27).

Conclusions:

The results show a substantial agreement between data collected in central Italy and national trends. The occurrence of cases per year is stable. The serovars prevalence does not agree with the prevalence found in EU, in particular concerning S. Typhimurium var. monophasic frequency. Further investigations are needed to explain the significant increment of patients' mean age in 2021.

Key messages:

- This kind of studies provide a detailed picture of the S. serotypes actually relevant to human health and could be used to improve and update food safety regulations and monitoring programs.
- Surveillance and digital reporting, even retrospective, are pivotal tool for long-term monitoring, outbreaks investigation and research.

Abstract citation ID: ckac130.194
The impact of the COVID-19 pandemic on tuberculosis case reporting in Kazakhstan

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Background:

The COVID-19 pandemic had a significant impact on economic development, lifestyles and health systems in all countries. Due to the lack of medical interventions, many countries adopted restrictive measures to slow the spread of the virus and reduce the burden on the healthcare system. Quarantine measures have had an impact on the transmission of SARS-CoV-2. However, the unintended consequences of such drastic measures were inevitable. In developing countries, there have been adverse effects of disruptions in health services, including the provision of timely medical services in detecting cases of tuberculosis in the population. The aim of this study was to study the influence of COVID-19 pandemic on the tuberculosis incidence in the Republic of Kazakhstan.

Methods:

We analyzed national data on the reported tuberculosis cases and screening results of tuberculosis in Kazakhstan for 2019-2020. The primary data were collected from regular reporting of cases through surveillance.

Results:

The number of registered patients identified during screening activities in 2020 were 2,854 cases compared to 4,288 cases in 2019 before COVID-19 era. The proportion of cases with antibiotic-resistant (poly, multi, super) forms of tuberculosis increased up to 6.7% in 2020 in comparison with 2019.

Conclusions:

There is a need to conduct an analysis of the reasons for the increase in cases of multidrug-resistant and extensively drug-resistant tuberculosis. The working process should be adapted to epidemics and emergencies to ensure the availability of medical services, as well as to improve the system of preventive examinations and screening for the early detection of TB cases. The abstract was submitted under the 'CATINCA - Capacities and infrastructures for health policy development' project which is coordinated/led by Robert Koch Institute and supported by the WHO Regional Office for Europe.

Key messages:

- The detection of tuberculosis during preventive examinations and screenings significantly decreased in 2020 compared to 2019.
- In recent years, there has been a significant increase in the number of cases with poly-, multi- and superantibiotic-resistant forms of tuberculosis.

Abstract citation ID: ckac130.195
Major economic burden of musculoskeletal and connective tissue diseases in Slovenia

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Background:

Musculoskeletal and connective tissue diseases represent a growing public health problem, a great burden on health systems and place a heavy burden on society as a whole. Patients with musculoskeletal and connective tissue diseases often retire early, and any early retirement that could be prevented represents a loss of human capital, which means great social and economic damage to society. The present study was conducted in order to calculate for the first time in Slovenia the costs of the six most common diseases of the musculoskeletal and connective tissue diseases for the period from 2016-2018.

Methods:

The calculated burden of musculoskeletal and connective tissue diseases was based on the calculation of various direct and indirect costs cross-sectionally at the level of one year. The methodology of National Transfer Accounts (NTA) was used for the calculation of indirect costs. Six major diagnoses based on the International Classification of Diseases and Related Health Problems for statistical purposes were selected for calculation. Data were obtained from different national routine databases.

Results:

Calculations of the economic burden of musculoskeletal and connective tissue diseases in Slovenia showed that the economic costs of six selected diagnoses in the period 2016-2018 averaged about 5% of total health expenditure or 0.4% of gross domestic product in this period. The highest direct costs were hospitalizations, followed by costs for medicines, first curative visits at the primary level and visits to the outpatient clinic at the secondary level.

Conclusions:

The results of the first calculation of the burden of musculoskeletal and connective tissue diseases in Slovenia showed a high economic burden of these diseases in the period from 2016 to 2018. The economic burden is underestimated and would be significantly higher considering all diagnoses from this group of diseases.

Key messages:

- Reducing the burden of musculoskeletal and connective tissue diseases is absolutely necessary in view of the aging population and in the light of the sustainability of health systems.
- The preparation of strategic documents for the promotion of musculoskeletal health and the consistent implementation of their contents has become urgent in Slovenia.

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The Portuguese observatory on occupational psychosocial factors: contribution for public health

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To achieve the goal of sustainable employment, considering the profile of the Portuguese working population (PWP), is needed a range of strategies to ensure long, productive, and sustainable careers allied with a better quality of working life, health, and wellbeing, but also with public health policies grounded on scientifically validated and reliable data. This is possible through a comprehensive working system approach that ensures workers will be mentally and physically able to remain at work by the balance between work demands and individual resources allied with public health policies transfer into the workplaces by organizations' leadership and policy makers. The Portuguese Observatory on Occupational Factors (Popsy@Work) aims at addressing this global challenge by: i) digitally collecting psychosocial data on the PWP; ii) implementing and strengthening of a psychosocial occupational health surveillance digital system; iii) providing reference values for the PWP concerning Psychosocial Health; iv) Transferring to society knowledge and best practices; v) Raising awareness on the importance of psychosocial management in occupational settings based on science. Popsy@work is a digital platform that collects and aggregates psychosocial data analytically and creates a visualization hub adding value to data on the PWP and giving science back to society in a usable way, empowering workers, strengthening organizations and grounding public policies. Pospy@Work considers the development of strategic intelligence on levels and inequalities of psychosocial health and well-being in occupational settings by robust metrics and reference data. Creating opportunities for national policy dialogue on inequalities, including the psychosocial health of the PWP through collaboration with diverse sectors identifying and mapping subgroups of populations whose unmet needs require specific outreach measures.

Key messages:

- Popsy@work allows psychosocial health monitoring, reporting and foresight, promoting the provision of robust metrics and reference values for the Portuguese working population.
- Popsy@work allows psychosocial health on occupational settings to be digitally monitored in a continuous way and sustain public health policies.

Abstract citation ID: ckac130.197
Changing life expectancy in Europe 1990-2019: Global Burden of Disease Study 2019

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Improvements in life expectancy have slowed in high income countries, with uncertain causes. We assessed the contribution of different causes of death to changes in life expectancy, and changes in population exposure to major risk factors in 16 European Economic Area countries plus the 4 nations of the United Kingdom from 1990-2013 and 2013-2019, using the Global Burden of Disease Study. After decades of steady improvements in life expectancy, all countries experienced smaller annual improvements after 2013. Norway experienced the smallest mean annual rate of change in improvement from pre 2013 to post 2013 of 0.03 years, and Northern Ireland (followed closely by Scotland and England) experienced the largest annual reduction from pre to post 2013 of 0.25 years. The cause of death responsible for the largest reductions in life expectancy improvements after 2013 was cardiovascular disease, followed by neoplasms. The largest reductions in deaths from cardiovascular disease were attributable to seven major risk factors: high LDL cholesterol, tobacco, dietary risks, high fasting plasma glucose, high systolic blood pressure, high body mass index, and low physical activity. The risk factors for deaths from neoplasm were similar. Exposure to tobacco remains a high risk but exposure declined steadily. Exposure to the other risks generally worsened after 2013, particularly for BMI and high fasting plasma glucose. The European countries that had better maintained reductions in deaths from cardiovascular disease and neoplasms also experienced larger improvements in life expectancy. These changes were underpinned by changing exposure to major risks. Policy responses to the slowdown in life expectancy improvements should include reducing population exposure to major risks, including the broader risks from diet and low physical activity, through prevention and addressing the broad social and commercial determinants of health as well as adequate funding for health services.

Key messages:

- Reductions in European life expectancy improvements have been driven by changes in deaths from cardiovascular disease and neoplasms.
- Policy responses to the slowdown in life expectancy improvements should include reducing population exposure to major risks, including the broader risks from diet and low physical activity.

Abstract citation ID: ckac130.198
Causes of death in Germany: A time series analysis of official statistics from 1990 to 2020

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Background:

The analysis of the temporal patterns of causes of death is one of the most important tasks in population health monitoring and forecasts. In the present study, a detailed time series analysis of official statistics is performed in order to identify major temporal trends in the distribution of health risks in the German population.

Methods:

Official statistics on causes of death from 1990 to 2020 are utilised. The causes of death are classified according to the International Classification of Diseases (10th Revision). Temporal trends of death cases per 100,000 population and ten-year forecasts are estimated with integrated autoregressive moving average models (ARIMA).

Results:

Cardiovascular diseases, neoplasms and cerebrovascular diseases have accounted for more than 70% of all deaths between 1990-2020. In contrast, urogenital, infectious and muscular-related diseases have been reported for less than 2% of deaths during the same period. Annual deaths per 100,000 population due to cardiovascular and cerebrovascular diseases largely decreased between 1990-2020 (-11.07 95% CI [-15.17; -6.97] and -4.02 95% CI [-6.85; -1.20], respectively). Concerning other causes of deaths, no temporal trends were observed, with the exception of diseases of the nervous and digestive system (0.83 95% CI [0.08; 1.58]). The forecasts for the decade 2020-2030 suggest that cardiovascular diseases and neoplasms are expected to remain the most frequent causes of death in Germany and could account for about 67% of all deaths.

Conclusions:
The results indicate that non-communicable diseases, in particular the group of cardiovascular diseases and neoplasms, will remain the major driver of mortality in Germany over the next decade.

Key messages:
- Cardiovascular health has greatly improved over the last decades in Germany.
- Non-communicable diseases are likely to remain the main drivers of morbidity and mortality over the next decade.

Abstract citation ID: ckac130.199
Social inequalities in multimorbidity patterns in southern Spain: findings from the DEMMOCAD survey

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Background:
Multimorbidity (MM) is associated with lower quality of life, greater disability, and higher use of health services. It is a complex problem that is difficult to capture due to the broad spectrum of concurrent chronic diseases involved. There is a need to identify and characterize patterns of chronic conditions in the local context of specific population groups. The DEMMOCAD project aims to respond to this knowledge gap by detecting patterns of MM and their inequalities in the province of Cadiz (Spain).

Methods:
A cross-sectional study was carried out by means of telephone interviews with people over 50 years of age. The final sample was 1592 individuals with MM. A latent class analysis was carried out to identify patterns of MM from 31 chronic conditions. First, the appropriate number of classes was established, considering model fit indices, class size, and clinical interpretability. Subsequently, covariates were introduced into the model using the three-step approach, a technique that minimizes biases in the multinomial regression model.

Results:
Preliminary analyses of the goodness-of-fit indices of the model derived five MM patterns (entropy = 0.727): (C1) mild MM; (C2) cardiovascular; (C3) musculoskeletal; (C4) musculoskeletal plus mental; and (C5) complex MM. Compared with class C1, persons in class C5 were significantly older and less educated, class C4 had a lower income, class C3 was smokers and disabled, and class C2 was characteristic among older males. All four classes also showed lower scores on mental and physical dimensions of the SF12 scale compared to class C1.

Conclusions:
In addition to providing an adjusted characterization of the population of the area analyzed, these initial findings highlight the existence of social inequalities in multimorbidity at the local level that should be addressed by implementing policies targeting the most vulnerable groups in Cadiz (low socio-economic status groups, people with disabilities, and the elderly).

Key messages:
- Five patterns of multimorbidity were identified in the province of Cadiz (Spain).
- Tailored policies are needed to reduce social inequalities in multimorbidity among vulnerable groups in this local area.

Abstract citation ID: ckac130.200
Strategies to recruit people with selected nationalities for the interview survey GEDA Fokus

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Background:
People with migration history (PMH) are underrepresented within health monitoring at Robert Koch Institute (RKI). To better describe the health status of PHM, the RKI is currently conducting the health interview survey GEDA Fokus with different migrant groups. Aim of this contribution is to present which sub-groups in this sequential mixed-mode survey design are reached by which mode.

Methods:
People aged 18-70 years with Croatian (hr), Italian (it), Polish (pl), Syrian (sy) or Turkish (tr) nationality were drawn out of 99 residents' registration offices all over Germany (N = 33,436). Study persons were invited sequentially to participate online (saq-web), paper-based(saq-paper) and in person (CAPI) or by telephone (CATI) in Arabic, Croatian, German, Italian, Polish or Turkish. Saq-web was available in German only or bilingual. Data collection took place from November 2021 to April 2022. Per nationality, 1,200 participants were recruited.

Results:
As of 25th of April, 6,197 people took part, most often per saq-web (49%), which was less often used among participants aged $\geq$ 50 years (35% vs. 56%). Pl participants used saq-web most often in German only (55%), sy participants most often used the bilingual version (77%). Saq-paper was more often used by participants aged $\geq$ 50 years (41% vs. 22%) and less often by tr (21%) and sy (24%) participants. Participants with it nationality most often took part on their own initiative (saq) (92%), while tr (33%) and pl (28%) participants were recruited via personal contact (CAPI/ CATI) more often.

Conclusions:
Preliminary results show that offering multiple modes of administration helps to reach different sub-groups. Personal contact contributes to reach those not directly taking part on their own initiative. The opportunity to utilize the bilingual version of the questionnaire was well accepted, especially among those with presumably shorter duration of residence in Germany.

Key messages:
- Offering different modes of survey administration, including personal contact increases survey participation.
- In order to reach people with migration history in their heterogeneity the utilization of multilingual questionnaires is crucial.

Abstract citation ID: ckac130.201
The impact of perceived discrimination on subjective health among adolescents

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Background:
Interpersonal discrimination (disc.) plays an important role for physical and mental health, througoutthe life-course and in particular during adolescence. People can experience disc., e.g. due to their physical appearance or language preferences

independently of having a migration background (mb, official statistical category in Germany). Aim of this contribution is to analyse the impact of perceived disc. on subjective health and its relation to mb.

Methods:

Using data from from German Health Interview and Examination Survey for Children and Adolescents (KiGGS) wave 2 (2014 - 2017), we analysed by logistic regression the impact of a) overall perceived disc. ($\geq$ one indication of "sometimes" across eight dimensions), b) perceived disc. related to origin, skin colour, accent, language, dialect and c) one- and two-sided mb (one or both parents with own mb) on subjective health among adolescents aged 14 to 17 years.

Results:

Among 3,558 adolescents, 21% perceived disc. in at least one of overall eight dimensions, 11% reported disc. related to their origin, skin colour or language. A one-sided mb was measured for 8,4% of participants, a two-sided mb for 20%. Perceiving overall disc. (OR = 3.29) and disc. related to origin, skin colour or language (OR = 1.91) was associated with reporting a (very) bad subjective health. Mb had no impact. Effects remain after controlling for gender, age and socioeconomic position of parents (overall disc. aOR = 2.99; disc. related to origin, skin colour or language aOR = 1.65).

Conclusions:

Perceived disc. is associated with worse subjective health among adolescents, whereas no association with mb is observed. Epidemiological analyses solely focussing on one statistical category such as mb are insufficient as they do not consider those affected by discrimination but are not captured by mb. Differentiated analyses are necessary to elucidate explanatory mechanisms and protective factors.

Key messages:

- Discrimination has negative effects on self-rated subjective health.
- Differentiated analyses based on more than "origin" or "migration background" is required to describe public health.

Abstract citation ID: ckac130.202
An analysis of RMNCH data quality on technological applications and methods to improve it

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Background:

Health information management systems (HIMS) are used by most countries to record data on the coverage of reproductive, maternal, newborn and child health services (RMNCH). The HIMS in India manually collects data from primary health care facilities. Low and middle income countries (LMIC) are shifting to technological applications (apps) to improve reporting and real time tracking of RMNCH services. This study found high disparity of data between different sources. Yet governments and other stakeholders continue to use poorly reported data for daily monitoring, review and decision making. This study shares insight on the high degree of data variation, and proposes process and policy changes to improve it.

Methods:

To quantify the extent of data variation, critical RMNCH indicators from apps and HIMS are compared for a given geography and time period. Workshops with the primary health workers and their supervisors were conducted to understand the challenges in reporting, based on which solutions to improve the efficiency of apps are proposed.

Results:

Preliminary analysis in the state of Madhya Pradesh shows, in the year 2020-2021 live births, neonatal deaths and Infant deaths were 93%, 91% and 71% less respectively on apps as compared to HIMS. Major challenges of reporting on technological applications by primary health workers

- low internet penetration at 31% in Madhya Pradesh
- Lack of mechanisms to ensure user friendly and glitch-free apps
- Poor capacity to understand public health indicators and application generated reports

Conclusions:

Online data quality must be governed by policies that focus on implementing mechanisms to analyze and validate data from different sources and remove blockages to quality reporting. Online public health reports need to be demystified by building capacities of primary health workers and their supervisors to use data to reflect on their performance and plan for improvement.

Key messages:

- Poor online data will impact real time action to ensure coverage and accountability for low performance.
- Investing in user friendly efficient technology for RMNCH services with strong quality control mechanisms, is the priority for good decision making.

Abstract citation ID: ckac130.203
Trends in working years lost due to different types of work disability and unemployment

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Background:

Little is known about working years lost (WYL) due to work disability and unemployment by industrial sector. This information would help in directing interventions promoting healthy working careers, knowing that the sectors have been differently affected by economic fluctuations and other changes in the labour market. We examined trends in WYL in the general Finnish population and by industrial sector in the period after the 2008 financial crisis with a particular focus on different types of work disability.

Methods:

Utilising register data on the Finnish working-age population and the Sullivan method, we calculated expected WYL due to sickness absence, other temporary work disability, partial disability retirement, full disability retirement, unemployment and other reasons in years 2010, 2013 and 2016 for the general male and female populations and by industrial sector.

Results:

In 2010, a 30-year-old person was expected to have around two-and-a-half to three WYL due to full disability retirement and unemployment until reaching age 65, depending on gender and the reason. By 2016, WYL due to full disability retirement decreased to less than two years and that due to unemployment increased to around four years among both genders. WYL due to sickness absence, other temporary work disability, partial disability retirement and other reasons remained relatively stable. The total WYL increased between 2010 and 2016 particularly among women. The differences by industrial sector in WYL were attributable more to unemployment than to the different work disability statuses.

Conclusions:

After the financial crisis unemployment appears to have replaced disability retirement as the most important reason for WYL. Furthermore, as individuals with a defined industrial sector are initially employed, sectoral differences in WYL are not largely attributable to disability retirement, disability pensioners typically having been outside the labour market for a long time.

Key messages:

- During economic downturns work disability may be increasingly disguised as unemployment, which should be considered when tackling problems of health and work ability of the labour force.

- Partly due to healthy worker effect, differences in working years lost by industrial sector are attributable to long-term work disability to a much smaller extent than to unemployment.

10.R. Mental health 2

Abstract citation ID: ckac130.204
A German study on the impact of stress on interparental relationship strain after preterm birth

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Background:
Relationship satisfaction is an important predictor of well-being. Few studies address the effects of stress on interparental relationships of parents with preterm infants. However, the experience of a preterm birth represents an extreme, stressful event and therefore may place a strain on a relationship. Our aim is to examine the impact of postnatal stress on maternal and paternal perceptions of relationship strain.

Methods:
As part of the Neo-CamCare project, a retrospective cross-sectional study was conducted targeting parents with infants with a birth weight below 1,500 g. Linear regression was used to analyse the influence of stress on relationship strain.

Results:
437 mothers and 301 fathers participated. Data indicate that interparental relationship strain experienced by fathers (M = 2.61, SD = 1.46) is lower than strain experienced by mothers (M = 3.43, SD = 1.7). The stress level due to the infant's behaviour and appearance is lower in fathers (M = 2.53, SD = 0.95) than in mothers (M = 2.98, SD = 1.05). Stress due to parental role change is higher in mothers (M = 3.37, p = 1.04) than in fathers (M = 2.49, SD = 0.99). Regression analyses show that stress due to behaviour and appearance, as well as parental role change, can be associated with relationship strain in mothers. For fathers, only stress experienced due to the behaviour and appearance can be associated with relationship strain, whereas parental role change is not significant.

Conclusions:
Our data illustrate that relationship strain can result from stress in mothers and fathers, indicating the need for stress prevention measures for both. Only mothers show relationship strain due to stress in their parental role. Although it is unclear what mechanisms underlie these findings, we assume that the maternal role is still primarily associated with child care. One way to relieve maternal stress could be to increase psychological support and the promotion paternal involvement in the postnatal period.

Key messages:
- Understanding the extent to which stress affects relationships helps to address mothers and father equally.
- Based on the findings, parent-centred interventions can be developed to manage relationship strains.

Abstract citation ID: ckac130.205
Perceived discrimination and mental health among adolescents in Germany

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Background:
The association between perceived discrimination and mental health in adolescents has been widely documented. Aim of this contribution is to show how the relationship between mental health and perceived discrimination at school, work or job training differs depending on socio-economic or migration-related determinants.

Methods:
The present analyses was conducted with data from German Health Interview and Examination Survey for Children and Adolescents (KiGGS) wave 2 (2014 - 2017). Weighted linear regression analyses were conducted to explore the association between perceived discrimination at school, work or job training and behavioral problems in adolescents (14-17 years). Also, we examined the extent to which the association is moderated by the parents' income, education as well as the language spoken at home.

Results:
Of all young people, 25.5 % reported perceived discrimination at school, work or job training. Behavioral problems were reported more frequently in adolescents with discrimination experience (12.5 % vs. 3.23 %). Multivariate analyses showed that the coefficients of the association between perceived discrimination and behavioral problems differed by parents' level of education (low 4.07 (2.39-5.74)/high 2.47 (1.29-3.65)), income (low 3.61 (2.06-5.16)/high 0.35 (-1.81-2.51)), or language spoken at home (German 2.02 (0.33-3.70)/ Other 3.48 (-0.27-7.23)).

Conclusions:
A large proportion of adolescents experienced discrimination, with this being reported more frequently among young people with behavioral problems. Parents' income and education as well as the language spoken at home are relevant for this context. To ensure that health inequalities are not exacerbated by discrimination, targeted prevention measures are needed in these settings. These should address not only the individual needs of young people, but also the underlying conditions and thus aim to promote health equity in the long term, especially in already disadvantaged groups.

Key messages:
- Perceived discrimination is important when considering mental health, whereby these associations may vary between socioeconomic and migration-related determinants.
- Prevention programs regarding discrimination are needed, which address individual needs and underlying conditions of adolescents, especially in already disadvantaged groups.

Abstract citation ID: ckac130.206
Normalisation of mental health problems: Adolescents' views on mental health problems and stigma

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Background:
It is essential to listen to adolescents' views on mental health issues since these problems are common among young people.

Exposure to stigmatization is an additional burden, causing increased suffering. This qualitative descriptive study aimed to explore adolescents' views on the prevalence of mental health problems and public stigma related to mental health problems.

Methods:

Semi-structured individual interviews and focus group interviews were conducted with a total of 32 adolescents, aged 15-18 years. The interviews were held on Gotland, Sweden's largest island, between October and December 2020. Systematic text condensation was used to analyse the data.

Results:

Three themes were identified: Having mental health problems is the new normal; What others think of us affects us a lot; If others lack experience and knowledge, they don't respond in a good way. The adolescents perceived mental health problems as a common phenomenon. Increased mental health problems in young people were linked to pressure related to school performance, social media and improved openness about mental health problems. Stereotypic gender norms, rumours and prejudice were perceived as important causal risk factors of mental health problems. Lack of knowledge was suggested as a source of prejudice against people suffering from mental health problems.

Conclusions:

The adolescents recognised mental health problems as an increasing public health issue, but also as a normal phenomenon due to current living conditions for young people.. They perceived stereotypic gender norms, taboo and prejudice against mental health problems as factors contributing to and increasing mental health problems and wished for a society without such factors. The results suggest that the tri-folded description of stigma involving stereotypes, prejudice and discrimination can be applicable to adolescents.

Key messages:

- The results suggest that adolescents recognise mental health problems as an increasing public health issue but also as a normal phenomenon due to current living conditions for young people.
- Increased knowledge of mental health problems alongside reduction of prejudice and stereotypic gender norms was requested by the adolescents to improve young peoples' mental health.

Abstract citation ID: ckac130.207
Multi-method analysis of gender differences in psychological distress among the elderly during COVID

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As COVID swept through Europe, and the world, with high rates of illness and death, so did symptoms of anxiety, depression, post-traumatic stress disorder, stress, and psychological distress. This study examines the relationship between gender and psychological distress among Latvians over 50 years old within the first 6 months of the COVID-19 pandemic. Data from Wave 8 COVID-19 data of the Survey of Health, Aging, and Retirement in Europe (SHARE) as an early data version of the SHARE Corona survey conducted between June and August 2020. It features the data collected by telephone (CATI) on topics related to COVID-19 for a large sub-sample of SHARE panel respondents. This study examined a sample of 980 adults over 50 years old in Latvia. Bivariate analysis were performed utilizing the Pearson chi-square test for association to examine differences in symptoms of psychological distress by gender during the first six months of the COVID-19 pandemic. Level of significance was determined by the p-value test statistic. Alpha level was established at .05. A chi-square test for association shows that there were statistically relationships between gender and feeling nervous (X2 (2, N = 976) = 22.11, p < .001), feeling depressed (X2 (3, N = 976) = 10.95, p < .01), and trouble sleeping (X2 (2, N = 976) = 20.40, p < .001). This study rejects the null hypothesis that no differences exist between the genders, as women reported greater psychological distress during the first 6 months of the COVID-19 pandemic. Additional multi-method analysis is consistent with these findings and concludes that this is due to the greater concern women report for family, and the burden which placed limitations on meeting their children and grandchildren.

Key messages:

- Gender differences exist in experiences of psychological distress during the early COVID-19 pandemic among the aging population in Latvia.
- With the high rates of illness and death associated with the COVID-19 pandemic, so were symptoms of anxiety, depression, post-traumatic stress disorder, stress, and psychological distress.

Abstract citation ID: ckac130.208
Enhancing the understanding of parental burnout from an empirical and psychometric perspective

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Background:

Parental burnout (PB) is a relatively new syndrome resulting from chronic parenting stress. Besides efforts to enhance scientific and public understanding of PB, little is known about its link to intimate partner violence (IPV), and the psychometrics of German measures for PB remain an under-researched topic. This study aims to address these gaps by 1) testing the interplay of PB, parenting, couple satisfaction, and IPV, 2) examining the psychometrics of the German version of the Parental Burnout Assessment (PBA).

Methods:

Data were collected online as part of an international PB study including Austrian parents aged 18 or older with at least one child at home (0-18). Overall, N = 121 mothers from a community sample reported on family functioning, PB, couple quality and gender roles. Structural equation modeling was applied to assess the fit of the theoretical model. Furthermore, data from N = 220 Austrian and German parents on PB and familial variables during the Covid-19 pandemic were collected to analyze the psychometrics of the German PBA. Confirmatory factor analyses were performed to test the validity of the PBA.

Results:

SEM indicated a good model fit, $\chi\circ2(37) = 35.51$, $p = .54$; CFI = 1.00; RMSEA = .00, (95% CI = .00 -.06). Furthermore, an indirect effect of couple satisfaction on the link between IPV to PB and IPV to parenting was found.

Conclusions:

This study provides preliminary evidence for the importance of couples' relationship satisfaction in understanding links between IPV and PB as well as parenting in German-speaking mothers. On the basis of these findings, future public health efforts may be organized to focus on preventing PB indirectly or directly by targeting couples' relationship. Additionally, psychometric results of this study can inform researchers and practitioners about the applicability of the German PBA, improving screening of at-risk parents, and offering support for parents at early stages.

Key messages:

- Our findings underscore the importance of couples' relationships for understanding parental burnout in German-speaking parents.
- Valid and reliable assessment of parental burnout can support the screening of at-risk parents at early stages.

Abstract citation ID: ckac130.209
Managing Minds at Work: development of a digital line manager training programme

Holly Blake

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Background:

Mental ill health is the leading cause of sickness absence with high economic burden. Workplace interventions aimed at supporting employers with prevention of mental ill-health in the workforce are urgently required. Managing Minds at Work (MMW) is a digital intervention targeting support for line managers in any work setting to promote better mental health at work through a preventative approach.

Objectives:

To describe the design and development of the MMW digital training programme, prior to feasibility testing. We adopted a collaborative participatory design involving co-design (users as partners) and principles of user-centred design (pilot and usability testing). Agile methodology was used to co-create intervention content with a stakeholder community of practice. Development processes were mapped to core elements of the Medical Research Council (MRC) framework for developing and evaluating complex interventions.

Results:

The program covers five broad areas: (i) promoting self-care techniques among line managers; (ii) designing work to prevent work-related stress; (iii) management competencies to prevent and reduce stress; (iv) having conversations with employees about mental health; (v) building a psychologically safe work environment. Pilot and usability testing (n = 37 surveys) aligned with the Technology Acceptance Model (TAM) demonstrated that MMW was perceived to be useful, relevant, and easy to use by managers across sectors, organization types and sizes. We identified positive impacts on manager attitudes and behavioural intentions related to preventing mental ill-health and promoting good mental well-being at work.

Conclusions:

MMW is a digital training programme for line managers that has been co-created using rigorous development processes and aims to support employers with primary prevention in mental health. The next step is to explore the feasibility and acceptability of this intervention with line managers in diverse employment settings.

Key messages:

- We used co-creation and participatory design to create Managing Minds at Work - a new digital intervention to support line managers in preventing mental ill-health at work.
- The next step is to explore the feasibility and acceptability of this intervention with line managers in diverse employment settings.

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Exploring ethical issues arising from a problem-solving intervention in the Swedish Primary Care

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Background:

Common mental disorders count for a large percentage of sick leave cases in Europe and in Sweden. Problem-solving with workplace involvement have shown promising results in reducing the number of sick leave days for employees on sick leave for these conditions. Engaging the workplace by for example including the first-line manager in the return-to-work process changes the usual role of the primary care. Hence, this study aims to explore ethical issues that potentially arise when introducing workplace involvement as part of a problem-solving intervention.

Methods:

A qualitative study in the Swedish Primary Care using data from semi-structured interviews with rehabilitation coordinators (n = 6), employees on sick leave for common mental disorders (n = 13), and their first-line managers (n = 8). A theoretical framework for systematic identification of ethical aspects of healthcare technologies was used to guide the interviews and reporting of results. Content analysis was used to code the data, searching for latent content. Ethical issues related to the ethical values privacy, identity, autonomy, professional values, third party, equality and justice were identified and described. The analysis was concluded by a normative discussion.

Results:

Ethical issues were identified such as difficulties for the employees to control personal information. A need to create an integrated role of a patient and an employee and for coordinators to act neutral instead of as a patient advocate. Managers needed to balance the needs of the organization with the needs of the employee. A pre-requisite for participation was agreeing to manager involvement which may affect the equality of the intervention.

Conclusions:

A conversation about sharing of information, roles, responsibilities and expectations during the rehabilitation should be initiated early and be continuous. Managers need support in learning the "how to" when having an employee on sick leave due to a common mental disorder.

Key messages:

- The problem-solving intervention imposed ethical issues in regard to control over personal information and role shifting, which can be handled through discussions and awareness.
- By analysing ethical aspects and norms and values connected to the intervention, adaptations and solutions can be discussed and handled before full scale implementation.

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Effect, economic and process evaluation of a mental health return to work intervention: study design

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Background:

In Germany, the sickness absence duration for mental disorders lasts on average more than twice as long as for all other diseases. Interventions that link medical-therapeutic approaches with organisation-directed methods to improve a sustainable return to work (RTW) have hardly been evaluated. The aim is to present the study design, which evaluates the (cost-)effectiveness and feasibility of an 18-month intensified RTW aftercare delivered by German psychiatric outpatient clinics to employees with mental disorders.

Methods:

A two-arm multicentre randomised controlled study is carried out. Sick-listed employees with mental disorders are recruited within psychiatric hospitals (n = 506). Besides care as usual, the intervention group receives a multimodal treatment consisting of individual RTW-support, RTW-aftercare groups, and web-based aftercare. At five time points over a 24-month observation period, quantitative effectiveness and health economic evaluation data from a societal perspective will be obtained. Intervention fidelity, reach, context, satisfaction and dose delivered will be examined in a multi-method process evaluation. A qualitative evaluation using pre-and post-interviews from a sub-sample (n = 30) will complement the effectiveness and process evaluation findings.

Results:

Recruitment is currently ongoing. The intervention is expected to improve the employeés achievement of a sustainable RTW, defined as the 12-month remain and participation at work without having sickness absence periods of > 6 weeks (after RTW). It is hypothesized that the intervention is preferable in terms of costs compared to care as usual. The interviews allow for a better understanding of subjective experiences with the intervention.

Discussion:

This study evaluates the (cost-)effectiveness and implementation process of an intensified RTW aftercare. If successfully implemented and evaluated, it might be adopted as standard care for employees with mental disorders in Germany.

Key messages:

- A comprehensive evaluation of a RTW-intervention is needed.
- The proposed design includes an effectiveness, process and health economic evaluation. It has a unique scope and follow-up length.

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Mental health care in the post-partum: differences between Danish-born, migrants and descendants

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Background:

Research suggest migrants are at higher risk of mental health (MH) disorders in the post-partum (PP), while they have less access to care. However, MH need and care have been studied separately, descendants have been, mostly, excluded and migrants, studied as a homogeneous group. We aim to assess differences in MH care use between Danish-born, migrants and descendants in the PP after a MH need is identified; and to characterize migrants at lowest risk of accessing MH care.

Methods:

This retrospective cohort study includes 45571 women who gave birth from 2002 to 2018 in Denmark and had a MH need identified by a nurse in the PP program. MH care use, from delivery to two years PP, was retrieved from national registries and includes contacts with the general practitioner, psychologist, psychiatrist, emergency room, hospitalization, and medication expedition. Cox regression models estimated time to MH care use, by migrant status and migrant characteristics, adjusted by history of MH, sociodemographic and birth variables. Results are shown as hazard ratios (aHR [95% CI]).

Results:

Final sample consisted of 75.7% Danish, 19.7% migrants and 4.7% descendants. Median time to treatment was 4 months for Danish and 6 months for migrants and descendants. Risk of accessing MH care was lower for migrants (aHR 0.75 [0.70; 0.79]) and descendants (aHR 0.77 [0.70; 0.86]) than for Danish-born. Among migrants, refugees showed higher risk of accessing MH care (1.22 [1.04; 1.42]) than non-refugees; recently arrived showed lower risk (<5 years, 0.85 [0.74; 0.97]) than those living in Denmark for ≥10 years; and migrants from East Africa showed the lowest risk of accessing MH care (0.47 [0.33; 0.66]) compared to migrants from North Europe.

Conclusions:

There is a gap in PP MH care between Danish-born women, who show higher and earlier access to care, and migrants and descendants. Refugee background, length of residency and origin impact migrant's MH care use and should be considered.

Key messages:

- Unmet need for MH care is higher for migrants and descendants than for Danish-born in the postpartum.
- MH care use differ among migrants and tailored strategies of care provision could be beneficial.

Abstract citation ID: ckac130.213
Having mental health problems but not sickness absent: factors of importance among privately employed

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Background:

Knowledge is scarce on individuals who are experiencing mental health problems but who have low or no sickness absence (SA). The aim of this study was to identify individual-level characteristics, including sociodemographic factors, morbidity, and lifestyle, among privately employed individuals with previous depression/anxiety but no SA during follow-up.

Methods:

This prospective cohort study included 750 twin individuals born in Sweden in 1959-1986, employed in the private sector and with a history of depression/anxiety. Depending on the birth year, the twins were invited to participate in two different health-screening surveys in 2005, when study participants were aged 19-20 or 20-30, respectively. Survey data were used to evaluate depression and anxiety, self-rated health, stressful life events, emotional neglect, level of physical activity, and alcohol use. Study participants were prospectively followed regarding SA occurrence between 2006 and 2018. Data on SA, sociodemographic factors, outpatient healthcare use, and use of prescribed antidepressants were obtained from the Swedish national registries. Descriptive statistics will be reported with further analyses for the presentation.

Results:
Preliminary results showed that despite previous depression or anxiety, 35% of women and 52% of men were not on SA during the follow-up period. Those who had no SA during follow-up were more likely to have higher education >12 years (49%), experienced fewer stressful life events (43%) and emotional neglect (56%), had better self-rated health (95%), along with a lower use of antidepressants (11%) and outpatient healthcare (88%), as compared with those on SA (33%, 65%, 66%, 90%, 17%, and 98%, respectively).

Conclusions:
Higher education, being male, fewer life adversities, good self-rated health and low use of antidepressants and outpatient healthcare were individual-level factors of importance for those with previous depression or anxiety and no incident SA during follow-up.

Key messages:

- Individuals with previous depression/anxiety, but not sickness absent, were more likely to have higher education, be male, and have lower morbidity, as compared to individuals on sickness absence.
- Identification of factors that prevent sickness absence among those with mental health problems may potentially be used to improve sickness absence prevention strategies.

Abstract citation ID: ckac130.214
Job resources do not mitigate the impact of job demands for workers with depression

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Introduction:
Jobs characterized by low to moderate job demands and high job resources are associated with better work outcomes among healthy workers, yet it remains unclear whether this is the case for workers with depression. This study examined whether depression moderates the relationship between job demands, job resources, and maintaining employment.

Methods:
Data from the longitudinal population-based Lifelines cohort study were matched with register data on employment status from Statistics Netherlands (n = 55,950). The two-way interaction between job demands and depression and the three-way interaction between job demands, job resources and depression were examined in a zero-inflated Poisson regression model with path 1 including a binary employment outcome and path 2 a count variable including months out of employment.

Results:
The interaction effect of job demands and depression on being employed was significant (b = -0.22, 95% CI: -0.44; 0.01), showing that workers without depression were more likely to be employed whereas workers with depression were less likely to be employed if they had high job demands. The three-way interaction between job demands, job resources, and depression was significant for months out of employment (b = 0.15, 95% CI: 0.01; 0.29), indicating that workers with depression had more months out of employment when reporting high job demands and high job resources compared to workers without depression.

Discussion:
Although increasing resources to prevent negative work outcomes may be beneficial for workers without depression, this approach might be limited for the vulnerable subgroup of workers with depression.

Key messages:

- While job demands are associated with a higher likelihood of employment during follow-up for workers without depression, this is not the case for workers with depression.
- Job resources do not help workers with depression who face high job demands.

Abstract citation ID: ckac130.215
Co-locating public mental health services in communities: a realist evaluation

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Background:
Public mental health (PMH) services address social determinants of mental health, such as poverty, poor housing, and job insecurity. Austerity and welfare reform in the UK has led to cuts to social and welfare support, increasing poor mental health and widening inequalities, exacerbated by COVID-19. State health services lack capacity to tackle social issues that contribute to a large proportion of expressed mental health need. Co-locating PMH services within community spaces is a potential solution to increase early access and improve quality of services. Using a realist evaluation, we sought to develop the theory on how community co-location affects PMH outcomes, who this works best for, and how this is impacted by the context of delivery.

Methods:
We collected data from service-users and service-providers at six case study sites across England, UK, using interviews (n = 62), four focus groups (n = 40) and two stakeholder workshops (n = 19).

Results:
We identified four overarching theories. First, community providers do not operate under the same limits as state services allowing them the flexibility and time to build trust and ongoing relationships with service users. Second, the ethos and culture of services is to empower users to access help and be independent. Third, accessing support from a shared local space allows a coordinated and holistic response reducing barriers such as distance, cost, and anxiety. Four, as they are recreational services and spaces for access by all with no predefined/required level of need they are better at promoting wellbeing and primary prevention.

Conclusions:
Community co-location of PMH services can strengthen the overall mental health system by widening reach to people vulnerable to poor mental health and enabling earlier intervention on associated social determinants. This has potential to reduce mental health inequalities and demand on the state health system.

Key messages:

- Community co-location of PMH services can provide early and holistic support for complex social issues.
- There is potential to support the state health system by alleviating demand for help with ‘non-health’ issues.

10.S. Policy, politics and public health

Abstract citation ID: ckac130.216
Transformation of the long-term care system in Poland in the light of the maps of health needs

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As the inevitable ageing of the population progresses, the pressure on the public health system increases. The predicted rise in the share of people aged 65 and more from 19% in 2020 to 33% in 2050 jeopardises the capacity of the long term care in Poland. It demands immediate actions in public policies to strengthen the system and to provide the silver generation with the proper and adjusted services. That topic is one of the main issues for the map of health needs, developed by the Ministry of Health in Poland. The analyses investigate the current and future state of this part of the system, e.g. the number of visits, average length of stay, types of services, care-giver support ratio. Conclusions drawn from the data allowed to formulate a number of challenges, which include:

1. levelling up the access to the services,
2. increasing the number of outpatient services, provided at home or close to the place of residence,
3. implementation of the eHealth solutions,
4. support for the informal care-givers.In line with these information, the actions and strategic frameworks have been established at the national level and included:

1. strategic approach for deinstitutionalisation, in order to bring the long term care closer to the patients' environment, to provide them with an optimal level of comfort and to make them self-reliant for as long as possible,
2. enhancement of the inpatient care through transformation of less occupied wards into long term wards in district hospitals.

Key messages:

- The Maps of Health Needs help to create national public policies and strategic frameworks aimed at coping with the foreseen challenges of aging society pressuring the healthcare system.
- The main challenge for the long term care in the future is to channel the available resources in the appropriate way.

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The frequency of UTIs in people who undertake intermittent catheterization: A systematic review

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Background:

Intermittent Catheterization (IC) is a common procedure used for the management of incomplete bladder emptying in various diseases such as spinal cord injury, multiple sclerosis and benign prostatic hypertrophy. Catheterization is associated with several complications and particularly with an increased risk of developing urinary tract infections (UTIs) responsible for high morbidity worldwide and significant costs to health systems and society.Today, this health problem is still underestimated. Therefore, the aim of this study was to summarize the available evidence on the clinical and epidemiological burden of UTIs among patients performing IC.

Methods:

A systematic literature review was performed querying two online database (PubMed,Web of Science) from January 2012 to January 2022. All studies in English language and focused on the clinical-epidemiological burden of UTIs related to IC in the adult population were included.

Results:

Overall, 43 studies were considered. It was described a range of UTIs from 26% to 63%, with an increased number of hospital admissions and length of stay. UTIs were more common in patients with spinal cord injuries (about 40%) and with multiple sclerosis (24-34%).The main risk factors associated with UTIs were catheter reuse, type of catheter and catheterization procedure adopted.

Conclusions:

Data on IC-associated UTIs are still limited. Estimating the UTIs load in patients with IC could support healthcare professionals to identify the most appropriate type of catheter to reduce the risk of this important complication. Proper management of catheterization could improve patients' quality of life and also reduce the impact of diseases associated with this procedure on health systems and society.

Key messages:

- Catheterization is associated with an increased risk of UTIs causing morbidity and relevant costs to health systems and society.
- Knowing the burden of IC-associated UTIs could support better patients management in terms of suitable procedures to apply and more appropriate catheters to use.

Abstract citation ID: ckac130.218
Anticipating & assessing adverse consequences of public health interventions - CONSEQUENT framework

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Introduction:

Despite the best intentions, public health (PH) interventions can have adverse and other unintended consequences (AUCs). AUCs may arise in novel PH interventions, as well as from known and tested PH interventions implemented in a new context. Despite their importance, this topic has been largely overlooked. Therefore, we used a structured value-guided as well as evidence-based approach, to develop a framework to support researchers, practitioners, and policy-makers in anticipating and assessing AUCs of PH interventions.

Methods:

We employed the 'best-fit' synthesis approach starting with an a priori framework and iteratively revising this based on systematically identified evidence. The a priori framework was derived from both the WHO-INTEGRATE framework and the Behaviour Change Wheel, to root the framework in global health norms and values, established mechanisms of PH interventions, and a complexity perspective. The a priori framework was advanced based on theoretical and conceptual publications and systematic reviews on the topic of AUCs in PH. Thematic analysis was used to revise the framework and identify new themes. To validate the framework, it was coded against four selected systematic reviews of AUCs of PH interventions.

Results:

The CONSEQUENT framework includes two components: the first focuses on AUCs and serves to categorise them; the second component highlights the mechanisms through which AUCs may arise. The first component comprises eight domains of consequences - health-related, health system, human and fundamental rights, acceptability- and adherence-related, equality- and equity-related, social and institutional, economic and resource-related, and environmental.

Conclusions:

Both over- and underestimation of AUCs of PH intervention poses risks. The CONSEQUENT framework may facilitate classification and conceptualization of AUCs of PH interventions during their development or evaluation to support evidence-informed decision-making.

Key messages:

- Despite their importance for evidence-informed decision making adverse and unintended consequences of public health interventions are often overlooked within public health research and practice.
- The CONSEQUENT framework can support decision-makers in anticipating, assessing, and accounting for adverse and other unintended consquences, as well as the machanisms leading to them.

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Tobacco outlet availability in Dutch rural and urban areas

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Background:

The Netherlands aims to reduce the availability of tobacco outlets by implementing a sales ban for vending machines (2022) and supermarkets (2024). The government intends to further phase out tobacco sales by petrol stations and small outlets after 2030. This study aims to understand its impact on tobacco outlet availability in the Netherlands, with particular attention to rural areas.

Methods:

An audit of tobacco retailers was held between Sept 2019-June 2020 in four cities (Amsterdam, Eindhoven, Haarlem, and Zwolle) and between March-Apr 2022 in seven rural municipalities (Aa en Hunze, Ermelo, Dinkelland, Montferland, Simpelveld, Veere, and Waadhoeke). Each identified retailer was visited and mapped using Global Positioning System (GPS). Tobacco outlet availability was calculated in terms of density per population and km2, and residents' proximity to the nearest outlet.

Results:

In the rural areas, we found a total of 98 tobacco outlets, of which supermarkets (n = 57), petrol stations (26), small outlets (13) and tobacco specialist shops (2). In the four cities, we found a total of 870 outlets. Tobacco outlet density was much lower in rural areas than the four cities: 0.09 vs. 2.2 per km2 and 5.05 vs. 6.2 per 10,000 capita. The average shortest distance from an address to a tobacco outlet was much higher in rural areas (1.23km) compared to cities (0.31km). After implementation of all sales bans, tobacco outlet availability will reduce to 2 outlets in rural areas and 61 in urban areas which represents 0.1 and 0.4 per 10,000 capita, respectively. The distance will increase in cities (to 1.42km), but particularly in rural areas (to 5.28km) where 5 of the 7 municipalities did no longer include a tobacco outlet.

Conclusions:

The proposed restrictions on tobacco sales will strongly decrease tobacco outlet availability, and might even disappear in some rural areas. These results call into question how the tobacco industry would respond to the proposed restriction.

Key messages:

- This study is the first ex-ante policy evaluation to assess the impact of current and future tobacco control policies at the POS on tobacco outlet availability in the Netherlands.
- The proposed restrictions on tobacco sales will strongly decrease tobacco outlet availability, and might even disappear in some rural areas.

Abstract citation ID: ckac130.220
Public perceptions uncovered: engaging in decision-making regarding non-pharmaceutical interventions

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Background:

To control the COVID-19 pandemic, non-pharmaceutical interventions (NPIs) were implemented worldwide, that heavily impacted the daily lives of citizens. Occasionally, the public expressed discontent about NPIs, as NPIs did not always corresponded with their preferences. The question is if and how public engagement (PE) could aid in development and implementation of NPIs, in order to improve legitimacy, quality and compliance.

Methods:

An online survey was conducted from 27 October to 9 November 2021, with a representative sample of the public in the Netherlands on gender, age, education, place of residency and migration background. In total 4981 respondents participated. Perceptions and preferences about PE in decision-making on NPIs to control COVID-19 was collected. Four NPIs were used: Nightly curfew (NC); Digital Covid Certificate (DCC); Closure of schools and daycares (CSD); and 1.5meter social distance.

Results:

Around 25% of respondents expressed a desire to engage in decision-making, as it would increase understanding and quality of NPIs, and their trust in the government. Especially for the NPIs DCC and NC, respondents found it valuable to engage, by providing their perspective on certain trade-offs in values in decision-making (e.g. opening up society vs division in society by vaccination status). The public could play a role by giving feedback on bottlenecks during decision-making, however overall responsibility should stay with experts and policy-makers. Desire for engagement was lowest for CSD. Around 50% of the respondents did not want to engage, as they felt they were not knowledgeable enough to do so and did not perceive a need to engage. The other 25% had a neutral disposition.

Conclusions:

Engagement was not self-evident for most respondents, yet the ones willing to engage revealed important possibilities for future outbreaks. Next, a deliberative process for PE in decision-making could be executed, in order to implement our findings in practice.

Key messages:

- Although engagement was not self-evident, respondents who were willing to engage revealed important possibilities to shape future public engagement practices in decision-making in COVID-19 control.
- Respondents were mostly willing to engage in NPIs with no consensus in the trade-offs of relevant values in decision-making, such as the Nightly Curfew and the Digital Covid Certificate.

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Determinants influencing municipal decision-makers in Germany regarding community health promotion

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Background:

Community health promotion should be based on theoretical behavioural and environmental approaches. Especially changes in the physical environment require administrative and political decisions. This study aims to identify determinants that influence decision-makers from local politics and administrations on decisions so that health promotion can be placed on the agenda of communities as a prerequisite of intervention implementation.

Methods:

We used the methods of qualitative guided interviews and a quantitative survey. First, decision-makers from local politics and administrations in both urban and rural areas in Germany were interviewed in the period from July to November 2020. The interviews were analysed using qualitative content analysis according to Kuckartz and MAXQDA. Second, a nationwide online survey was conducted using Limesurvey. We used descriptive analyses. In both surveys, decision-makers reported the determinants for decision-making processes and their decision-making behaviour.

Results:

22 interviews were conducted (women n = 7), and 415 participants (women n = 118) responded to the online survey. The decision-making behaviour of local decision-makers can be differentiated on different levels, following socio-ecological models: individual, socio-cultural, institutional, municipal and political. Each of these levels comprises a multitude of determinants that are essential for successful persuasion toward community health promotion. At the individual level, we identified determinants like attitudes, outcome expectations or emotions towards a topic.

Conclusions:

The identification and understanding of determinants for local decision-making are essential for a tailored and theory-based intervention approach to place health promotion on the agenda of communities and to implement interventions. Further research is needed to replicate the importance of potential determinants and to develop effective intervention methods and techniques.

Key messages:

- Regarding to a theory-based implementation of community health, determinants of local decision-makers should be taken into account.
- The determinants are nested on different levels (e.g. individual, socio-cultural, institutional) of a socio-ecological approach.

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Swedish local and regional politicians' views on their role in health promotion

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Background:

The political context is an important determinant of health. Politicians in municipalities and regions in Sweden are responsible for many of the determinants of health, and their role is therefore important when considering health promotion. The aim of the study was to explore how politicians describe their role in health promotion.

Methods:

An electronic questionnaire focused on politicians' role, responsibility, and possibility to promote health was sent to all politicians in municipalities and regions in the north of Sweden. A total of 667 politicians answered the questionnaire, and out of them, 361 politicians answered the free text question ''as a politician I consider my role in health promotion to be ...''. The answers were analyzed using thematic analysis. The four themes discovered were used to sort politicians into groups. All politicians were sorted into the group that was most similar to their answer. Group sizes were shown in percentage of how large part of the politicians belonged to the respective groups.

Results:

Preliminary results show that the politicians could be divided into four different groups: 1) No political role, only personal aspects described (such as being a good role model) (25,3%), 2) Promote individuals to take care of their health (for example through information) (19,5%), 3) Support other parts of the organization (municipality or region) to promote health, mainly through financial support and agenda-setting (29,8%), 4) Most (if not all) political decision-making affect health (25,4%).

Conclusions:

There is a large variety in how politicians describe their role in promoting health. Only approximately half of the politicians see that their political decision-making can directly affect the health of the population. With the political context being an important determinant of health, this could be considered a missed opportunity for structural health promotion work.

Key messages:

- Approximately half of the politicians did not describe political means of affecting population health.
- Not recognizing the political determinants of health risk making politicians miss the opportunity for structural health promotion work.

Abstract citation ID: ckac130.223
Preparing for the unexpected: Comparing plans for post-terror health response in Norway and France

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Background:

How healthcare systems should respond to health and psychosocial needs in the population after terrorism is debated. Still, there has been recent interest for more coordinated health threat governance in Europe. Studies comparing approaches to health emergency contingency in different countries are thus needed. This poster will present a comparative study of how France and Norway planned for disaster follow-up prior to four major terrorist attacks, and how differences in the approaches can be understood.

Methods:

National plans and guidelines from France and Norway, planning the response to mass casualty incidents relevant to four terrorist attacks in 2011, 2015 and 2016 were analyzed, by document analysis. Walt and Gilson's health policy model, focused on context, process, content and actors guided the analysis.

Results:

The countries' approaches were similar regarding identified target groups of prescribed measures and contents of some measures, however historical and systemic differences shaped approaches to post-terror needs. The countries deviated particularly on who the actors responsible for providing care were, and also the content of some measures. For instance, in

France specialized mental health care were more involved in early psychosocial care than in Norway, where primary care approaches were more salient.

Conclusions:

Contextual factors appear to affect how healthcare contingency is planned, and finding one approach applicable in all national contexts appears challenging. Still, the presentation will discuss the potential for identifying core elements for psychosocial and healthcare follow-up that can be relevant in different contexts.

Key messages:

- There is variation in how countries approach the task of protecting the population's health and psychosocial well-being following terrorism.
- There is a need to continue mapping existing practices in different countries to identify core elements for psychosocial follow-up that could be used internationally.

Abstract citation ID: ckac130.224
Impact of the kidney transplantation moratorium in France because of the COVID-19 pandemic

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Background:

The COVID-19 pandemic has resulted in worldwide kidney transplantation (KT) moratoriums. The impacts of these moratoriums on the life expectancy of KT candidates remain unclear.

Methods:

We simulated the evolution of several French candidate populations for KT using a multistate semi-Markovian approach and according to moratorium durations ranging from 0 to 24 months. The transition rates were modeled from the 63,927 French patients who began dialysis or were registered on the waiting list for KT between 2011 and 2019.

Results:

Among the 8,350 patients active on the waiting list at the time of the French KT moratorium decided on March 16, 2020, for 2.5-months, we predicted 4.0 additional months [CI: 2.8, 5.0] on the waiting list and 42 additional deaths [CI: -70, 150] up to March 16, 2030. In this population, we reported a significant impact for a 9-month moratorium duration: 135 attributable deaths [CI: 31, 257] up to March 16, 2030. Patients who became active on the list after March 2020 were less impacted.

Interpretation:

The temporary moratorium of KT during a COVID-19 peak in order to free up hospitals' resources doesn't impact patients' 10-year survival if the moratorium does not exceed a prolonged period.

Funding. French National Research Agency (ANR-20-COV8-0002-01).

Key messages:

- The French 2020 KT moratorium didn't impair patients' 10-years survival.
- 9-month or longer moratoriums may impair patients' 10-years survival.

Abstract citation ID: ckac130.225
Public Health Guideline to prevent and control SARS-CoV-2 in schools: development and evaluation

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Issue/problem:

In times of high demand for scientific evidence for decision-making on COVID-19 mitigation measures, guidelines can be useful for translating scientific evidence into policy and practice. While guidelines are widely used in medical decision-making, they are novel to public health in Germany.

Description of the problem:

Since December 2020, a guideline group has been working on a living, evidence- and consensus-based public health guideline on preventing and controlling SARS-CoV-2 transmission in schools. The group includes scientists across multiple disciplines as well as a broad range of stakeholders, including from the school family. Key features in the development of recommendations included a Cochrane rapid review and the WHO-INTEGRATE evidence-to-decision framework. The development and usefulness of the guideline for decision-making are being evaluated using a multi-method approach.

Results:

The first version of the guideline containing nine recommendations was published in February 2021. The WHO-INTEGRATE framework facilitated the consideration of factors such as health benefits and harms, feasibility, acceptability and financial constraints. Preliminary findings of the evaluation suggest that under time pressure, developing few essential, consensus-based recommendations while assessing their societal implications is warranted. A shared understanding of evidence and of the purpose and limitations of guidelines is critical. To remain relevant, continuous integration of new evidence and updating of the guideline is necessary.

Key messages:

- Purpose and limitation of guidelines needs to be clear to ensure engagement and utilization.
- To remain useful for decision-making, guidelines and the underlying evidence need to be continuously updated.

Abstract citation ID: ckac130.226
The role of socioeconomic status and political attitudes in the spread of Covid-19 in Austria

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This study investigates the role of socioeconomic status (SES) and political attitudes marked by populism and libertarianism in the spread of Covid-19 infections across Austria. A spatial regression approach is adopted based on official registry data on Covid-19 cases at the municipality level, granted by the Austrian National Public Health Institute. This allows the consideration of spatial dependencies between observations in close geographic proximity. Moreover, to uncover potential temporal (in)stabilities in the effects, the associations are examined over two pandemic phases, namely the second (06/20 to 02/21) and third wave (02/21 to 07/21) of infections. The analysis shows that low educational attainment and income led to higher infection rates during both periods under investigation. In contrast, unemployment was negatively related to the Covid-19 incidence. While the findings for income and education were more pronounced during the third wave of infections, unemployment had a more significant impact during the second wave. Contrary to what was expected, the findings report that populist attitudes were associated with lower case numbers during the second wave. This association reversed and became positive in the third wave but was no longer significant. A positive yet non-significant relationship was detected between libertarian attitudes and Covid-19 cases for both periods studied. The findings suggest that low-income and less-educated groups carry a higher Covid-19 disease burden in Austria. This provides vital information for policymakers to develop targeted public health strategies to protect vulnerable groups and achieve a more equitable distribution of health in society. Only limited evidence was provided regarding the impact of populist and libertarian sentiments on the spread of Covid-19. As polarisation has increased throughout the pandemic, further research on attitudes characterized by skepticism towards state intervention and science is needed.

Key messages:

- This study shows that income, education, and unemployment had a significant impact on municipality-level Covid-19 infection rates in Austria during the second and third waves of the pandemic.
- While populist and libertarian attitudes were positively associated with the Covid-19 incidence during the third wave, the effects were not significant.

11.R. The impact of the COVID-19 pandemic

Abstract citation ID: ckac130.227
Flu and Covid-19: is there adherence to vaccination in target groups?

Domitilla Marconi

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Background:

In Italy, the flu vaccine is recommended and free for target groups (adults≥60 years old, fragile people, healthcare workers, pregnant women). During the 2020/2021 flu season, an increased vaccination coverage (+6,9%) was observed compared to the previous season, also due to the Covid-19 pandemic. We aimed to investigate how strong the adherence to the flu vaccine was by the vulnerable groups and assess if the Covid-19 vaccination campaign may have influenced the rate of flu vaccines.

Methods:

At the beginning of autumn 2021 we conducted an online survey among the population of Tuscany. We collected data on demographics, health status (pregnancy, vulnerable), flu and COVID-19 vaccinations coverage and health information sources. In addition, we performed a descriptive and a risk factors analysis to assess correlation between our variables with R v 4.0.0. Significance level was set at $p < 0.05$.

Results:

Among 408 participants, 248 (61%) belong to a vulnerable group and are recommended to receive the flu vaccine, 229 (56%) usually get the flu vaccine, 386 (95%) got the Covid-19 vaccine, 267 (65%) choose and trust the general practitioner (GP) as their health information source. There is a statistically significant association between being part of a vulnerable group and getting the seasonal flu vaccine (OR 6.63 95% CI 4.26-10.3 $p < 0.001$). In addition, getting the Covid-19 vaccine increases the likelihood of receiving the flu vaccine (2.90 95% CI 1.16-7.28 $p = 0.018$). Moreover, participants who trust their GP as their health information source (OR 1.63 CI 1.08-2.46 $p = 0.019$) are more likely to receive the flu vaccine; other information sources (TV, newspaper, social media) are not associated with the flu vaccine.

Conclusions:

Our research shows that vulnerable groups get vaccinated against the flu. The increase in flu vaccine coverage may be due to the COVID-19 vaccines campaign. GPs play a crucial role in the health promotion, prevention and health literacy of patients.

Key messages:

- GP plays a crucial role in the prevention and health literacy of patients.
- COVID-19 vaccines campaign may have positively influenced the flu vaccination campaign. However, we must continue to maintain the coverage we have managed to achieve in the future.

Abstract citation ID: ckac130.228
Immune Response After Vaccination against SARS-CoV-2 in the Elderly in the Czech Republic

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Background and Aims:

Elderly, especially those with chronic diseases, are a population at high risk of a severe course of the SARS-CoV-2 infection. The study aimed to investigate the complex immune response after vaccination in nursing home residents older than 65 years depending on the previous COVID-19 status and vaccine brand.

Methods:

375 participants participated in the study in September-October 2021. IgG antibodies against spike protein and nucleocapsid protein, the titer of virus neutralization antibodies, and cellular immunity (interferon-gamma release assay) were tested in elderly nursing home residents vaccinated with Pfizer, Moderna 30-31 weeks after the completion of vaccination and in those vaccinated with AstraZeneca 23 weeks before sampling. The prevalence with 95% confidence intervals (CI) was evaluated in Stata version 17.

Results:

In total, 95.2% (95% CI: 92.5%-97.1%) of samples had positive results of anti-S IgG, 92.8% (95% CI: 89.7%-95.2%) were positive in virus neutralization assay and 89.0% (95% CI: 84.5%-92.5%) in the interferon-gamma-releasing assay (indicator of cellular immunity). Even though the immune response to the Pfizer and Moderna vaccines were evaluated after a longer period than AstraZeneca, the immune response in residents vaccinated with these vaccines were superior. All immune parameters in vaccinated individuals were significantly higher in convalescent residents than in those who had not been infected with COVID. No case of COVID-19 occurred during the vaccination-to-test period.

Conclusions:

High immune response was found in elderly nursing homes residents (65 years and older) after 5-7 months after vaccination against SARS-CoV-2. In particular, vaccinated convalescents showed high immune responses. It appears that such residents are much better protected from COVID-19 than those who are only vaccinated.

Key messages:

- In a random sample of elderly nursing homes residents, high immune responses were found 5-7 months after the completion of vaccination against SARS-CoV-2 in the Czech Republic.
- During the vaccination-to-test period (5-7 months) no case of COVID-19 occurred in the samples of Elderly Nursing Homes Residents in the Czech Republic.

Abstract citation ID: ckac130.229
Attitudes towards mandatory vaccinations during the COVID-19 pandemic in Bulgaria

Stanislava Hadzhieva

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Background:

Vaccinations are an essential public health strategy to control preventable diseases. A much-discussed approach to increase coverage is mandatory vaccination; however, its legitimacy and effectiveness were put to question during the COVID-19 pandemic. As of March 1,2022, Bulgaria had one of Europe's lowest immunization coverage rates against COVID-19. Only 29.3% of Bulgarians had completed COVID-19 vaccination, compared to 71% in the EU and EEA, and the country ranked last in number of booster doses (9.9% vs 51.4 %). This study aims to investigate the public's attitudes toward proposed mandatory COVID-19 vaccination and toward the long-standing mandatory child immunization schedule in the context of the COVID-19 pandemic.

Methods:

An online cross-sectional survey was conducted in April 2022 using a self-administered anonymous questionnaire to collect information on sociodemographic characteristics, vaccination status and attitudes toward mandatory vaccination to COVID-19 and the mandatory childhood immunization schedule.

Results:

Out of 1433 reached respondents, 1200(84%) completed the survey. The largest relative share of respondents is between 35-44y-33.3%; 72.7% were women; mainly highly educated (50.8%), and vaccinated participants (59.3%). There is a significant and large difference between vaccinated and unvaccinated regarding the full support of mandatory COVID vaccinations (46.1% vs 1.8%), and regarding mandatory child vaccinations (77.9% vs 50.4%). Mandatory childhood vaccination schedules are supported by 88.7% of those in favor of obligatory COVID-19 vaccinations and 56% of those who oppose them ($p < 0.001$). Significance is preserved after adjustment for vaccination status.

Conclusions:

Public health authorities need to develop well-organized vaccination campaigns in which accurate evidence-based information is adequately disseminated with respect to individuals' autonomy. More research on the determinants of vaccination attitudes in Bulgaria is necessary.

Key messages:

- Mandatory vaccination programs should be proceeded by investigation of the social readiness for acceptance.
- Exploration of cultural specificities to influence vaccination decision is needed.

Abstract citation ID: ckac130.230
Fear of infection or fear of protection – driving factors of COVID-19 vaccine uptake in Bulgaria

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Background:

Bulgaria faced significant COVID-19 morbidity and mortality rates, but many people underestimated the risk of transmission and severity of infection. Rising vaccine-related fear and misinformation exacerbated existing hesitancy and mass vaccination remained a challenge. This study aims to investigate the factors influencing COVID-19 vaccination uptake in Bulgaria.

Methods:

A cross-sectional study was conducted in April 2022 in a sample of 1,200 respondents. Data were collected via an online self-administered questionnaire, measuring perceived risk of COVID-19, vaccine attitudes, trust in health system, and sociodemographics. Results were analyzed using bivariate and multivariate statistical methods.

Results:

Bivariate analyses showed that the majority of vaccinated respondents (81.9%) expressed concern about infection, compared to 47.1% of non-vaccinated. Significant differences were related to perceived risk of COVID-19 vaccine: 61.0% of vaccinated assessed risk as small versus 7.4% of refusers. Non-vaccinated participants demonstrated distrust in vaccine benefits and lack of trust in health system, science and pharmaceutical companies. The multivariable regression revealed associations between age, income, vaccine perception, and vaccination uptake. The 45-54 and 55-64 age groups were less likely to refuse vaccination compared to the youngest age group ($OR = 0.34$, $p = 0.009$ and $OR = 0.38$, $p = 0.036$). Odds of refusing the COVID-19 vaccine decreased as income increased ($OR = 0.33$, $p = 0.036$). A high perceived risk of adverse effects increased the odds of vaccine refusal by 7.02 ($p<.001$).

Conclusions:

The lack of confidence in the vaccine safety and effectiveness, coupled with an underestimation of the coronavirus disease, formed a critical barrier to the vaccine uptake. The misinformation fueled vaccination fear. Public health campaigns should address vaccine-related concerns and promote vaccination adherence in more consistent manner targeting also the spread of fake news.

Key messages:

- The lack of confidence became a crucial barrier for vaccination coverage in Bulgaria.
- Understanding driving factors for vaccine uptake is of utmost importance to design effective vaccination programs.

Abstract citation ID: ckac130.231
Hand hygiene and HAI transmission in Piedmont, Italy: an observational study, 2017-2019

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Background:

Hand hygiene (HH) is one of the most important measures to prevent healthcare-associated infections (HAIs). Several indicators have been proposed to measure HH practices, including alcohol-based handrub consumption (AHC). The objective of this study was to evaluate whether AHC is associated with HAI transmission.

Methods:

All 25 public hospitals/trusts of Piedmont, in Northern Italy, are required to provide data each year concerning HAIs and infection prevention and control (IPC) activities, as part of a mandatory regional indicator system. Data on AHC and HAIs were extracted from reports provided concerning the years 2017-2019. The mean annual AHC for each facility was expressed as liters per patient-day. The rate of hospital-wide Methicillin-resistant Staphylococcus aureus (MRSA) and carbapenem-resistant Enterobacteriaceae (CRE) infections was calculated per 1000 patient-days (pd). Mean ventilation-associated infections (VAP) for 1000 days of ventilation (vd) and mean catheter-related bloodstream infections (CR-BSI) for 1000 days of catheterization (cd) were calculated for intensive care units (ICUs). Spearman's correlational analysis was conducted between AHC and HAIs: hospital-level, ICU-level.

Results:

Hospital-level: mean AHC was 15.4 liters/pd; mean HAI rate was 39.6/1000 pd (MRSA) and 18.5/1000 pd (CRE). No significant correlation was found. ICU-level: mean AHC was 39.6 liters/pd; mean HAI rate was 1.7/1000 cd (CR-BSI) and 8.2/1000 vd (VAP). A moderate correlation was found between AHC and CR-BSI rate (Spearman's ρ -0.55, p 0.022). Concerning AHC and VAP, higher AHC was reported from facilities with lower VAP rates, however no significant correlation was found (Spearman's ρ -0.203, p 0.451).

Conclusions:

Results of this study support the validity of AHC as an indicator of IPC practices in ICUs. The hospital-level analysis could have been affected by important differences in AHC among ward types.

Key messages:

- Results of this study support the association between higher AHC and reduced HAI transmission in intensive care units.
- Stratifying data by ward type could provide further insight in the association between AHC and HAI rates.

Abstract citation ID: ckac130.232
Vaccination policy strategies before and during the COVID-19 pandemic: an overview

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Background:

The debate on vaccination strategies has been periodically involving researchers, policymakers, and also the population. Interest waves have occurred both after a revival of childhood infectious diseases in 2016-2017, due to low vaccine coverages, and during the recent Coronavirus outbreak. This study aimed at overviewing vaccination strategies (and corresponding vaccine coverages) for childhood vaccinations and SARS-CoV-2.

Methods:

Measles was chosen as a childhood vaccination indicator. Policy data were retrieved from health institutions (either European or national/regional) and, for COVID-19, also from press agencies and newspaper websites. Vaccine coverage data were retrieved from the World Bank, World Health Organisation, and UNICEF databases (for childhood vaccines), and from the "Our World in Data" platform for SARS-CoV-2. A qualitative comparison was performed between the two contexts.

Results:

Unlike childhood vaccinations, few countries (and only Austria in Europe) imposed generalised COVID-19 mandates, most countries preferring targeted mandates for higher-risk groups. Many countries confirmed their traditional voluntary vaccination approach also for COVID-19, while countries historically relying on compulsory vaccination strategies, such as Slovenia and Hungary, surprisingly opted for voluntary SARS-CoV-2 vaccination, with unsatisfactory results. However, no tangible crude association was generally found between vaccination policies and achieved coverages, although factors such as cultural background, education, and religion appeared to influence the impact of vaccination policies.

Conclusions:

The COVID-19 experience has enriched pre-existent vaccination strategy debates by adding interesting elements concerning attitudes toward vaccines in a novel context. Reading the available results in the frame of vaccine hesitancy determinants can help to understand the relationship between policies and actual coverages.

Key messages:

- Few countries have imposed generalised mandates for COVID-19, while many preferred targeted obligations for high-risk groups and some countries surprisingly opted for a voluntary approach.
- Accurately considering social and cultural determinants allows understanding the chance of success of vaccination strategies, ahead of fostering the right policymaking approach for each population.

Abstract citation ID: ckac130.233
Using default opt-out strategies to undercover the unknown HCV infections: a scoping review

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Background:

Following the advent of directly acting antivirals (DAAs) a global effort is underway to eliminate viral hepatitis C (HCV) by 2030. Yet identification of infected individuals and access to dedicated services may pose a challenge to the achievement elimination targets. A scoping review to synthesize studies that explored the efficacy of opt-out strategies to improve HCV testing capacity was conducted.

Methods:

We searched PubMed and Scopus (from 2015 to March 2022) for all English original articles and systematic reviews addressing opt-out strategies for HCV testing in different settings, published in the WHO's European Region Countries. We excluded articles that focused on other testing implementation strategies.

Results:

A total of 136 articles were screened at the title and abstract level, of which 41 were also assessed at full text for eligibility after deduplication. In the end, 30 articles met the inclusion criteria. Studies originated from 19 different countries of the WHO's European Region, with the most prevalent being France (26.9%, 11/41). The 43.3% of the articles addressed opt-out testing strategies in emergency departments (EDs), 36.6% into prisons, 13.3% in primary care, and 6.6% among people who use drugs. Opt-out default testing was found to be effective in EDs and prisons, whereas only 2 articles tested the efficacy of opt-out strategies for HCV testing in primary care settings.

Conclusions:

Opt-out strategies resulted in increased testing rates and higher cost-effectiveness in different settings, especially EDs and prisons. However, to identify individuals with undiagnosed infections, birth cohorts screening in the general population may be needed. Further research is needed to assess the utility of an opt-out default testing strategy in primary care settings.

Key messages:

- Opt-out strategies resulted in increased testing rates and higher cost-effectiveness in different settings.
- OpT-out strategies should be implemented in primary care settings to undercover the unknown infections.

Abstract citation ID: ckac130.234
Impact of lockdown on football players' injuries

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Background:

The global outbreak of COVID-19 has resulted in the closure of stadiums and the interruption of Serie A for three months. Many studies have evaluated the effects of COVID on population health, but few have evaluated the effects of containment measures on the health of football players. With this study, we evaluated the impact of this break on Serie A football players.

Methods:

This cross-sectional study was conducted considering a timespan of three Serie A seasons (2018-19; 2019-20; 2020-21). The information was obtained from the German website Transfermarkt. All the players who had played at least one match during each of the Serie A season were identified. For each of the players, data concerning the number of days lost due to injury, both before and after the stop in the championship due to Covid, were collected. Statistical analysis was performed using Stata 17 Software.

Results:

According to the selection criteria, 264 players were selected. This group was subsequently skimmed to 256 players after eliminating all players who did not suffer physical injuries over the timespan considered (non-purely orthopedic surgery; COVID; Intestinal problems; Infections). 256 players were analysed, 228 had skipped at least one day for pre-lockdown due to physical injury (median = 37,5), while 227 missed a day for post-lockdown (median = 27). Wilcoxon signed-rank test between days lost due to injuries before and after lockdown highlighted significant differences ($p < 0.05$).

Conclusions:

Comparing pre-lockdown and post-lockdown periods, we noticed that there were fewer days skipped due to physical injury post lockdown. Statistical evidence suggests that the same players were more susceptible to suffer physical injuries in the pre-lockdown period. This is probably because some players have worked with home coaching by spending more time in the gym and less time on the field. Also tapis roulant and cyclettes were often delivered to football players' homes.

Key messages:

- In this phase of coexistence with COVID-19 it is of fundamental importance to understand the impact that public health measures have on the population.
- Although, with vaccination, there has been a reduction in the number of cases, it is critical to strengthen preparedness against all possible epidemic scenarios.

Abstract citation ID: ckac130.235
Dietary factors and risk of SARS-CoV-2 infection in the Moli-sani Study Cohort

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Background:

A healthy diet plays a major role in supporting the immune system which is critical to protect the host from pathogenic organisms. To date, evidence on the relationship between dietary habits and the risk of SARS-CoV-2 infection is still scarce.

Methods:

Analyses on 1,096 participants from the Moli-sani Study (2005-2010) who were re-examined in 2017-2020, and in January-September 2021. Food intake was assessed in 2017-2020 using a 188-item FFQ. Adherence to Mediterranean diet (MD) was evaluated using the Mediterranean Diet Score (MDS) ranging from 0 to 9. Multivariable logistic regression models were used to estimate odds ratios (OR) and 95% confidence intervals (95%CI) for incident SARS-CoV-2 infection in association with dietary factors.

Results:

Out of 1,096 participants, 90 either reported to have tested positive for COVID-19 or were positive for anti-SARS-CoV-2 antibodies before receiving any COVID-19 vaccine. In a multivariable-adjusted model controlled for known risk factors, a 1-point increase in MDS was associated, though not significantly, with lower risk of SARS-CoV-2 infection (OR = 0.90; 95%CI 0.78-1.04). Among individual dietary components, a high consumption of vegetables or fruits and nuts was associated with lower odds of SARS-CoV-2 infection (OR = 0.57; 0.34-0.96 and OR = 0.61; 0.37-1.00, respectively). High fish intake was otherwise linked to increased risk of infection (OR = 2.05; 1.25-3.36). Nutritional factors associated with reduced risk of infection were dietary fibre (OR = 0.50; 0.27-0.93 for 10 g/d increase), vegetable proteins (OR = 0.56; 0.33-0.94 for 10 g/d increase) and vitamin C (OR = 0.94; 0.89-0.99 for 10 g/d increase).

Conclusions:

Adherence to MD was suggestive of a lower risk of SARS-CoV-2 infection. In particular, large amounts of fruit and vegetables were associated with reduced odds of being infected, as well as diets rich in fibre, vegetable proteins and Vitamin C.

Key messages:

- Diets rich in vegetables, fruits, Vitamin C and fibre were independently associated with lower risk of SARS-CoV-2 infection.
- Nutrition could represent an effective strategy at the population level to contribute to the protection against SARS-CoV-2 infection.

Abstract citation ID: ckac130.236
Parental perception about the pandemic impact on mental health of children: a cross-sectional study

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Background:
The pandemic may increase mental issues among children. This study aimed to explore parental perceptions on the pandemic impact on the health status of their children, with a focus on mental health.
Methods:
An online nationwide cross-sectional study has been conducted amongst Italian parents (from April 2022-ongoing). The survey included: Strength and Difficulties Questionnaire (SDQ), Kessler-6 (K6) for parent's psychological distress, and pandemic-related items. The outcomes were: child's SDQ above the clinical cut-off and perceived child's worsening of sleep, appetite, physical and mental health during the pandemic. Multivariable regressions were run ($p < 0.05$ as significant).
Results:
Up to date, participants were 333 (88% female). Mean age was 40.7 years (SD = 6.7). Considering their children, 52.9% were female and mean age was 6.62 (SD = 4.3). A total of 12.6% of children passed the SDQ cut-off. Having parents who are healthcare workers (adjOR = 4.1), having parents positive for K6 (adjOR = 4.0) and having a poor economic situation (adjOR = 3.9) were significantly associated with a higher probability of passing the cut-off. Considering the pandemic, 15.4% declared their child had worse sleep, 12.2% lower appetite, 6.6% more physical issues, and 22.9% more mental issues. Using electronic devices more than before the pandemic was significantly associated with worsening of sleep (adjOR = 2.9) and appetite (adjOR = 6.9). Having parents who are healthcare workers was significantly associated with worsening of sleep (adjOR = 2.3) and mental health (adjOR = 2.4). Having parents positive for K6 was significantly associated with worsening of mental health (adjOR = 5.3).
Conclusions:
This study suggested a perceived substantial worsening of children's health, especially considering mental health. Exploring how parents recognize their children's health and how the COVID-19 has changed daily habits should be considered as a public health priority in Europe.
Key messages:
- Children having parents who are healthcare workers, having parents positive for K6 and having a poor economic situation had a higher risk to pass the clinical cut-off of SDQ.
- According to parents' perceptions, the impact of the pandemic was relevant on children's health, especially on mental health.

Abstract citation ID: ckac130.237
Participatory development of inclusive health communication on COVID-19 with homeless people

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Background:
The COVID-19 pandemic demonstrates the important role of providing people with easy to access up-to-date health information in digital formats. People experiencing homelessness have limited access to health information and were hardly ever directly addressed through communication channels in Germany. Lack of digitalization within shelters and social services, as well as technical and socio-economic barriers in purchasing and maintaining a smartphone are further barriers to information.
Methods:
The Charité-COVID-19-project for and with homeless people has created digital health information videos and posters, with an interdisciplinary team and in a participatory approach. Two videos on general information and testing of COVID-19 were launched in 5 languages in February 2021. Vaccination posters in two language versions including 9 languages are available since April 2021.
Results:
We will present the collaboration of research, practice and community, the production process, the distribution and the acceptance of the formats. The web link refers to the videos, posters and further information:
https://tropeninstitut.charite.de/forschung/charite_covid_19_projekt_fuer_und_mit_obdachlosen_menschen/
Conclusions:
Exclusion from (digital) information is an increasingly important part of the structural marginalization of homeless people. This, as well as the inadequate consideration of this population in health communication and the pandemic response have to be addressed. Tackling the digital gap allows improved access to health information for homeless people and promotes health-seeking behaviour. Empowerment of the community through participation and a network between community, service providers, politics and research are also crucial for improvement of homeless people's health in the future.
Key messages:
- Exclusion from (digital) information is an increasingly important part of the structural marginalization of homeless people that has to be addressed.
- Bridging the gap between research, practice and community was a key factor for the realisation of inclusive digital health communication with homeless people in this project.

11.S. Prenatal and maternal health

Abstract citation ID: ckac130.238
Community Perceptions of Facilitators and Barriers to Post Natal Care access in Rural Laos

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Background:
The quality of Maternal, Neonatal and Child Health (MNCH) services delivered varies widely in Lao People Democratic Republic. Swiss Red Cross (SRC) provides support to the country to improve the quality of reproductive health services, enhance access, and positively change health behavior through the MNCH2 project. This implementation research was then undertaken aiming to identify factors affecting decision-

making of women relative to accessing postnatal care (PNC) and explore opportunities for improving SRC programming.

Methods:

From August 2020 to January 2021, 33 in-depth interviews and 6 focus group discussion (FGD) with 54 women were conducted. Women who had given birth in the last six months were purposively selected from several ethnic groups residing in Chomphet and Phonexay Districts in Luang Prabang province. Socio-cultural and behavioral factors affecting women's decision to access PNC were assessed during the interviews and FGD. Additional perceptions were gathered though interviews with the partners, health service providers, village heads, and external project stakeholders.

Results:

Traditional practices such as smoking ritual, strict practice of keeping the baby in the house within the first three days, and the treatment and disposal of placenta were identified as the main barrier for women to access PNC. Perceived importance of these traditional practices, however, are affected by family hierarchy especially with older family members insisting on its practice. Economic, road conditions, and transport challenges were also identified as significant barriers.

Conclusions:

Traditional practices and family hierarchy, together with physical and economic access limit women's capacity to engage with facility-based postnatal care. Thus, quality outreach with home visits are critical. Gender inclusive health education given not only to pregnant women but to all family members was also identified as critical and is recommended to improve PNC access.

Key messages:

- Post natal care remains the most neglected phase in the provision of quality maternal and newborn care.
- Understanding what influences decision making around health care seeking optimised the goal to continue to increase the numbers of women who access a health facility for post natal care in Laos.

Abstract citation ID: ckac130.239
Using Intervention Mapping to develop an intervention to promote healthy child weight development

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Background:

Clear documentation of the understanding of the problem, development process, and content of interventions is essential to understand why interventions succeed or fail. Transparent reporting will enable future researchers to build on previous evidence and replicate or adapt interventions for new contexts. This paper describes the theory- and evidence-based systematic development of the Bloom Trial - a home-based intervention to promote healthy weight development among infants and children in Denmark.

Methods:

Development of the intervention is guided by the six-step planning tool the Intervention Mapping protocol. Step 1: Needs assessment including identification of risk factors in infancy and existing interventions, interviews with parents, and an organizational capacity assessment. Step 2: Development of program theory and matrices. Step 3: Selection of theoretical methods and practical applications for modifying personal and environmental determinants. Step 4: Development of intervention tools. Step 5: Planning of program adoption, implementation, and sustainability. Step 6: Generation of an evaluation plan.

Results:

The Bloom intervention is universal but with a strong focus on families with low socio-economic position and non-Danish ethnic background. It is aimed at first-time parents and addresses early risk factors for child overweight such as parental skills and healthy habits related to food and meals, movement, screen time and sleep, and introduce a new theme: sense of security in the family. It will be integrated in existing services delivered by community health nurses supplemented with extra elements such as telephone consultations, family groups and a video library.

Conclusions:

The transparency of the developmental process and theoretical, empirical, and contextual foundation of the Bloom Trial may enable future studies to build on our findings and accumulate knowledge to promote healthy weight development among infants and children.

Key messages:

- The development process resulted in a complex intervention addressing known risk factors for child overweight e.g., meals, movement, screentime and sleep, and introduce a new theme: sense of security.
- Transparency of the developmental process may enable future intervention studies to build on our findings and accumulate knowledge to promote healthy weight development among infants and children.

Abstract citation ID: ckac130.240
Interaction between MTNR1B polymorphisms and lifestyle intervention on pregnancy outcomes

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Background:

Interactions between polymorphisms of the melatonin receptor 1B gene (MTNR1B) and lifestyle intervention for gestational diabetes have been described. Whether these are specific for physical activity or healthy eating intervention is unknown.

Objectives:

To assess the interaction between MTNR1B rs10830962 and rs10830963 polymorphisms and lifestyle interventions during pregnancy.

Methods:

Women with a BMI of ≥ 29 kg/m2 (n = 436) received counseling on healthy eating (HE), physical activity (PA) or both. The control group received usual care. The analysis had a factorial design with comparison of HE versus no HE and PA versus no PA. Maternal outcomes at 24-28 weeks were gestational weight gain (GWG), maternal fasting glucose, insulin, insulin resistance (HOMA-IR), and development of GDM. Interaction between receiving either HE or PA intervention and genotypes of both rs10830962 and rs10830963 was assessed using multilevel regression analysis.

Results:

GDM risk was increased in women homozygous for the G allele of rs10830962 or rs10830963 (OR 2.60 [95% CI 1.34, 5.06] and 2.83 [1.24, 6.47], respectively). Significant interactions between rs10830962 and interventions were found: In women homozygous for the G allele, but not in the other genotypes, the PA intervention reduced maternal fasting insulin (beta -0.16 [95%CI -0.33, 0.02], p = 0.08) and HOMA-IR (-0.17 [-0.35, 0.01], p = 0.06). In heterozygous women, HE intervention had no effect, whereas in women homozygous for the C allele, HE intervention reduced GWG (-1.6 kg [-2.4, -0.8]).

Discussion:

In women homozygous for the risk allele of MTNR1B rs10830962, GDM risk was increased and PA intervention might be more beneficial than HE intervention for reducing maternal insulin resistance.

Key messages:

- In women homozygous for the risk allele of MTNR1B rs10830962, risk of gestational diabetes was increased.
- For these women, PA intervention might be more beneficial than HE intervention for reducing maternal insulin resistance.

Abstract citation ID: ckac130.241
Impact of COVID-19 on maternal and neonatal outcomes: a population-based cohort study in Latvia

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Introduction:

Coronavirus disease (COVID-19) has affected many pregnant women worldwide. Pregnant women with COVID-19 infection belong to a vulnerable group with concerns about the effect of the disease on maternal and neonatal health.

Objectives:

To assess association of COVID-19 on maternal and neonatal outcomes in Latvia.

Methods:

Data source was Medical Birth Register. A total of 17206 birth data for 2021 were included in the data analysis.

Results:

2.1% (n = 358) women with COVID-19 (U07.1; U07.2) during pregnancy or delivery. COVID-19 infection was related to the following conditions during pregnancy - gestation diabetes (10.6% to 4.6%; $p < 0.001$); placental abruption (1.7% to 0.6%; $p < 0.05$). Birth outcomes for COVID-19 infected women showed that infection has led to the increased caesarean section (27.7% to 22.0%; $p < 0.01$), preterm birth (12.8% to 5.3%; $p < 0.001$); low birth weight $\leq$2499g rate (10.1% to 3.9%; $p < 0.001$); stillbirths (2.8% to 0.4%; $p < 0.001$) and newborn infections specific to the perinatal period (P35-P39) (9.5% to 5.2%; $p < 0.05$). Increased BMI (8.9% to 6.8%), fetal distress (3.9% to 2.4%); preeclampsia, eclampsia (3.2% to 2.1%), hypertension (2.8% to 2.0%), gestational hypertension (5.0% to 3.8%) more frequently were observed among COVID-19 infected patients but the difference was not statistically significant. COVID-19 associated with higher odds (adjusted by mother age, multiple births, gestational age, mode of delivery) of gestational diabetes (ORadj 2.3; 95%CI 1.7-3.4; $p < 0.001$), newborn infections specific to the perinatal period (ORadj 1.7; 95%CI 1.2-2.4; $p < 0.01$) and stillbirth (ORadj 4.0; 95%CI 1.9-8.2; $p < 0.001$).

Conclusions:

COVID- 19 during pregnancy is associated with higher risk of adverse maternal and perinatal outcomes. The study results of short-term pregnancy outcomes show importance of implementation of all recommended COVID-19 prophylactic measures by public health specialists and clinicians during antenatal care.

Key messages:

- COVID- 19 during pregnancy is associated with higher risk of adverse maternal and perinatal outcomes.
- Study results of short-term pregnancy outcomes show importance of implementation of all recommended COVID-19 prophylactic measures by public health specialists and clinicians during antenatal care.

Abstract citation ID: ckac130.242
Dietary habits of pregnant women in Bulgaria

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Background:

The optimal nutritional status of the mother is one of the most influential non-genetic factors for the healthy development of the fetus. In recent years, more and more scientific evidence has been accumulating that her dietary habits and nutritional status determine the fetal development and the health of the offspring.

Methods:

A cross - sectional study of pregnant women's dietary habits was conducted online. A questionnaire is attached, including questions about the diet, the frequency of consumption of certain food groups, application of alternative eating patterns and more. The analysis of the results is done with a software statistical package Jamovi ver. 2.3.0.

Results:

The servey is conducted among 117 women with a mean age of 30.4 ± 4.88 years. The majority of them have changed their dietary habits after registering a pregnancy (72.6%). Among all respondents, 18.8% haven't got a fixed diet. 67% of the respondents eat 3 - 4 times a day, and 5.1% - less than three times a day. The relative share of pregnant women who consume milk and dairy products every day is 41% and 47%, respectively. None of the respondents restrains from consuming dairy products. Only 5.1% of the respondents do not consume milk. Six of the surveyed women (5.1%) do not eat meat and 14 (12%) do not eat fish. The relative share of women who eat fish 1 - 2 times a week is 29.9%. The majority of women (88.9%) doesn't consume alcohol during pregnancy. The relative share of vegetarians is 6%. There are no vegans among the women surveyed.

Conclusions:

The majority of pregnant women surveyed follow the recommendations for healthy eating. There are women at risk of developing nutritional deficiencies among the respondents - macro - and micronutrients, which is a threat for maternal health, the course of pregnancy, as well as the growth and development of offspring.

Key messages:

- The key to a normal pregnancy and primary prevention of complications is to establish healthy dietary habits.
- Malnutrition, overfeeding and unbalanced nutrition during pregnancy can adversely affect the offspring health at all stages of its live.

Abstract citation ID: ckac130.243
Late antenatal care initiation and neonatal outcomes in an ethnically diverse maternal cohort

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Background:

Ethnic minority status and maternal socio-economic deprivation are linked to delayed access to health care during pregnancy. The link between late antenatal care initiation and neonatal outcomes in settings with high ethnic diversity and social disadvantage is seldom explored. This study examined associations between late antenatal care initiation (first antenatal appointment >12 weeks gestation) and neonatal outcomes of preterm birth (<37 weeks gestation) and low birth weight (<2500 g) in an ethnically diverse socially disadvantaged maternal cohort.

Methods:

A retrospective cross sectional study using routinely collected anonymous data of singleton births between April 2007 - March 2016 from a large UK National Health Service maternity unit in an ethnically diverse, socially disadvantaged area. Univariate and multivariate logistic regression models were used to examine the associations between late antenatal care initiation and prevalence of preterm birth and low birth weight.

Results:

Of the 46,307 singleton births recorded, more than one third (34.8%) were to mothers from Black African, Black Caribbean, Indian, Pakistani, and Bangladeshi mothers. Gestational week at first antenatal appointment was available for 99.31% births among which 79.2% had their first appointment at $\leq$ 12 weeks, 12% at 13-20 weeks, and 8.8% at $>$ 20 weeks. Mothers who booked at 13+ weeks were significantly more likely to have a preterm and/or low birth weight baby. Compared to mothers who booked at $\leq$ 12 weeks, those booking at $>$ 20 weeks were 4.08 times (95% CI: 3.29,5.07) as likely to have an extremely preterm baby (<28 weeks of gestation) and 3.12 (CI 2.66, 3.67) times as likely to have a baby born with extremely low birthweight (<1500g).

Conclusions:

Mothers in ethnically diverse socially deprived areas who started antenatal care late were at increased risk of adverse neonatal outcomes. Targeted intervention programmes and services are needed to support these mothers.

Key messages:

- Mothers who start antenatal care late are more likely to have a preterm and/or low birth weight baby in ethnically diverse socially disadvantaged areas.
- There is a need for targeted programmes and services to support mothers in ethnically diverse socially disadvantaged areas to start antenatal care on time.

Abstract citation ID: ckac130.244
Health professionals' communication and Italian pregnant women's attitudes to the Covid-19 vaccine

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Background:

Pregnancy is a risk condition for hospitalization and severe illness from Covid-19, with an increased risk of maternal mortality and serious neonatal complications. The study examines Italian pregnant women's attitudes about the Covid-19 vaccine, the role of healthcare professionals' (HP) communication, the reasons and potential predictors for non-adherence to vaccination.

Methods:

An online survey was developed by LimeSurvey software and spread through social media between August 2021 and January 2022 to pregnant women of age living in Italy. Participants were asked to indicate their sources of information and to rate the support received from their HP; their health literacy (HL) was assessed using the HLS-EU-Q6 tool. Multivariate linear regression analysis was performed. Open-ended questions were analysed using MaxQDA 2022.

Results:

1594 total survey responses were obtained (median age 31.5±4.94); 48% of the participants had a university degree. Only 17% of women had sufficient HL. Most (52%) of them refused to be vaccinated against Covid-19 while pregnant, 27% were unsure and 26% disagreed about the safety of the vaccine during pregnancy. Most of them did not deem the information received by HP complete (56%), clear (52%), and reliable (46%); 49% of them did not feel supported in their decision to vaccinate. This variable was the main predictor of vaccine hesitancy in addition to concern about vaccine safety in the multivariate model. Among women who felt unsatisfied 57% had an inadequate HL compared to 40% of those who had sufficient HL (p<.0001). The analysis of the open-ended questions also revealed a pervasive feeling of uncertainty.

Conclusions:

The study highlights how the lack of adequate communication and support by HP had a strong impact in the adherence to Covid-19 vaccination among pregnant women.

Key messages:

- The lack of an effective communication by healthcare professionals contributed to the feeling of uncertainty and concern of pregnant women about Covid-19 vaccination.
- There is a need to put effort on training for HP to improve their communication skills to support pregnant women's health decisions and improve their literacy in such a delicate phase of their life.

Abstract citation ID: ckac130.245
Knowledge, beliefs and experience of adopting healthy habits in pregnancy: a mixed methods study

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Background:

Early life exposures affect a child's obesity risk. The EARLY START uses participatory action research to develop an intervention for reducing early life obesogenic exposures. The initial phase uses a mixed methods approach to investigate pregnant mothers' knowledge, beliefs, and experience of adopting healthy dietary and physical activity (PA) habits.

Methods:

Cypriot pregnant women in 2021 completed a web-based questionnaire on: a) Adherence to Mediterranean diet (MD) (MEDAS tool); b) knowledge, beliefs on diet and PA. A subgroup participated in a structured focus group discussion of their experience/needs in adopting healthy habits. Data were analyzed using Descriptive and Thematic Content methods.

Results:

Ninety-seven women participated, 73% <35 y.o., 49% primigravida, 92% with tertiary education. Adherence to MD was moderate (median 6/14, IQR 2.5), 90% were eating <3 portions of fruit/vegetables daily, 50% believed their diet was healthy and did not change habits in pregnancy. Most had access to information (94%), internet was the commonest source (74%), and the doctor the most trusted (47%). Mild and moderate-intensity PA were considered appropriate by many (60%) for the first and second half of pregnancy, respectively. Most (90%) were aware of the risks of excessive weight gain in pregnancy. Qualitative analysis showed that women value diet as "the main driver to holistically achieving a healthy pregnancy". The main barrier was the "struggle between the will and ability". PA was considered a "therapy" but the challenge was "to achieve the right balance". Internet was described as "accessible but unreliable information source". Women believed that needs can be met by "early, holistic recommendation-based interventions run by professionals".

Conclusions:

A huge gap exists between knowledge, beliefs, and practice of healthy behaviours in pregnancy. New interventions should meet gaps and needs using contextualized, timely, holistic, and reliable approaches.

Key messages:

- Exploring knowledge and experience of healthy habits in pregnancy as part of participatory action research in shaping an obesity prevention intervention revealed important gaps and unmet needs.
- Future interventions should holistically address knowledge gaps and behavioral change needs using contextualized, timely, holistic and reliable information and methods.

Abstract citation ID: ckac130.246
Breastfeeding and allergic disease at age nine in Ireland: An Irish prospective cohort study

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Background:

Despite well-recognised benefits, Irish breastfeeding rates remain suboptimal. Although associations between breastfeeding and allergic disease are well-researched in younger children, evidence for continued effect in older children is sparse. This Irish prospective cohort study investigated associations between breastfeeding and allergic disease at age nine.

Methods:

The study sample included all nine-year-old children enrolled in the Growing Up in Ireland Infant Cohort Study whose mothers had participated in both Wave 1 and Wave 5. Mothers self-reported infant feeding practices at nine months and allergic diseases at nine years. Multiple logistic regression was used to generate adjusted odds ratios (aOR) for associations between breastfeeding and allergic diseases; re-weighting was applied to enhance generalisability.

Results:

Response rate was 72% (N = 8,006). Most mothers (53%) had ever-breastfed their child; younger mothers, smokers and those of lower socioeconomic status were significantly less likely to have ever-breastfed. Compared to never-breastfeeding, ever-breastfeeding was protective against asthma (aOR 0.74, 95%CI 0.62-0.87) and eczema (aOR 0.72, 95%CI 0.55-0.93) at age nine. Ever-breastfeeding increased the risk of atopic rhinitis (aOR 1.44, 95%CI 1.07-1.94); the association with food allergy was inconclusive (aOR 1.17, 95%CI 0.83-1.64). Breastfeeding $\geq$6 months was protective against asthma (aOR 0.57, 95%CI 0.39-0.82) and any allergic disease (aOR 0.72, 95%CI 0.55-0.96). Exclusive breastfeeding (3-5 months) was protective against asthma (aOR 0.67, 95%CI 0.50-0.89) and eczema (aOR 0.54, 95%CI 0.34-0.86).

Conclusions:

This study provides new evidence suggesting breastfeeding may be protective against asthma and eczema but may increase the risk of atopic rhinitis in older Irish children. Results must be considered in light of high Irish allergic disease prevalence and action in support of breastfeeding prior to and following birth prioritised accordingly.

Key messages:

- Findings lend support to a protective association between breastfeeding and asthma and eczema in later childhood and indicate breastfeeding may play a role in allergic disease prevention.
- Breastfeeding may reduce the risk of asthma and eczema in Irish children: findings should be used to drive impactful breastfeeding promotion and reorientate cultural norms in favour of breastfeeding.

Abstract citation ID: ckac130.247
Assessment of maternal and newborn services in Uganda based on the Effective Coverage framework

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Background:

The implementation of a health service does not necessarily equate to a health gain. Effective Coverage (EC) aims to capture the potential benefits of a health intervention by adjusting the crude coverage for quality. The aim of this study was to assess the EC of Antenatal Care (ANC), Institutional deliveries and Postnatal Care (PNC) in Oyam district, Uganda, considering the input (drugs and equipment) and the process dimension (components of care provided).

Methods:

The study involved 19 Health Centers (HC), 12 type II, 6 type III and 1 type IV, having a catchment area of 15.603 expected deliveries per year. The analysis covered the period between April and September 2021. Data on crude coverage were retrieved from the District Health Information Software-2. Data used to assess quality domains were extracted from checklists compiled during Supportive Supervisions and were summarized by readiness and likelihood of quality care indices. The crude coverage of the interventions was adjusted to calculate the input-adjusted and the quality-adjusted coverage.

Results:

The readiness index was 0.81 for ANC, 0.82 for institutional delivery and 0.88 for PNC, while the likelihood of quality of care was 0.73, 0.88 and 0.89 respectively. In all three areas, the loss of coverage was mainly due to lack of materials and equipment; HCs II showed lower quality indexes than HCs III, particularly for ANC (P = 0.007). Compared to the target population, EC was 40% for ANC4 visits, 48% for institutional deliveries and 77% for PNC visits. The gap between crude and EC was higher for ANC4 (-30%) compared with the one for institutional deliveries (-18%) and PNC (-23%).

Conclusions:

EC is a useful indicator for monitoring maternal and neonatal services in low-resource countries, bringing gaps in crude coverage to the surface. Supportive Supervision provides an opportunity to assess EC at the facility level without additional resources and to support health authorities in setting priorities.

Key messages:

- The application of EC framework can be adapted both at district and facility level, either to a single service or healthcare pathways, and guide public health intervention.
- Integration of Supportive Supervision data in the EC is an innovative approach and permit to include the quality of care dimension in the routine data collection.

Abstract citation ID: ckac130.248
Birth defects and associated antenatal care factors related with 1st trimester of pregnancy

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Background:

Ultrasound (US) can help monitor normal fetal development and screen for any potential problems. The prenatal detection of fetal anomalies allows for optimal perinatal management.

Aim:

The aim was to assess congenital anomalies at births and their associated antenatal care factors.

Methods:

Data source - Health Care Monitoring Datalink (HCMD), including two data sources: Medical Birth Register and ambulatory care data provided by public and private health care providers about US. Screening was detected by specific manipulation code: 50694 - routine US screening in the 1st trimester of pregnancy. All singleton birth in 2018 (n = 12955) were included in the data analysis. OR (odds ratio) were calculated. Multiple regression model was adjusted for mother age, gestational age, living area and antenatal care factors.

Results:

The mean mother age was 30.3 (SD 5.4) and gestational age 39.3 (SD 1.8). The use of ICD-10 code O28 - abnormal findings on antenatal screening of mother - was observed in a small number of cases. 2.4% (n = 305) abnormal findings on antenatal screening of mother were detected at ambulatory care visits. From these cases 7.5% (n = 23) were diagnosed congenital anomalies at birth. Totally 2.8% (n = 362) of births were registered congenital anomalies. Congenital anomalies at birth have higher and statistically significant odds of invasive diagnostic methods in pregnancy (OR = 2.0; 95%CI 1.2-3.6; $p < 0.01$) and abnormal findings on US screening (OR = 2.6; 95%CI 1.7-4.2; $p < 0.001$). Slightly higher frequency of congenital anomalies at birth but not statistically significant ($p > 0.05$) were observed for 1st trimester genetic screening (OR = 1.5), preterm deliveries (OR = 1.4) and living in urban area (OR = 1.3).

Conclusions:

Pregnancy outcome as congenital anomalies at birth related with higher maternal screening examinations prenatally. Further studies are needed to analyze the efficiency of US examinations for early prenatal detection of congenital anomalies.

Key messages:

- Pregnancy outcome as congenital anomalies at birth related with higher maternal screening examinations prenatally. There is not enough information of US screening results in existing data bases.
- Further studies are needed to analyze the efficiency of US examinations for early prenatal detection of congenital anomalies.

Abstract citation ID: ckac130.249

Health-related quality of life among five-year-old extremely preterm children with motor disorders

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Background:

Motor disorders resulting from extremely preterm birth (EPT; <28 weeks' gestation) can limit daily activities, schooling and social relationships. Cerebral palsy (CP) affects about 10% of children and non-CP movement difficulties (MD) are highly prevalent, although they tend to be under-diagnosed, especially in children without other developmental difficulties. We investigated the association between motor disorders and health-related quality of life (HRQoL) among five-year-old children born EPT.

Methods:

We included children at age five from a population-based EPT birth cohort born in 2011-2012 in 11 European countries (N = 1,021). Children without CP were classified using the Movement Assessment Battery for Children - 2nd edition as having significant MD (≤5th percentile of standardised norms) or being at risk of MD (6th-15th percentile). Parents reported on CP diagnoses and HRQoL using the Pediatric Quality of Life InventoryTM. We used linear regression to compare HRQoL scores by motor status adjusting for social characteristics.

Results:

Children born EPT with CP, significant MD and at risk of MD had lower adjusted HRQoL total scores [95% confidence intervals] than those without MD: -26.1 [-31.0; -21.2], -9.1 [-12.0; -6.1] and -5.0 [-7.7; -2.3]. Decreases were greater for physical scores: -35.3 [-42.7; -27.9], -11.9 [-16.1; -7.8] and -5.4 [-9.1; -1.6] than psychosocial scores: -20.6 [-25.2; -16.0], -7.4 [-10.3; -4.5] and -4.9 [-7.6; -2.1]. These differences persisted after exclusion of children with other developmental difficulties.

Conclusions:

Motor disorders among 5-year-old children born EPT were associated with lower HRQoL, even among children with less severe motor difficulties and without other developmental difficulties.

Key messages:

- Among five-year-old children born extremely preterm, severity level of motor disorders was associated with reductions of their health-related quality of life.
- Differences persisted after exclusion of children with other developmental difficulties and among children not receiving motor-related health care services had lower health-related quality of life.

Poster Displays

DA Strengthening health systems: improving population health

Abstract citation ID: ckac131.001
Providers' Experience with Artificial Intelligence-Based System During the COVID-19 Pandemic

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Background:
As the pandemic continues to spread worldwide, many of healthcare facilities are exploring new methods to keep their patients safe from potential hospital-acquired infections (HAIs) during the pandemic. This study explored the attitudes about artificial intelligence (AI) among providers who utilized AI-based hand hygiene monitoring system (HHMS) at a rural medical center during the pandemic.
Methods:
A self-administered questionnaire was mailed to 48 healthcare providers at a rural medical center in north Texas, with a 75% percent response rate (n = 36). The survey collected information on providers attitudes about AI-based HHMS use. In addition, the study also examined the relationship between provider's well-being and the level of satisfaction with the AI-based HHMS use. The lessons learned from this study will be used to determine important factors to consider when attempting to advance and expand AI technologies in rural healthcare settings.
Results:
Results revealed that the integration of AI technology within the existing electronic health record (EHR) system remains a challenge for many providers. Plus, the lack of user-centered design approaches to incorporate the AI tool into existing workflows has reduced providers satisfaction about the new technology.
Conclusions:
The findings suggested that although AI technology has great promise to reduce the number of hospital-acquired infections (HAIs), successfully implement of an AI-based tool that meets the expectations of users requires significant levels of consolidation to ensure that it fits within the existing workflows and is accepted by users.
Key messages:

- AI application indirectly affects the well-being of providers, particularly in rural healthcare settings.
- A better AI application interface design that meets the expectations of providers is needed.

Abstract citation ID: ckac131.002
Colorectal Cancer Prevention in Eastern European (EaP) Countries: A Policy Analysis

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Background:
Colorectal cancer (CRC) is a critical public health issue in Central and Eastern European Countries, where it is the second leading cause of female cancer deaths. In this study, we aimed to identify the presence of CRC policies in EaP Countries and analyze the content of CRC policies for comprehensiveness.
Methods:
We conducted a scoping review based on the methodological framework suggested by Arksey and O'Malley. We searched for publicly-available policy documents from Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine. We outline each country's prevention approaches and activities based on World Health Organization (WHO) guidelines for CRC screening.
Results:
Most countries had at least one policy addressing some aspect of colorectal cancer prevention. Primary and secondary prevention were most commonly addressed, and certain details such as healthy lifestyle campaigns, target age and screening method (gFOBT, FIT or colonoscopy) were frequently mentioned in these policies. Policies to implement or pilot population-based CRC screening program have been adopted only by Georgia. Our analysis revealed the urgent need to improve the availability and use of colorectal cancer screening among those countries.
Conclusions:
These country experiences suggest that while prevention approaches can promote the best strategies to carry out screening programs, there is no standardized approach to screening for CRC.
Key messages:

- Further research is urgently needed to better understand CRC screening needs of adults in EaP.
- Necessity of CRC screening irrespective of need will help make shift from curative to preventive cancer care.

Abstract citation ID: ckac131.003
Person-centred care to prevent hospitalisation - a focus group study with primary care providers

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Background:
The primary healthcare sector comprises various health services, including disease prevention at local level. Research shows that targeted primary healthcare services can prevent the development of acute complications and reduce the risk of hospitalisations. While interdisciplinary collaboration has been suggested as a means to improve the quality and responsiveness of personal care needs in preventive services, effective implementation remains a challenge. The aim was to investigate perceptions of preventive care among primary healthcare providers by examining their views on what constitutes a need for hospitalisation, and which strategies are found useful to prevent hospitalisation. Further, to explain how interdisciplinary collaboration can be supported with a view to providing person-centred care.
Methods:
Five focus group interviews were conducted with 27 primary healthcare providers. Interviews were transcribed, and analysed with qualitative content analysis.

Results:

Three categories emerged: 1) Mental and social conditions influence physical functioning and hospitalisation need, 2) Well-established primary healthcare services are important to provide person-centred care through interdisciplinary collaboration and 3) Interdisciplinary collaboration in primary healthcare services is predominantly focussed on handling acute physical conditions.

Conclusions:

By focusing on the whole person, it could be possible to provide more person-centred care through interdisciplinary collaboration and ultimately prevent some hospitalisations. The findings have clear implications for person-centred care and health system quality, and they highlight the need for involving stakeholders at all levels and for informing about the relevance of social and mental conditions, as they may influence the general health state and the risk of hospitalisation. The study supplements existing knowledge by providing valuable insight into the views of key primary healthcare providers.

Key messages:

- Healthcare providers are attentive towards the influence of mental, social and physical conditions on the risk of hospitalisation highlighting the importance of care that considers the whole person.
- The development and sustainable implementation of person-centred care in local primary care settings may be supported by evidence-based practices and co-production trajectories.

Abstract citation ID: ckac131.004
Knowledge and use of antibiotics among health care users in Institute of public health of Belgrade

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Background:

Antimicrobial resistance (AMR) is one of the major global public health threats that may lead to severe illness, hospital admissions, treatment failure and increasing of the health care costs. In order to address those challenges, the aims of this study were to examine the antibiotics consumption among the population of health care consumers in the Institute of Public Health of Belgrade, and their knowledge and attitudes regarding antibiotics compared to the inhabitants of EU and Japan.

Methods:

A cross-sectional study was conducted on a sample of 321 respondents who visited the Institute of Public Health of Belgrade in July 2021. The basic survey instrument was a Eurobarometer questionnaire (with the permission of the Directorate General for Communication European Commission). The obtained data were analyzed by methods of descriptive statistics, which included frequency distribution with percentages. In addition, the Chi-square test was used to examine the difference in frequencies.

Results:

More than half of all respondents used antibiotics in the previous 12 months (56.6%), majority of them with a doctor's prescription and 57.1% did some pre-testing (blood or urine test, swab) before or at the same time as using antibiotics. They used antibiotics most often for urinary infections (9,3%) and common cold (8,1%). We discovered that the knowledge of our respondents is somewhere in between comparing to the knowledge of the people from EU and Japan. 37.4% of our respondents knew that antibiotics are ineffective against cold and flu; 68.9% knew that unnecessary use of antibiotics makes them ineffective; 55.9% knew that taking antibiotics often leads to side effects such as diarrhea and 50.7% knew that antibiotics don't kill viruses.

Conclusions:

Knowledge about the antibiotics is insufficient and interventions of education, better informing and awareness of general public are necessary to encourage rational use of antibiotics.

Key messages:

- It is important to take evidence based interventions to reduce unnecessary use of antibiotics.
- This is the first study about antibiotics in Serbia which used the Eurobarometer model of research.

Abstract citation ID: ckac131.005
International Horizon Scanning the impact of Covid-19 on increasing the health gap and vulnerability

Liz Green

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The COVID-19 pandemic has caused unprecedented challenges for populations, health systems and governments worldwide, which have resulted in lasting economic, social and health impacts. The results of such have been felt disproportionately throughout society and existing vulnerabilities have been highlighted and heightened. A clear understanding of the extent of these vulnerabilities is needed in order to fully address the problem. The World Health Organization Collaborating Centre on Investment for Health and Well-being (WHOCC), Public Health Wales has developed a summary report focusing on the existing and emerging inequalities resulting from the pandemic, as identified through international evidence and learning from the International Horizon Scanning Reports. These reports, undertaken between May 2020 - August 2021, are based upon rapid evidence synthesis reviews of international literature. The summary report focuses on global learning and best practices in order to better understand and address the unequal impacts of the pandemic. The information has been categorised according to the five essential conditions required to enable a healthy life as presented within the WHO health equity conditions framework. The report provides evidence on groups most vulnerable to both direct and indirect impacts of the pandemic as well as promising practice to address the resulting inequity. Inequalities and related factors explored within the report include but are not limited to, level of deprivation and education. Taking a global perspective, this report summarises international evidence to support inclusive, sustainable, and equitable solutions, such as protecting economic well-being and taking an intergenerational lens in both response and recovery. To address and mitigate the impact of the pandemic upon vulnerable groups, collating and sharing international evidence and best practice has proven to support equitable long-term socio-economic and environmental recovery.

Key messages:

- International learning provides vital insights to support recovery in Wales and beyond.
- Responses to the pandemic should address the needs of the vulnerable to reduce existing health gaps.

Abstract citation ID: ckac131.006

This abstract has been withdrawn

Abstract citation ID: ckac131.007
Personal budget: integration of social and health resources of frail elderly in supported discharge

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During COVID-19 pandemic, health and social condition of frail elderly got worse at worldwide level. This aggravation was due both to isolation and higher mortality rate for COVID-19, influenced by the widespread condition of comorbidity in this segment of population. The progressive change of needs in this target weren't matched with a prompt and adequate response, which could guarantee the taking charge of frail elderly. Personal budget is a tool for integrating public health, social assistance and family efforts on the international scene. In the Italian context, it is emerging as means to program and coordinate economic and professional, institutional, and personal resources, finalising them to provide a personalised pathway. Research aims to value the contribution of personal budget association to effectiveness and efficacy of personalised pathway for frail elderlies in early supported discharges. A research-intervention approach was done. Personal budget was applied to a significant sample of cases of personalised pathways for frail elderly in supported discharge in the Local Health District of Teramo. The study compared used resources and obtained health outcomes between the sample and a control group. The application of the personal budget permits the immediate maximisation of resources use and the quantification of the deviation between the available and the needed resources for provision of personalised pathway. Moreover, this tool supported the planning of services, the integration of health and social actions, the monitoring of adherence to planned programmes and the application of corrective mechanisms, if these are necessary, improving the health outcomes. Personal budget contributes to increase the integrated and continued taking charge of frail elderly in supported discharges in the short-medium term. Globally, this tool could be an organisational and economic answer for responding in a sustainable way to international increasing of life expectancy.

Key messages:

- Personal budget manages and controls both health and social activities and resources.
- Personal budget supports the establishment of an integrated and continuous taking charge system of the frail elderly.

Abstract citation ID: ckac131.008
Does community HIV combination prevention (HPTN 071 (PopART)) impact healthcare inequity?

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Background:

This research explores the impact of the HIV Prevention Trials Network (HPTN) 071 combination prevention (PopART) trial on horizontal inequity in Zambia and South Africa. Evidence suggests there is often inequality in healthcare utilisation in relation to socioeconomic characteristics, such as wealth. This paper is the first to address such distributional outcomes and inequities in a randomised trial setting.

Methods:

We utilise horizontal inequity as a key performance metric to make value judgements with regards to the distribution of healthcare utilisation in a health system. Additionally, we supplement this index by estimating the impact of PopART on inequality in healthcare utilisation and HIV prevalence, estimating concentration curves and indices.

Results:

We find a pro-rich inequity in healthcare utilisation, as ranked by wealth, before and after the trial is implemented. Pro-rich implies, for example, the 20% poorest make up less than 20% of healthcare utilisation. This suggests the trial enabled the wealthier subset of the population to take better advantage of accessing healthcare.

Conclusions:

Given the high prevalence of HIV in lower-income households in Zambia and South Africa, these results strengthen the case for interventions tailored to informing poorer households about the benefits of prevention and after-care.

Key messages:

- The PopART trial demonstrates as with any intervention, there is a risk of exacerbating an underlying inequity. Policies directed at these problems specifically may help alleviate such burdens.
- This paper shows one example of a distributional imbalance in the HIV population. Given the absence of work on RCT interventions, the findings may also be used to inform future trial design.

Abstract citation ID: ckac131.009
"A basic frame existed but was not followed" – Finnish public health system's response to COVID-19

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Background:

Crisis management Managing crises often requires diverging from predetermined plans. In this paper, we investigate how public health authorities in Finland acted, what kind of roles they adopted and how the expected roles and actions appeared in relation to the legislative framework and preparedness plans during the COVID-19 pandemic. Based on inter-country comparisons, Finland has managed COVID-19 pandemic relatively well. The study provides qualitative insights on pandemic governance in a decentralized multi-stakeholder public health system.

Methods:

Semi-structured interviews (n = 53) with key public health actors at central, regional and local levels were conducted during March 2021-February 2022. The data was analysed with thematic analysis.

Results:

The predetermined roles and duties for pandemic management were not unequivocal in practice and appeared unrealistic considering the resources of the public health system. Responsibility was divided between several actors, but lack of interaction enhanced emerging tensions between them. Local and regional actors experienced national steering intervening in operational decisions. At central level distrust towards the capabilities of local and regional actors was expressed. The pandemic was framed and managed as a health crisis despite of its wider societal effects. This challenged local and regional decision-making, where wider societal impacts had to be considered.

Conclusions:

Public health authorities in Finland interpreted their roles and responsibilities in pandemic governance in various ways: some actors adopted more active agency than others and the roles were not always in line with the existing regulative framework.

Key messages:

- Interpretation of the roles outlined in preparedness plans are context dependent and may lead to conflicts between different actors.
- In a system with multiple actors at multiple levels, building trust and improving interaction are important for coordinated action.

Abstract citation ID: ckac131.010
Essential Medicines for Dental Caries: Cost-Effectiveness of ART and SDF

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Background:

Untreated tooth decay (caries) is the most common global health condition and one of the largest preventable disease burdens for society. It concerns both children and adults, particularly in low resource settings whereout of pocket expenditures for oral care often cause catastrophic health expenditures. The 2021 WHO Oral Health Resolution emphasized the relevance of developing so-called "Best Buys" for oral health. The purpose of this study was to identify the cost-effectiveness of Atraumatic Restorative Treatment (ART) and Silver Diamine Fluoride (SDF) as potential treatments to reduce the caries burden worldwide.

Methods:

Leaning on WHO CHOICE methodology, evidence scoping and an expert consensus were facilitated to extract model input parameters which were then fed into cost-effectiveness-analyses (CEA) for ART and SDF. The cost-effectiveness of the interventions was expressed as Cost per DALY averted.

Results:

The evidence scoping revealed relevant, information on the effectiveness and costs of ART and SDF. The CEA identified both ART and SDF to be potentially cost-efficient treatment strategies in settings with limited resources. SDF was found to provide a cost-efficient treatment alternative in settings where the comparably larger (human) resource requirements for ART cannot be met.

Conclusions:

The findings suggest that ART and SDF represent potentially cost-efficient strategies to reduce the caries burden in settings with limited resources. While ART has previously been proposed as part of WHO's essential package of oral care, SDF could provide a comparably inexpensive treatment alternative.

Key messages:

- Untreated tooth decay (caries) is the most common global health condition and one of the largest preventable disease burdens for society.
- The CEA identified both ART and SDF to be potentially cost-efficient treatment strategies in settings with limited resources.

Abstract citation ID: ckac131.011
A training ground Lay out improves rehabilitation after trauma surgery: A Fast Track Policy

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Fracture patients are frail and have high mortality. We investigated whether introducing a fast-track strategy during post-surgery care and including early rehabilitation protocols may shorten the length of hospital stay (LOS) while improving the overall clinical effectiveness. A training ground was built inside the inpatient area dedicated to trauma settings. Usual postoperative care consists of immobilization during the first day, but patients may start rehabilitation earlier, 24 hours after the surgical procedure, with a fast-track strategy. In general, gait speed, step length, and self-assessment in terms of mobility improve significantly in the first six postoperative weeks in fracture patients. As delayed postoperative mobility during hospitalization was observed, the established training ground may help with this concern. The expert physiotherapist may contribute to ameliorating the indicators showing great potential in postoperative rehabilitation regardless of fracture pattern. The primary outcome was postoperative physical functioning. Secondary outcomes included the patient's assessment of therapeutic effect (overall improvement), perceived pain intensity, health services utilization, treatment side effects, and adverse events. Data were analyzed by univariate analysis and binary logistic regression showing a reduction of LOS of almost three days. Further, the optimized hip fracture program reduced the rate of in-hospital post-operative complications and mortality. Adding to the schedule, some PROMPTS (Patient-reported outcome measures) could further integrate the patient empowerment perspective into the quality set of values. For this reason, 'fast track' may define a crucial policy able to guarantee rapid rehabilitation, becoming a key factor to achieving a good clinical effect. Fast-track rehabilitation facilitates a shortened hospital stay and cost-saving and can be used to optimize the patient's condition before admission to a rehabilitation facility

Key messages:

- Early rehabilitation protocols may shorten the length of hospital stay (LOS) while improving the overall clinical effectiveness.
- Human factors and patients empowerments may help.

Abstract citation ID: ckac131.012
Breast cancer incidence and mortality in Georgia by regions and municipalities in 2015-2019

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Background:

According to the NCDC, in 2015-2019, breast cancer ranked first in the structure of cancer in Georgia. Additional studies are needed to identify breast cancer incidence and mortality by regions and municipalities of Georgia.

Methods:

Electronic dBase of cancer population registry for 2015-2019 (52,178 cancer cases), Tbilisi registry database for 2002-2004 (33,478 deaths from all causes), methodology recommended by IARC and UICC, SEER program and 2014 Georgian census data were used in the study. Standardized cancer incidence and mortality rates (ASR, TASR, AAR, SRR, CR64, CR74, SIR, SMR, PIR, 95% CI) were calculated.

Results:

29,303 cases of cancer (56% of all cancers) were registered in the Georgian female population in 2015-2019, including 18,432 (62.9%) cases of breast cancer. In the mentioned 5 years, breast cancer ranks first in the general structure of cancer incidence in female population of Georgia and Tbilisi. According to ASR (world standard) and AAR (Georgia and Tbilisi standards, 2014), annual incidence was 62,9%000 / 95,7%000 in Georgia, and 85.3%000 /123,6%000 - in Tbilisi. According to the SRR, incidence of breast cancer in Tbilisi was 1.4 times higher than general incidence of breast cancer in Georgia. In 2015-2019, compared to 1988-1992, i.e., in 27-year dynamics, rate of breast cancer in Tbilisi according to the SRR increased 2.4 times, and according to SIR- by 140,2% in dynamics. ASR of breast cancer deaths in Tbilisi in 2015-2019 annually made up 112,2%000. According to the SRR, in 2015-2019, the rate of breast cancer deaths in Tbilisi increased by 3.4 times, compared to 2002-2004. In 13-year dynamics, the incidence of breast cancer deaths according to SMR increased by 238%.

Conclusions:

In order to advocate for breast cancer control it is recommended to develop regional and municipal screening programs based epidemiological maps of cancer and ensure effective screening services for each woman through the State program prevention guideline.

Key messages:

- Epidemiological maps of breast cancer are recommended for use in planning regional and municipal programs of cancer control, including screening which will help breast cancer control advocacy.
- Ensure effectiveness of screening services for each woman through the State program prevention guideline.

Abstract citation ID: ckac131.013
Healthy ageing: Herpes zoster infection and the role of the adjuvanted recombinant zoster vaccine

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Background:

Increases in life expectancy over the last 50 years has been matched by an increase in the burden of diseases (e.g. herpes zoster (HZ)) in adults $\geq$50 years of age (YOA). Without intervention, around 30% of individuals can expect to develop HZ in their lifetime, which would impact their daily activities and healthy ageing.

Methods:

We conducted a narrative review on published literature on the impact of developing HZ on healthy ageing and the ability of vaccination to prevent the burden of disease due to HZ. Specifically, we describe HZ impact on quality of life (QoL), and impact of the adjuvanted recombinant zoster vaccine (RZV) on reducing the burden of HZ in adults $\geq$50 YOA.

Results:

In adults $\geq$50 YOA with HZ, 65.1% and 15.8% reported severe pain and worst imaginable pain, respectively. Pain persisted for up to 90 days (defined as post-herpetic neuralgia) in 10-20% of HZ patients, and occasionally for years after initial symptoms. Pain due to HZ impacted all domains of QoL (psychological, physical and social). Evidence suggested that RZV reduced HZ burden of illness and burden of interference on daily activities by > 90%. Reports also suggested that RZV retained vaccine efficacy of > 90% in all frailty subgroups, who typically respond poorly to other vaccinations. Long-term follow-up data reported vaccine efficacy against HZ of 84.1% (95% confidence interval, 64.4% - 94.0%), 8 years post-vaccination. Modelling studies demonstrated that vaccination resulted in reduced hospitalization and other healthcare visits related to HZ.

Conclusions:

Vaccination with RZV can protect older adults from HZ, thus maintaining QoL and promoting active and healthy ageing.

Key messages:

- There is significant burden of disease due to HZ among adults $\geq$50 YOA due to ageing and immunosenescence.
- Vaccination can reduce burden of disease among the elderly and frail individuals and maintain QoL.

Abstract citation ID: ckac131.014
Interorganisational collaboration to improve accessibility of diagnostic evaluations for children

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Background:

Children with a suspected developmental disability need early diagnostic evaluations and support, to maximize developmental opportunities. Accessibility to diagnostic settings in Flanders, Belgium, is poor, with waiting periods up to two years. Interorganisational coordination of activities using a public health and needs of the population perspective is needed to strengthen the system. This study aims to evaluate current practices and opportunities for interorganisational collaboration of organisations active in the field of diagnostics.

Methods:

It concerns a qualitative, policy-support research project. 6 homogeneous focus groups were organised for the 6 types of organisations subsidized by the government to perform diagnostic evaluations of children with a (suspected) developmental disorders. Data were thematically analysed and categorized in a process of researcher and data-triangulation. A member check validation was done.

Results:

59 persons participated. We classified the hampering and facilitating factors for collaboration Current interorganisational collaboration is mostly limited to referral. Organisational differences in vision and goals, working processes and quality requirements, regulations and financial support criteria, a problem of accessibility and communication problems are hampering factors. Knowledge of mutual expertise and working processes, personal contacts and open communication are facilitating factors.

Conclusions:

A population public health based organisation of the field of multidisciplinary diagnostic evaluations for children with a developmental disorder, with interorganisational collaboration and coordination of activities in mandated networks, sharing experience and knowledge, would increase the accessibility for all children and strenghten the health system. The implementation of interorganisational networks would benefit from a functional and institutional analysis of organisations.

Key messages:

- Coordination of activities and interorganisational collaboration in mandated networks, could potentially improve the accessibility of diagnostic evaluations for children with a developmental disorder.
- Implementation of interorganisational networks would benefit from a functional and institutional analysis of organisations.

Abstract citation ID: ckac131.015
Thyroid cancer incidence in the female population of Georgia by regions and municipalities

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Background:

According to the NCDC (Tbilisi, Georgia), in 2015-2019, thyroid cancer ranked second in the cancer structure of cancer in Georgia. Additional studies are needed to identify the thyroid cancer incidence by regions and municipalities of Georgia.

Methods:

E-dBase of cancer population registry for 2015-2019 (52,178 cancer cases), Tbilisi registry database for 2002-2004 (33,478 deaths from all causes), methodology recommended by IARC (Lyon) and UICC (Geneva), SEER program and 2014 Georgian census data were used in the study. Standardized cancer incidence and mortality rates (ASR, TASR, AAR, SRR, CR64, CR74, SIR, SMR, PIR, 95% CI) were calculated.

Results:

Ranking and proportion of thyroid cancer in female population of Georgia in 2015-2019 according to the regions and municipalities, its age specifics and dynamics were determined. Incidence of thyroid cancer in women in Tbilisi (ASR = 52.4%000; AAR = 64.1%000), compared to Georgia (ASR = 34.4%000; AAR = 41.0%000), indicates that Tbilisi is the geographically highest prevalence zone for this site cancer and the highest levels were observed in the 25-69 age group (TASR25-69 - Georgia = 110.8%000, Tbilisi = 190.1%000). In dynamics, the incidence of thyroid cancer in the 27-year period (2015-2019 vs 1988-1992) according to the SIR, increased by 66.4%. According to the cumulative risk index (CR64, CR74), the municipalities, where the risk of developing thyroid cancer is almost 1.5 times higher than the total rate in Georgia, were identified. According to the PIR, the ratio of thyroid cancer to the share of thyroid cancer in the structure of cancer in the regions of Georgia (including Tbilisi) showed that the proportion of thyroid cancer in Tbilisi (PIR = 117.7) is 17.7% higher compared to proportion of total thyroid cancer in Georgia.

Conclusions:

It is recommended that the epidemiological map of thyroid cancer incidence be used in planning national, regional, and municipal preventive programs.

Key messages:

- It is recommended to continue study in this direction: retrospective review of histological and histochemical features of each case of thyroid cancer.
- It is recommended: to conduct molecular (oncogenes) studies in conjunction with histological and histochemical studies.

Abstract citation ID: ckac131.016
Evaluation of primary health care system in Yangon Region, Myanmar: a mixed-method approach

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Background:

Many low- and middle-income countries and international organizations have invested resources to strengthen primary health care services. Despite efforts from the Ministry of Health on primary health care, barriers to accessing health care services and health inequality in Myanmar still exist. This study aimed to identify the challenges and unmet needs in the current primary health care services by assessing the experiences and perceptions of healthcare workers and local leaders in three townships (Htantabin, Hmawbi, and Taikkyi) in Yangon, Myanmar.

Methods:

The study was conducted among healthcare professionals and community leaders in three townships. By adopting a mixed-method approach, a cross-sectional health needs assessment survey was conducted for quantitative data (n = 66), and focus group discussions (15 group discussions) were conducted online for qualitative data.

Results:

As a result of the survey regarding six domains; hygiene, primary medical care, maternal and child health, infectious diseases, non-communicable diseases, and leadership, enhancing the management and leadership capacity had the lowest average score on the current achievement (2.81 out of 5), while strengthening infectious disease control service and accessibility was perceived as the highest mean on the priority of intervention (4.28 out of 5) and the impact of the intervention (4.7). The focus group discussions revealed that while specific infrastructures and equipment necessary for the category were addressed, the need for financial support has been the recurrent theme throughout the discussions.

Conclusions:

Utilizing the World Health Organization's six-building block framework, our findings suggest that a long-term targeted financial investment in the primary health care system is critical in Myanmar by increasing health care expenditure per capita. At the same time, related barriers and facilitators should be considered to optimize the effectiveness of prioritized interventions.

Key messages:

- Health care providers and local leaders perceived the management and leadership capacity as the lowest current achievement.

- A long-term targeted financial investment in the primary health care system is critical in Myanmar.

Abstract citation ID: ckac131.017
Smoking cessation for cancer patients through the lens of cancer specialists: challenges & solutions

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Background:

The benefits of smoking cessation (SC) for cancer patients are widely recognised. However, there has been a limited emphasis on SC in this context and it continues to be a challenge for cancer patients. As part of a larger feasibility study aiming to develop a structured SC pathway for cancer patients in Ireland, this qualitative study explored the SC practices, experiences and opinions of oncology healthcare professionals (HCPs).

Methods:

Semi-structured interviews were conducted with 18 HCPs from lung, breast, cervical, head and neck and general oncology, across 4 specialist adult cancer hospitals in Ireland. Interview transcripts were analysed using thematic analysis.

Results:

Four key themes emerged:

(1) Frequently ask and advise but infrequently assist: most HCPs ask about smoking and many advise about available supports, but few refer patients to SC services. Where offered, referrals were to hospital SC services and/or nicotine replacement therapy was prescribed; no HCP prescribed varenicline or bupropion. Barriers included lack of time, ill-defined referral pathways and lack of knowledge.

(2) Increased willingness but differing ability to quit: most patients were interested in quitting post diagnosis and had varying support needs, linked to cancer stage, social circumstances and stress levels.

(3) Need for an integrated or parallel service: all HCPs suggested that a structured and defined referral pathway will facilitate SC.

(4) Motivational counselling and pharmacotherapy combination: many HCPs suggested face to face as the best mode of intervention initially, with regular follow ups and ongoing support virtually, started pre-treatment, with an empathetic and empowering approach with provision of both motivational counselling and SC pharmacotherapy.

Conclusions:

Smoking post cancer diagnosis has serious implications for cancer treatment and prognosis but is frequently overlooked. These findings will inform the design of a SC pathway for cancer patients.

Key messages:

- Despite increased willingness to quit, there is inadequate and inconsistent SC support provision for cancer patients.
- Tailored SC support should be an integral part of comprehensive cancer care.

Abstract citation ID: ckac131.018
Attitudes of children and adolescents towards healthy lifestyle issues

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Background:

Health education for promoting healthy lifestyle from early ages is considered to be important. However, this issue has not been thoroughly examined in Georgia. The research, undertaken on adolescents, aimed to analyse adolescents' lifestyle, awareness and attitudes towards healthy lifestyle.

Methods:

The study applied a mixed methods design and included both, qualitative and quantitative research methods. 145 students aged 17 to 23 years participated in the research. In order to evaluate the adolescent's perceptions and attitudes, qualitative individual interviews with university students were conducted. For the quantitative method, a self-administered questionnaire assessing the level of adolescents' awareness and attitudes towards healthy lifestyle was developed.

Results:

This section presents preliminary findings of the study. We found that more than 67% of adolescents were aware on the importance of healthy lifestyle. However, most of the participants did not transfer their knowledge into practice. The participants found it challenging to maintain healthy eating habits due to increased costs of healthy, organic food. The study also confirmed the need for integrated work of public, governmental, and non-governmental organizations to initiate and implement health promotion programs for children and adolescents.

Conclusions:

Overall, the study found that even though adolescents are aware about the importance of the healthy lifestyle, it is challenging for them to maintain it. In order to change adolescents' attitudes towards unhealthy behaviour, it is necessary to carry out targeted interventions.

Key messages:

- Health education is a necessary component for healthy lifestyle.
- Healthy lifestyle requires careful study of the issue and making evidence-based conclusions.

Abstract citation ID: ckac131.019
Enhancing COVID 19 vaccination coverage in Sierra Leone

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The project aim to support Sierra Leone in enhancing vaccination coverage. BACKGROUND In November 2021, the vaccination coverage rate was 7% for one dose and 4% for two. According with EPI program, the main problem was not the lack of vaccines (already provided by different donors) but the need of support (training, motivation, allowances) to health personnel. Lombardy project involved 31 local vaccination teams performing a refresh training, followed, by microplanning meetings. SIGNIFICANCE The Covid epidemiology in SL is not well known, but the possible new waves makes this intervention a high public health priority. USEFULNESS. The model is based on training, motivation, follow up and a very simple monetary allowance system based on performance. An online daily report available on smartphone was provided to follow up performances and manage allowances system. PROBLEM The objective was a donation of vaccines, but after a short assessment the issue changed to the need of supporting the local health staff. The goal shifted to train, give incentives for health workers, support to micro-planification and also to work on timely reporting to follow up the project results. QUESTIONS ANSWERED. Can support to micro-planning be effective in enhancing vaccination numbers? Can monetary incentives to personnel based on performances enhance vaccination numbers? Can a setting approach (school, workplaces,..) enhance vaccinations numbers? RESULTS the numbers of vaccination Increased from an average of 5 per team by day in early December (after the refresh training) up to an average of 15 by day after the support to micro-planning, the monetary progressive incentives based on performance and the introduction of settings approach. Up to 85.000 doses was performed in 4 months.

Key messages:

- Planning, performance based payement and training can enhance vaccination coverage.
- African countries can performe good vaccination programs if supported in organization and non only in vaccine donation.

Abstract citation ID: ckac131.020
Stylish UV-C lamp for disinfecting household objects

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Background:

Considering the current pandemic situation, the growing problem of antibiotic resistance and the increase in healthcare costs, attention to daily disinfection is becoming increasingly important. This study aimed to evaluate the bactericidal efficacy of a modern and stylish UV-C device designed for the home environment.

Methods:

The experimental study was conducted between July-August 2020 on four bacterial strains: Staphylococcus aureus, Salmonella typhymurium, Klebsiella pneumoniae and Escherichia coli. The UV-C device consist of a protective dome with a reflective coating, a UV-C lamp (placed in the device base) and three reflective holders. Different positions and exposure times were tested using two different carriers holder for the bacterial inoculum (plastic and stainless steel) to estimate the germicidal efficency related to UV-C lamp exposure, with direct and reflected (from the dome coating) light.

Results:

The experiment showed that the higher bacterial inactivation effect (3.5 to 7 log10) was achieved for all four strains at 3 minutes, but even at 1 minute, there is a marked reduction in the bacterial load with the only exception of Klebsiella pneumoniae. After 45 and 30 seconds, steel carriers contaminated by Escherichia coli and Staphylococcus aureus on the opposite side of the UV-C source showed significant reductions in the range between 99 and 99,9%.

Conclusions:

The device has proven to be effective for the disinfection of various everyday objects placed into the lamp and introduces beauty to the household environment.

Key messages:

- In this study, UV-C device proved to be a valuable tool for disinfecting household items and enhancing safety for everyday health.
- UV-C device proved to be a valuable tool for disinfecting household items and enhancing safety for everyday health.

Abstract citation ID: ckac131.021
Factors associated with hospitalization for aortic stenosis in Portugal from 2015 to 2017

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Background:

Severe aortic stenosis prevalence has been growing worldwide and constitutes a public health challenge. The gold-standard treatment is Surgical Aortic Valve Replacement (SAVR) however Transcatheter Aortic Valve Implantation (TAVI) has been increasing, especially in high-risk surgical patients. This study aims identifying the factors associated to the implementation of TAVI to minimize possible disparities in access to health services.

Methods:

This study used data on inpatient discharges from the Portuguese NHS, from 2015 to 2017. SAVR and TAVI, were classified according to the International Classification of Diseases (ICD). Chi-square test and independent T-tests with 1% significance level in the SPSS® were performed to identify the factors associated with both interventions.

Results:

A total of 8398 hospitalizations were analysed, 88.5% SAVR and 11.5% TAVI. The mean (SD) age for SAVR was 70 (±11) years old and 81 (±7) years old for TAVI ($p < 0.001$), 56.9% were male among SAVR and 44.6% among TAVI ($p < 0.001$). Year ($p < 0.001$), type of admission ($p < 0.001$), geographic location ($p < 0.001$), severity ($p < 0.001$) and Charlson Comorbidity Index (CCI) ($p < 0.001$) were associated with the type of intervention.

Conclusions:

TAVI was performed in more severe patients and there was an increase in TAVI over the years, which is consistent with the growing use of the technology among other patients, e.g., the high-risk surgical patients. We also found a geographic pattern in the use of SAVR and TAVI. This might reveal the existence of geographic disparities regarding availability and access to health services.

Key messages:

- In Portugal, there is an increase in the performance of TAVI, with geographical concentration that reflects on access.
- TAVI is more often performed in more severe patients as an alternative to SAVR with similar discharge outcomes.

Abstract citation ID: ckac131.022
Key issues for implementation of Genomics in Healthcare: a Policy Brief

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Issue/problem:

Healthcare (HC) can significantly benefit from genomic information for earlier, accurate diagnosis, effective personalized treatment with less adverse events, and accurate profiling of individuals for disease prevention. However, European countries are currently at variable maturity stages regarding the implementation of genomic medicine (GM) in healthcare, hindering the equitable delivery of personalized medicine to citizens across borders.

Description of the problem:

The European 1+Million Genomes Initiative (1+MG) aims to provide cross-border access to quality genomic information and related clinical data, to advance data-driven research and HC solutions to benefit citizens. This initiative is encouraging countries to develop national GM strategies, but guidance for successful implementation is needed. In this context, the Beyond 1 Million Genomes, a supporting action to the 1+MG initiative, organized three Country Exchange Visits (CEV) to discuss critical issues, share experiences and best practices, for the implementation of sustainable GM strategies in healthcare.

Results:

The United Kingdom, Estonia and Finland, which have advanced GM programs, hosted CEV describing progress and lessons learnt. Representatives of 1+MG signatory countries participated in these events and were able to present country level progress. The resulting Policy Brief (PB) captures key issues discussed at the CEVs, with real-life examples, and proposes policy recommendations for the successful implementation of GM in European healthcare systems.

Lessons:

Sustainable GM implementation in HC systems requires: 1) Patient and citizens trust and engagement; 2) Sustainable infrastructure and data regulation, with solid ethical and legal frameworks; 3) Capacity building of healthcare professionals; 4) A strong ecosystem involving all stakeholders, and encouraging synergies between healthcare, research and industry to promote continuous innovation.

Key messages:

- The implementation of GM in healthcare will take countries further towards making personalized medicine a reality, with remarkable health and socioeconomic benefits for patients and healthcare systems.
- Promoting cooperation, capacity building and sharing of best practices is crucial to reduce asymmetries between countries, which constrains effective and equitable cross-border personalized medicine.

Abstract citation ID: ckac131.023
Promoting positive masculinities among young people in Stockholm, Sweden. A mixed-methods study

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Background:

Despite policies aiming to curtail men's violence against women (VAW) in Sweden, one in three women have experience physical/sexual VAW. Promoting anti-VAW masculinities among young men is a key intervention to reduce VAW; yet little is known about what actions could be used to effectively do so in Sweden. This study aims to: 1. Identify actions that young people (men and women), and stakeholders believe can be used to promote anti-VAW masculinities and 2. Quantify the relationship, coherence and patterns of importance and applicability between the different identified actions.

Methods:

A mixed-methods study was conducted in Stockholm in 2019. In-depth interviews with young people aged 18-24 years (men = 16, women = 12) and stakeholders (n = 12) were used to identify actions to promote anti-VAW masculinities. Then, an online survey with 83 people (77 young people) was conducted asking participants to sort the actions and rate them in terms of importance and applicability. Multidimensional scaling and hierarchical cluster analysis were used to create clusters maps. Each cluster was rated in terms of importance and applicability.

Results:

Six clusters were identified: 1.own self-reflection and change, 2. actions in leisure-cultural spaces, 3. mandatory education on gender-VAW, 4. positive role models in public arenas, 5. support civil society and 6. strengthen government, police, and legal response. The clusters of mandatory education on gender-VAW and own self-reflection and change were rated higher in importance (mean 5.1 and 4.8 respectively). Mandatory education on gender-VAW and actions in leisure-cultural spaces were rated higher in applicability (mean 4.6 and 4.7 respectively). Correlation between importance and applicability was low (rho = 0.16).

Conclusions:

Promoting anti-VAW masculinities to tackle VAW should be done in multiple arenas. Mandatory education on gender-VAW in schools and leisure spaces are key strategies to promote anti-VAW masculinities.

Key messages:

- Preventing VAW by focusing on masculinities requires the involvement of various social spheres.
- Mandatory education on gender and VAW is considered key in curtailing men's VAW in Sweden.

Abstract citation ID: ckac131.024
Health system efficiency in Germany: results of a pilot study to assess health system performance

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Background:

Improved efficiency is one overall goal in WHO's Health Systems Framework. Efficiency is an important dimension of health system performance assessment (HSPA). HSPA is used as a tool to monitor and evaluate the performance of health systems and to support evidence-based policymaking. In the pilot study for a first German HSPA, efficiency was assessed as one dimension.

Methods:

Indicators were selected based on a systematic search of established instruments in national and international HSPA initiatives. Criteria for the inclusion of indicators were data availability and international comparability. Where possible, indicators were evaluated in terms of their development over time (2000-2020), in comparison to eight European countries (e.g., Austria, Denmark, France), and regarding equity aspects (e.g., age, gender, region).

Results:

Eight indicators to assess the efficiency of the German health system were identified and analysed accordingly. They cover the pharmaceutical sector, outpatient and inpatient care, and system-wide efficiency. Trend analyses were possible for all indicators, and most were also suitable for international comparisons. Overall, results of the chosen indicators indicate a moderate health system efficiency. The volume of generics as share of all pharmaceuticals, e.g., was 83% in Germany in 2019 (country average: 54%) and has been steadily increasing since 2000. In contrast, expenses for pharmaceuticals overall rose from 1.4% of GDP in 2004 to 1.7% in 2019, whereas it declined from 1.3% to 1.1% on average in the other countries.

Conclusions:

Within this first pilot study, a systematic and comparative German HSPA measuring the efficiency of the German health system using eight predefined indicators was proven to be feasible. The results give insights into efficiency measurements across different sectors, e.g., pharmaceuticals, identify developments of efficiency over time, and can support evidence-based policymaking.

Key messages:

- In the pilot study for a first German HSPA, efficiency was evaluated using eight indicators covering pharmaceuticals, outpatient and inpatient care, and system-wide efficiency.
- Based on the available data, which allowed trend analyses for all indicators and comparisons to eight European countries for most indicators, Germany's health system efficiency can still be improved.

Abstract citation ID: ckac131.025
Quality of health care in Germany: results of a pilot study to assess health system performance

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Background:

Health System Performance Assessment (HSPA) is used as a tool to monitor and evaluate the performance of health systems and to inform evidence-based policymaking. For the first time, a systematic HSPA was piloted for Germany. The conceptual framework includes different dimensions, e.g., access, population health, efficiency, and quality of care. In the following, Germany's performance is analysed in terms of quality of care.

Methods:

Indicators to assess the dimension of quality of care were selected based on a systematic search of established instruments in national and international HSPA initiatives. Other criteria for the inclusion of indicators were data availability and international comparability. The indicators were evaluated in terms of their time trend (2000-2020) and in international comparison (e.g., Austria, Denmark, France).

Results:

Overall, 17 indicators were selected to assess quality of care, of which two could not be analysed due to missing data. Indicators include, e.g., emergency readmissions after hospital stays, patient-reported medical errors, coercive measures in psychiatric wards, and in-hospital mortality. Trend analyses were possible for 14 indicators and most of them showed positive developments. In country comparisons, which were feasible for seven indicators, Germany mostly ranked below average. In-hospital mortality for acute myocardial infarction, e.g., was 8% in 2019 in Germany (other countries: 4%-7%) and has been stable since 2014. For stroke, Germany performs better and ranks three of five (6%; range: 5%-9%) in 2019.

Conclusions:

Measuring quality of care for a systematic and comparative German HSPA was proven to be feasible. However, some indicators could not be mapped so far due to lack of data. The results give insights into quality measurements across different sectors and can support evidence-based policymaking.

Key messages:

- In the first health system performance assessment (HSPA) for Germany, quality of care was evaluated over time (2000-2020) and compared to eight European countries using 17 indicators.
- Measurement of quality was feasible, but data availability should be strengthened in the future as country comparisons were possible for only half the indicators and two could not be analysed at all.

Abstract citation ID: ckac131.026
Towards Better Oral Health Prevention: the Value for Money of Fluoride Toothpaste

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Background:

Although largely preventable, tooth decay (dental caries) is among the most common health conditions worldwide and contributes to substantial dental treatment expenditures. While Fluoride Toothpaste (FT) is considered an essential strategy for oral health prevention, its market price has been shown to vary substantially across various settings. Against this background, the present study aimed to develop a decision analytical model to evaluate the cost-effectiveness of FT in various settings.

Methods:

Leaning on WHO CHOICE methodology, evidence scoping and an expert consensus were facilitated to extract model input parameters which were then fed into cost-effectiveness-analyses (CEA) for FT. The cost-effectiveness of the interventions was expressed as cost per Disability-Adjusted Life Year (DALY) averted.

Results:

The CEA identified a high likelihood for FT to be a cost-efficient treatment strategy in settings with comparably low market prices for FT. FT was less likely to be a cost-efficient treatment strategy in settings with comparably high market prices for FT.

Conclusions:

The developed decision analytical model is suitable to inform policymakers about the extent to which FT represents good value-for-money under different market prices.

Key messages:

- Fluoride toothpaste can provide high value for money as an oral health preventive strategy.
- Policymakers need to ensure the affordability of fluoride toothpaste in order to harvest relevant efficiency gains.

Abstract citation ID: ckac131.027
The European pharmacy market: the density and its influencing factors

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Community pharmacies deliver high-quality health care and are responsible for medication safety. During the pandemic, accessibility to the nearest pharmacy became more essential to get vaccinated against Covid-19 and to get medical aid. The government's goal is to ensure nationwide, reachable, and affordable medical health care services by pharmacies. Therefore, the density of community pharmacies matters. Overall, the density of community pharmacies is fluctuating, with slightly decreasing tendencies in some countries. The research question is: upon which conditions depends the variance in the density of community pharmacies in Europe? So far, the literature has shown that changes in the system affect prices and density. However, a European overview of the development of the density of community pharmacies and its triggers is still missing. This research is essential to counteract against decreasing density consulting in a lack of professional health care through pharmacies. I focus on liberal versus regulated market structures, mail-order prescription drug regulation, and third-party ownership consequences. In a panel analysis, the relative influence of the measures is examined across 27 European countries over the last 21 years. The results show that regulated pharmacy markets have over 10.75 pharmacies/100.000 inhabitants more than liberal markets. Further, mail-order prescription drugs decrease the density by -17.98 pharmacies/100.000 inhabitants. Countries allowing third-party ownership have 7.67 pharmacies/100.000 inhabitants more. The results are statistically significant at a 0.001 level. The output of my analysis recommends regulated pharmacy markets, with a ban on mail-order prescription drugs allowing third-party ownership to support nationwide medical health care through community pharmacies.

Key messages:

- Regulated pharmacy markets, with a ban on mail-order of prescription drugs and third-party-ownership have a positive effect on pharmacies density.
- The results of my analysis provide the government with measures to improve professional nationwide health care coverage for the population through pharmacies.

Abstract citation ID: ckac131.028
Need for a competency-based approach for the Public Health Workforce training: the ISS proposal

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Issue:

The COVID-19 pandemic acted as a catalyst for a reconsidering health care professional workforce (HCPW) competency needed to face future public health challenges, in line with the recent WHO ''Global Competency and Outcomes Framework for UHC'' document. In this context, in the Italian G20 Presidency framework, the Italian National Institute of Health (ISS), launched a program named ''Laboratorium'' - recognised in the G20 Declarations of Ministers of Health and Leaders - aimed to the development of training tools suitable for distance learning in whatever context they are placed.

Description of the problem:

Common competencies and needs of the HCPW have to be fulfilled through cross-sectional and multilevel training, to overcome the current emergency and be able to face future challenges. The aim is to provide a modular educational approach that is finalized to actively involve the participant: health professionals step in their training pathway according to their knowledge gaps, identify their specific learning objectives and, through a problem-based learning approach, acquire the proper skills for their function and tasks.

Results:

We propose a two-tiered approach to training: the development of competence based courses oriented to active learning. A pilot course on Epidemic Intelligence design according to this model is ready to be released. At the same time, a repository of everything available on the web systematically selected from authorised sources by a scientific committee was created to support the training objective. It is characterised by a detailed multilevel tagging that allows an effective modularisation to reach only the content useful for its user.

Lessons:

Accessibility to health-related training materials is a required necessity at every level of HCPW. Profiles within healthcare are increasingly heterogeneous and there is a need to focus on disseminating tools that can provide knowledge to address different healthcare scenarios and common purposes.

Key messages:

- Future public health challenges underline a need for a competencies-based learning approach in Healthcare Workforce training.
- Italian National Institute of Health propose two methods within the 'Laboratorium' project to enable this type of learning: specifically designed courses and a structured document repository.

Abstract citation ID: ckac131.029
Ukrainian refugee crisis: the experience of the Roman Local Health Authority ''ASL Roma 1''

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Problem:

On February 24th, 2022, Ukraine was invaded by Russian forces, forcing many Ukrainians to flee from their homes as refugees. More than 55,000 Ukrainians have since arrived on Italian territory. In response to the humanitarian crisis, the Roman Local Health Authority ''ASL Roma 1'' provided socio-sanitary assistance through first reception centers to more than 7700 refugees, prioritizing people with high social vulnerability. Ukraine's vaccine hesitancy and different epidemiological landscape represented a major hurdle to be overcome.

Practice:

ASL Roma 1's practice served to ensure infectious diseases prevention and control, as well as continuity of care for non-communicable diseases and mental health issues. It consisted of repurposing resources, such as COVID-19 Hubs and their personnel, stipulating Public-Private Partnerships and collaborations with the local Ukrainian community, massive training, creating a centralized multidisciplinary team (with Ukrainian members) and a dedicated database/IT system.

Results:

ASL Roma 1 empowered local Ukrainian communities by providing equipment, medical and administrative staff and socio-sanitary assistance. Ukrainian volunteers helped bridge the cultural gap for essential service provision, such as COVID-19 screening, enrolment in the NHS, health and social orientation, vaccinations and a tailored care pathway. Thus, more than 7700 refugees were assisted, with 1830 COVID-19 vaccinations administered and 170 in critical conditions promptly receiving specialized care.

Lessons:

The multidisciplinary and cross-cultural interaction between doctors, nurses, cultural mediators, social workers, and other key actors was essential in ensuring a holistic care pathway. Services catered to Ukrainian refugees need complete integration between primary and centralized care. Flexibility and resilience are fundamental to foster an ecosystem of innovation and optimization of healthcare provision on all levels, from local to supranational.

Key messages:

- The multidisciplinary and cross-cultural interaction between all medical and non-medical key actors is essential in

ensuring a holistic care pathway and complete social integration of asylum seekers.
- Health system flexibility, resilience and an ecosystem of innovation and optimization of healthcare provision on all levels are fundamental components of preparedness for future refugee crises.

Abstract citation ID: ckac131.030
Smart Brain Care – A novel approach to health care of mild cognitive impairment and mild dementia

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Background:
Dementia is a huge burden. Trends for the aging European nations indicate a significant increase of people with dementia. Prevention and early detection are the key elements to reduce risk factors and to treat reversible causes. In addition, identifying people at the beginning of the disease process is crucial when disease-modifying therapy becomes available.

Methods:
We aim to develop a complex intervention to improve the identification, diagnosis, and treatment of people with mild cognitive impairment (MCI) and mild dementia syndromes. Our goal is to reduce the time to diagnosis, raising awareness for MCI and increase patient involvement. First, barriers in pathways of care are determined in a systematic review and refined by conducting focus groups and interviews with primary care physicians (PCPs), specialists and experts in the field. A first theory about intervention components and how they interact are developed and will be further tested and adapted through development phase, feasibility and piloting.

Results:
The first blueprint of Smart Brain Care addresses three identified key barriers for an improved care of MCI and mild dementia syndromes (communication, skills and awareness) by three interventions (1-3), all linked and accessible through an e-database: An online platform (1) for exchange between PCPs, specialists and experts, (2) a screening tool, diagnosis-algorithm and training for PCPs as well as (3) information materials (e.g., fact sheets, short videos) separately accessible for patients.

Conclusions:
There is still low awareness about MCI under health care providers and the general population. A lack of knowledge, cooperation strategies and guidance seem to play an important role for the management of MCI and mild dementia syndromes.

Key messages:
- We need to increase focusing on the identification of people with MCI and mild dementia syndromes.
- Call for a structured diagnosis and treatment regimen to support primary care physicians as key players in the management of MCI and mild dementia syndromes.

Abstract citation ID: ckac131.031
Complete coverage by examinations: relationship to colorectal cancer burden and the COVID-19

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Background:
Colorectal cancer (CRC) is among the most common cancers and cancer causes of death worldwide. CRC screening and early detection is essential to reduce CRC incidence and mortality. CRC screening has been initiated in the Czech Republic in 2000 for persons over 50 and currently offers a faecal occult blood test (FOBT) or screening colonoscopy (CS). The aim of our study was to present complete coverage by examinations in relation to the trends in CRC burden and impact of COVID-19.

Methods:
We defined the complete coverage by examinations as the proportion of persons aged over 50 undergoing examination with CRC early detection potential (FOBT or CS for any indication) during past 3 years. Standardized incidence and mortality rates were used to assess epidemiological trends. The impact of COVID-19 was assessed for 2020 and 2021 by comparing the volume of examinations with 2019. We used national health registries (National Registry of Reimbursed Health Services, Czech National Cancer Registry) as the source of data.

Results:
Complete coverage was increasing over time and reached around 50% in recent years (target population is more than 4 million persons, most of the performed examinations were screening FOBT). However, coverage has decreased to 47.9% in 2020. In 2020 and 2021, the number of tests performed decreased by 16.9% and 5.5%, respectively, compared to 2019. CRC incidence and mortality rates have decreased by more than 20% and almost 30%, respectively, in the last decade.

Conclusions:
Complete coverage has reached a satisfactory level and has likely a positive impact on the epidemiological trends. However, further action is needed to increase coverage, recently affected by COVID-19 pandemic, when non-acute health care may have been neglected.

Key messages:
- The long-term high level of coverage by examinations likely has a positive impact on CRC burden.
- The observed decrease in coverage caused by COVID-19 needs to be appropriately compensated.

Abstract citation ID: ckac131.032
Five-hub General Conceptual Framework to improve the vaccination coverage for newly arrived migrants

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Background:
Within the Project ''Increased Access for Newly Arrived Migrants-AcToVax4NAM'' (Grant n 101018349, 3rd EU Health Programme), a General Conceptual Framework (GCF) was developed for understanding how to improve vaccination coverage for Newly Arrived Migrants (NAM), by characterizing and critically analysing system barriers and possible solutions to increase vaccination

Methods:
A logical pathway was hypothesized based on conceptual hubs in the immunization process. The identification of barriers and solutions was carried on by: a) non-systematic revision of scientific and grey literature, institutions and relevant websites, and documents suggested by Consortium Partners; b)

qualitative research conducted in each Consortium Country. The GCF was used as a guide for the above mentioned activities and organize results into the GCF itself to enrich it with content

Results:

5 conceptual hubs were identified: ENTITLEMENT to vaccination, REACHABILITY of people to be vaccinated, ADHERENCE to vaccination, ACHIEVEMENT of vaccination, EVALUATION of the intervention. All hubs are linked sequentially, starting with Entitlement without which the process cannot take place. Hubs are connected: if vaccination does not take place, it's important to go back to the previous hubs to understand the barriers. Reachability-Adherence-Achievement are closely related because some approaches are cross-cutting, such as proximity interventions which, in addition to allowing the system to approach NAM, promote adherence and thus possibility of completing the process. Other strategies may be implemented with different purposes: training aims to foster a culturally competent approach to facilitate adherence and avoid vaccination hesitancy, but also to improve competence in the entire process and lead to vaccination completion

Conclusions:

The proposed GCF facilitates identification of barriers and possible solutions to the effective achievement of immunization, at all stages of the process

Key messages:

- The GCF can be the basis for the creation of country-specific flow-charts through which to test strategies aimed at increasing immunization coverage in NAM.
- The GCF will be useful at EU level, to facilitate both the harmonisation of approaches and interventions and the evaluation of comparable approaches.

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Establishment of the Namibian National Public Health Institute: laboratory systems strengthening

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In 2020, the Namibian Ministry of Health and Social Services (MoHSS) and the Robert Koch Institute (RKI) started a twinning project with the long-term goal of establishing a Namibia Institute of Public Health (NIPH). A fundamental pillar of an NIPH is a fully operational Public Health laboratory system. Due to the COVID-19 pandemic, the need for strengthening the existing Namibian Laboratory system became eminent. Following the Intra-Action Review (IAR) of the COVID-19 response in Namibia in 2020, three regional diagnostic laboratories, at points of entry, were assessed. The major issues identified were long delays between sampling of both suspected cases and COVID-19 patients and receiving test results due to extended sample transport times to the central laboratory in Windhoek and the overload of the central capacities due to overwhelming numbers of samples during peak times. This led to the establishment of three SARS-CoV-2 PCR diagnostic laboratories through procurement and installation of equipment, provision of consumables/reagents, and on-site training of laboratory technicians with continued virtual technical support. Consequently, an important reduction of the diagnosis turnaround time was achieved. Of great value was the technical support given by the staff at the central laboratory during the trainings allowing for immediate validation of the newly established laboratories and to strengthen the communication between regional laboratories and the central laboratory. The Namibian molecular diagnostic capacities have increased in important regions in Namibia and will provide data to support the health policies of the future NIPH. New diagnostic protocols will be developed to foster the sustainability of the established laboratories and could support the implementation of genomic surveillance capacities. Finally, stronger relationships were built through these joint activities, which will support and the next steps of the establishment of the NIPH.

Key messages:

- Supporting and Strengthening the Namibian Public Health Laboratory system.
- Long-term goal of establishing a Namibia Institute of Public Health (NIPH).

Abstract citation ID: ckac131.034
Informal caregivers' profile needs: where do we stand?

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Background:

Non-communicable diseases' increase and demographic ageing require a solution to manage long-term care (1), where informal caregivers are key actors (2). Optimization in policies designed to support their caregiving role is needed. Portugal is an aged country with high prevalence of family that take care of dependent relatives. 'Informal caregivers' profile in Lisbon County: a health community approach' is a nurse-led research project designed to meet these challenges with the main aim: to develop a profile on informal caregivers in Lisbon county.

Methods:

Reporting the descriptive phase, a survey containing health/social questions was submitted to a non-probabilistic representative sample of careers, aged 18 years old or above in about 300 caregiver's caring dependent persons resident in Lisbon, in 2021. Univariate descriptive analysis was performed.

Results:

Married and retired women' caring for a parent were the most typical informal caregiver profile (n = 13, 4%). The majority do not have support from social services (n = 209, 61%). Two thirds live with the cared-for person (n = 219, 64%). Almost half (n = 150, 44%) have a university degree and only few planned the transition to a caregiver role (n = 13, 4%). No more than 10% had access to support programs (n = 71, 20%).

Conclusions:

Caregivers' unmet needs can complexify societal mechanisms relying on their work. Addressing these needs will be key to develop a strategy focused on supporting informal caregivers' priorities.

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Key messages:

- Caregivers profile needs will be key support a strategy on informal caregivers' priorities.
- No more than 10% of informal caregivers in a relevant European County had access to support programs.

Abstract citation ID: ckac131.035
Digital transformation of public health systems: strengthening to take rights seriously

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The expansion of digital public health, with the use of data in digital systems for planning and operation of public health policy, presents itself as strategic for the public and digital future of Public Health Systems, such as Brazilian Sistema Único de Saúde/SUS, as well as for the effectiveness of the right to healthcare and expansion of the access to public health services (with the experience of COVID-19 highlighting the importance of digital health, as well as fostering its accelerated expansion). Such digital expansion will increasingly stress the fundamental right to the protection of personal data, and it is therefore important to strengthen the regulatory and care response of SUS in the field of digital public health, both for the preservation of its regulatory capacity in digital public health (facing market private interests of Big Tech for example), but also to guarantee the protection of fundamental rights, such as the protection of personal data. The theory of fundamental rights and the dogmatics on personal data protection offer support to solve the tensions to the right to data protection arising from the expansion of digital health, with consideration between the rights of patients-data subjects and the needs of managing and planning public health policy

Key messages:

- The intense use of data and digital systems in public health policy is strategic to strengthen public health systems.
- The enhancement of Public Health Systems' regulatory capacity in digital transformation is important to protect right to health and data protection.

Abstract citation ID: ckac131.036
Socio-demographic and socio-economic disparities in medical rehabilitation in Germany in 2019

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Medical rehabilitation is a valuable component to restore physical and mental health, to prevent social isolation and to ensure a return to work. Due to the demographic change and the still increasing number of Post-Covid-19 patients, the demand for rehabilitation is still increasing. Latest, the COVID-19 pandemic elucidated that especially people from lower socio-economic backgrounds are disproportionally affected by health crisis. The aim of this study was to determine the influence of socio-demographic and socio-economic factors on quantitative exercise therapy in medical rehabilitation and to clarify the divergence of existing research findings. In our study we used data from 824.606 rehabilitation cases (German Federal Pension Insurance) and investigated the role of age and gender, marital status, social status and location towards inequalities in access to medical rehabilitation. Multiple linear regression and effect size calculation were used to show associations and to discuss the relation to clinical relevance. We were able to show a highly significant difference ($P < 0.001$) in access to exercise therapy in our study group. Patients aged 65+, women, single or widowed people, rehabilitants of low socioeconomic status or people located in the new federal states in Germany received shorter and less frequent exercise therapy. There are differences of up to 3.5 hours of treatment duration and 4.25 treatments per week, when disadvantaged social factors accumulate. However, despite the presented differences, the received treatments for the disadvantaged groups are still in the range of suggested minimum therapeutic requirements by the German Federal Pension Insurance. We could show a significant difference in rehabilitative therapy, which is solely based on social factors. There is an urgent need to draw special attention to the here discussed inequalities in access to medical rehabilitation for socially disadvantaged population and the overarching impact on society.

Key messages:

- The social inequality in medical rehabilitation to the detriment of the socially disadvantaged population that we have identified must give rise to clear changes in order to establish social justice.
- Equal opportunities and health quality assurance that address the individual needs of each patient should be the focus of socio-medical, policy development.

Abstract citation ID: ckac131.037
Vocational training of health mediators of primary care teams improves their sense of coherence

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Background:

A Primary Care Model Programme had been implemented in Hungary between 2013-2017 in which group practices were established that employed - among others - nonprofessional health workers (health mediators, similar to community health workers) to facilitate access for the most disadvantaged population groups. The health of mediators, themselves mostly disadvantaged ethnic Roma, was monitored every odd year of the Programme.

Methods:

A repeated cross-sectional health interview survey had been implemented inviting all health mediators who were employed at the time of the survey. The same questionnaire was used in all 3 surveys with items from the European Health Interview Survey 2009 and validated versions of other scales.

Results:

Positive changes occurred in the health status of mediators during 5 years of follow-up. Significant improvement in mental health occurred among those who completed on-the-job vocational training. By 2017, significant increase in sense of coherence was observed among those who obtained vocational qualification as opposed to those who did not. The proportion of highly stressed mediators showed a significant increase among those with no vocational training. Improvement was detected in all mediators in health awareness, dysfunctional attitudes, psychological stress and smoking prevalence.

Conclusions:

Significant improvement in mental status among those who obtained on-the-job vocational qualification were observed during follow-up of ethnic Roma health mediators in the programme in which they were equal members of the primary health care team. Employment of health mediators in primary care teams not only contributed to improving access to care for disadvantaged groups but also improved the mental health of mediators themselves.

Key messages:

- Nonprofessional health mediators are important members of primary care teams servicing disadvantaged populations.
- Significant improvement in mental status during 5 years of follow-up occurred among Roma health mediators who received vocational training and were equal members of primary health care teams.

DB Preparing for the unexpected: lessons learned from Covid-19

Abstract citation ID: ckac131.038

Implementation of ''COVID-19 case investigation and contact tracing'' training program in Armenia

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Background:

Comprehensive contact tracing and case identification (CICT) is key to preventing the SARS-COV-2 transmission. During the COVID-19 waves in Armenia, the effectiveness of CICT practices was suboptimal due to weak capacity of evidence-based CICT. The American University of Armenia and the University of California, Los Angeles offered a continuous education program for the public health workforce in Armenia which is relevant for any country aiming to improve its CICT capacities.

Objectives:

We developed and implemented a fully remote yet synchronous 'COVID-19 case investigation and contact tracing'' training program through didactic lectures, demonstrations of CICT interviews, small-group skill labs, and opinion polls. It covered the basic principles of public health and epidemiology, the main methods of CICT in relation to COVID-19, and health coaching techniques. We evaluated the knowledge improvement through a pre-experimental evaluation design at baseline and follow-up. The training sessions were held from November 2020 to June 2021. The participants received 10 CME credits upon completion of the training course.

Results:

The online modality allowed to reach professionals across the country, though affected the participation in the evaluation surveys. Overall, 93 professionals participated in the training program, yet only 57 returned completed surveys. The paired analysis showed an increase in the mean knowledge scores (0-24) at baseline and follow-up (14.5 vs 15.82 ($p = 0.0083$). A more notable increase was detected on questions that measured knowledge of health coaching techniques (0-6) (2.76 vs 3.44 ($p = 0.0052$)).

Conclusions:

New knowledge and skills penetrated into daily CICT practices across Armenia. This was a good example of a quick mobilization of local and international expertise to assist the national efforts in responding to a public health emergency by utilizing evidence-based approaches and lessons learned from the past infectious diseases' outbreaks.

Key messages:

- Our training program strengthened the human resource capacities of Armenia's existing public health system and assisted Armenia's COVID-19 response efforts.
- The model of our training program can be effectively adapted and extrapolated for various countries and settings which aim to improve response capacities to other threats of public health importance.

Abstract citation ID: ckac131.039

Dealing with the unknown: perceptions and fears of SARS-CoV-2 infection among hospital workers

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Introduction:

This study aims to explore perceptions, fears and worries regarding SARS-CoV-2 risk of infection and transmission to relatives and/or co-workers and non-pharmacological preventive interventions among hospital workers.

Materials and Methods:

The research used an explorative qualitative approach. Six focus groups and ten individual interviews across multidisciplinary workers (physicians, nurses, aides, cleaners, maintenance, and security staff) were conducted online and audio-recorded, transcribed verbatim and analysed using thematic analysis and mixed coding.

Results:

Forty professionals participated in the study. Four common themes emerged in all groups: challenges related to the lack of pandemic preparedness, concerns about personal protective equipment, unclear guidelines for case and contact tracing, and communication-related difficulties.

Conclusions:

This study emphasizes the key recommendations to improve non-pharmacological preventive interventions to reduce workers' fears and worries about the risk of infection and spreading the infection to others, including families. Above all, these should include ensuring the availability, and correct use of adequate personal protective equipment, improve guidelines on case and contact tracing, and setting effective communication channels for all workers of the organization. These recommendations must be reinforced in maintenance and security personnel, as well as night shift nurses and aides, in order to reduce also health inequalities.

Key messages:

- Lack of pandemic preparedness increased HCW' fear of infection, which could be reduced by ensuring the availability and good use of proper PPE, and by clear guidelines on case/contact detection.
- The improvement on non-pharmacological preventive interventions must be underpinned by effective communication channels and/or communication staff, and should reach all workers in the institution.

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The impact of the AstraZeneca suspensions on the public's vaccination intentions and trust

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Background:

In spring 2021, several countries, among which the Netherlands, suspended vaccinations against COVID-19 with the Vaxzevria vaccine from AstraZeneca (AZ) after reports of rare but severe adverse events (SAE). We investigated the impact of this news and the suspension on the Dutch public's COVID-19 vaccination intentions, COVID-19 vaccination perceptions (attitudes and feelings) and their trust in the government's COVID-19 vaccination campaign.

Methods:

We conducted two surveys (N = 2628), one shortly before the AZ suspension in the Netherlands and one shortly thereafter when all vaccinations were resumed. Chi2 tests were conducted to study changes in COVID-19 vaccination perceptions, intentions and trust before and after the suspension, and differences between perceptions and intentions regarding AZ vaccines compared to COVID-19 vaccines in general. All variables were measured on a 5-point Likert scale.

Results:

No significant changes were observed in COVID-19 vaccination perceptions and intentions, but trust in the campaign declined slightly (mean diff.(ΔM) = -0.2, 95% CI = -0.3/-0.2). In addition, compared to COVID-19 vaccinations in general, respondents were less likely to vaccinate with AZ (ΔM = -0.7, 95% CI = -0.7/-0.7), reported less positive vaccine attitudes (ΔM = -0.7, 95% CI = -0.7/-0.7), and more negative feelings (ΔM = 0.5, 95% CI = 0.4/0.5).

Conclusions:

The news on SAE and the AZ suspension might have caused a decline in trust in the government's COVID-19 vaccination campaign, as well as negatively impacted AZ vaccination perceptions and intentions. These results stress the need to adapt vaccination policies to anticipated public perceptions and responses following a vaccine safety scare, as well as the importance of informing citizens about the possibility of very rare SAE prior to the introduction of novel vaccines.

Key messages:

- Trust in the COVID-19 vaccination campaign declined following the news on rare but severe adverse events (SAE) and the suspension of AstraZeneca vaccines.
- While the news on SAE and the vaccination suspension did not seem to impact COVID-19 vaccination intentions in general, intentions to vaccinate with AstraZeneca were considerably lower.

Abstract citation ID: ckac131.041
"My quality of life was not the best" experiences of Australians during the COVID pandemic

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Background:

The social and economic impacts that have occurred during the pandemic can disproportionally affect those already experiencing poverty. The social determinants of health aggravate inequalities and can adversely affect wellbeing. This study aims to gain rich insight into Australian adults' experiences of the social determinants of health and the impact on their wellbeing during the COVID-19 pandemic.

Methods:

A descriptive qualitative study using purposive sampling to recruit participants for semi-structured interviews, conducted via videoconferencing between March-August 2021. Thematic analysis was performed with the support of NVivo 12.

Results:

Participants included 20 Australian adults from various socioeconomic areas ranging in age from 21 to 65 years. Three main themes emerged from the analysis of the data: Food-related concerns; Housing outcomes; and Psychological and emotional impact. Accessing food, during the COVID-19 pandemic, for most participants who resided in low socioeconomic areas, was described as stressful and challenging. Along with the burden of food security, many participants from low socioeconomic areas expressed emotional distress in relation to securing and maintaining adequate housing.

Conclusions:

The pandemic has amplified existing social determinants of health experienced by those within low socioeconomic areas, particularly those who are female and from migrant communities. The wellbeing of participants from low socioeconomic areas decreased in response to their experiences and challenges with food insecurity and housing instability, highlighting the need for housing affordability strategies and funding of emergency food relief initiatives. Food access for those in areas with high socioeconomic disadvantage, can be improved to address some of the barriers associated with food security by providing supermarket meal vouchers, access to community gardens, and school food programs.

Key messages:

- The housing and food insecurity experienced by participants in this study during the pandemic has influenced their overall wellbeing.
- The pandemic has amplified existing social determinants of health experienced by those in low socioeconomic areas.

Abstract citation ID: ckac131.042
The impact of four dominating variants and vaccine coverage on Covid-19 mortality: the Malta case

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Background:

Disease burden can be quantified by mortality. The European Islands of Malta experienced a seesaw of Covid-19 surges in mortality and cases across the pandemic. The study aims to assess the impact of Covid-19 mortality across the four phases dominated by different variants while considering the vaccination coverage among the Malta population.

Methods:

Covid-19 epidemiological data was obtained up till end of February 2022 from the websites of the Malta Ministry of Health and the European Centre for Disease Prevention and Control. Data was categorised into the four periods according to reported dominant Covid-19 variant. The Years of life lost (YLL) and Case-Fatality-Ratio (CFR) for each period were estimated. Correlations were performed between mortality and vaccinated age-groups.

Results:

The original Covid-19 period (54 weeks) had the highest YLL (6633.53), followed by the Omicron variant period (12 weeks; 2,692.17). The Alpha variant period (7 weeks) had the highest CFR (1.89) followed by the Original Covid-19 (1.37). A significant negative correlation was present between two dose vaccination and the 60-69 years ($p = 0.01$), 70-79 years ($p = <0.01$), and 80+ years ($p = <0.01$) age groups, while a positive correlation was present between the booster dose and the 60-69 years (p = 0.01) age group.

Conclusions:

Covid-19 variant's infectivity, transmissibility, and the effectiveness of the vaccine against the variant play an important role in the ultimate outcome. Reducing mortality by embracing mass vaccination that targets current variants along with other non-pharmaceutical interventions remains paramount.

Key messages:

- Mortality is an indicator for assessing the burden of an emerging variant within a population.
- The effectiveness of vaccination against emerging variants plays a role in reducing mortality rates.

Abstract citation ID: ckac131.043
Impact of mask-wearing on child and adolescent psychosocial development: a systematic review

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Background:

Wearing face masks in public is recommended under certain circumstances in order to prevent infectious diseases transmitted through droplets. The objective was to compile all German and English research results from peer-reviewed journal articles using a sensitive literature search on the effects of mask-wearing for preventing infectious diseases on the psychosocial development of children and adolescents.

Methods:

A systematic review was conducted considering different study designs (search period up until 12 July 2021). The risk of bias in the studies was determined using a risk of bias procedure. A descriptive-narrative synthesis of the results was performed. A search update will be conducted shortly before the conference.

Results:

Thirteen studies were included, and the overall risk of bias was estimated to be high in all primary studies. There are some indications from the included surveys that children, adolescents, and their teachers in (pre)schools perceived facial expression processing as impaired due to mask-wearing, which were confirmed by several experimental studies. Two studies reported psychological symptoms like anxiety and stress as well as concentration and learning problems due to wearing a mask during the COVID-19 pandemic. One survey study during the 2002/2003 SARS pandemic examined oral examination performance in English as a foreign language and showed no difference between the "mask" and "no mask" conditions. The results are preliminary and may be extended due to the search update.

Conclusions:

Only little evidence can be derived on the effects of face masks on different developmental areas of children and adolescents based on the small number of studies. There is a lack of research data regarding the following outcomes: psychological development, language development, emotional development, social behaviour, school success, and participation. Further cluster-randomized controlled trials or longitudinal studies are required.

Key messages:

- Empirical and experimental evidence shows that mask-wearing impairs facial expression among children, adolescents, and teachers in (pre)schools.
- Research on the following developmental areas is missing: psychological development, language development, emotional development, social behaviour, school success, and participation.

Abstract citation ID: ckac131.044
Total, sex and age-specific excess mortality during 2020 in 20 countries part of the C-MOR consortium

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Nationally published COVID-19 mortality estimates might underestimate the actual mortality burden attributed to COVID-19. Estimations of excess all-cause mortality can provide more accurate estimates of the toll of the pandemic. This study aims to estimate the overall, sex and age-specific excess all-cause mortality in 20 countries, during 2020. Total, sex and age-specific weekly all-cause death counts for 2015-2020 were extracted from national vital statistics databases. Percent excess mortality for 2020 was calculated by comparing average weekly 2020 mortality rates against average weekly mortality rates from the past five years (2015-2019). Comparisons were performed for the total population, per sex, and per age groups (<65 vs. 65+ or < 70 vs.70+) depending on data availability. Percent difference in average weekly mortality between 2020 and 2015-2019 ranged from negative for Australia and Norway, to < 5% for Denmark, Cyprus, Estonia, Israel, and Sweden, 5-10% for Georgia, Mauritius, Ukraine, Austria, France, Scotland and Northern Ireland, to ∼10-21% for England & Wales, Italy, Brazil, USA, Slovenia, and to 89% for Peru. The percent difference in average weekly mortality between 2020 and 2015-2019 for males was higher than for females except for Cyprus, Estonia, Slovenia and the USA. Lastly, in age specific analyses, for the majority of countries the % increase in average weekly mortality between 2020 and 2015-2019, was higher in the oldest age group investigated, however, for Peru and the USA (<65 vs. 65+ years) and for Cyprus and Mauritius (<70 vs. 70+ years), mortality increased similarly in both age groups. This study highlights that the excess mortality burden during the COVID-19 pandemic disproportionally affected specific countries, males, and in most, but not all countries, the oldest age groups. Strengthening of health resilience in the most affected countries, while targeting population groups impacted the most, is of paramount public health importance.

Key messages:

- Excess mortality burden during the COVID-19 pandemic disproportionally affected specific countries, and even within countries specific sex and age groups.
- Further investigation into the determinants of excess mortality is needed to suggest steps to strengthen health resilience in the countries and target population groups impacted the most.

Abstract citation ID: ckac131.045
The impact of COVID-19 on persons with concurrent mental health and substance use disorders

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Background:

The COVID-19 pandemic with its restrictions touched the daily life of most people. While everyday social life becomes difficult for citizens with economic and cultural capital, it becomes even worse for persons with mental health (MHD) and substance use disorders (SUD), who are particularly vulnerable to social exclusion. In this project, we aim to explore the impact of the pandemic on persons MHD/SUD, nearer, how the lockdown effected their daily life and further, the utilization of health care services under the consecutive waves of the pandemic.

Methods:

The project has two parts: First we conducted 17 individual interviews and one focus group with persons with MHD/SUD, using thematic analysis. Second, we merged the Norwegian Patient Register, the Register for Infectious Diseases and data from Statistics Norway. We matched data of 41500 individuals with MHD/SUD after gender, age and health region with a sample from the general population as a control group and study the health care service utilization under the consecutive waves of the pandemic in Norway in 2020-2021.

Results:

Within the qualitative study, we identified four interrelated main themes: (1) The COVID-19 outbreak as a perceived challenge, (2) A decline in mental health and well-being, (3) Increased substance use challenges, and (4) Diverse experiences with health and social services. The results show further that people with MHD/SUD have challenges with digital tools and/ or do not have the appropriate equipment. Persons with MHD/SUD face greater barriers in accessing the health care system compared to the general population as a control group. Results of the register study are still preliminary.

Conclusions:

Persons with MHD/SUD face major challenges during the COVID-19 pandemic There is reason to believe that new pandemics will emerge in the future. In this context, it is essential to gain knowledge of how to care for vulnerable groups in society and how to reach them in emergencies.

Key messages:

- Continuous maintenance of low-threshold services for persons with MHD/SUD during a pandemic is essential.
- Improvement of digital skills of service users or alternatives to digital consultations should be considered.

Abstract citation ID: ckac131.046
Process evaluation of a university residence-based SARS-CoV-2 testing programme in the UK

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Background:

Regular testing for SARS-CoV-2 is an important strategy for controlling virus outbreaks on university campuses during the COVID-19 pandemic but testing participation can be low. The Residence-Based Testing Participation Pilot (RB-TPP) was a novel 4-week intervention implemented at two student residences on a UK university campus, aiming to increase asymptomatic testing frequency and normalise university life through relaxed social restrictions onsite.

Methods:

Mixed-methods process evaluation determined whether RB-TPP was implemented as planned and identified implementation barriers and facilitators. Data were collected from meeting records, university students (online survey: n = 152; focus groups: n = 30), and staff (interviews, n = 13). Barriers and facilitators to implementation were mapped to the 'Capability, Opportunity, Motivation-Behaviour' (COM-B) behaviour change framework.

Results:

Uptake was high (n = 464 students opted-in; 98% of those living onsite). Implementation was broadly as planned, with adjustments due to national escalation of the COVID-19 Delta variant. Majority engaged in testing (88%); 46% (52% of testers) were fully compliant with pre-determined testing frequency. Most felt positively towards relaxed social distancing (97.9%). Implementation was facilitated by convenience and efficiency of testing and reduced negative impacts of isolation through opportunities for students to socialise. Barriers to implementation were mixed-messages about the rules, ambivalent attitudes, and lack of adherence to COVID-19 protective measures in the minority.

Conclusions:

This is the first process evaluation of the implementation of asymptomatic SARS-CoV-2 testing in university residences. Testing participation increased and student mental wellbeing improved. Rapid adaptions to the changing pandemic context generated complexity and challenge. Findings have global relevance for outbreak prevention and management strategies in higher education settings.

Key messages:

- Delivery of asymptomatic SARS-CoV-2 testing and relaxation of social distancing within residences led to high rates of testing participation and benefits for student mental wellbeing.
- This is the first process evaluation of the implementation of asymptomatic SARS-CoV-2 testing in university residences with global relevance for outbreak prevention in higher education settings.

Abstract citation ID: ckac131.047
Uptake and impact of COVID-19 preventive measures amongst migrant populations in the Netherlands

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Uptake of preventive measures to reduce transmission of viruses such as SARS-CoV-2, is crucial in the control of pandemics. To ensure equitable uptake we explored contextual factors that shaped uptake of COVID-19 preventive measures amongst smaller, albeit substantial, migrant populations in the Netherlands. 39 persons of Eritrean, Ghanaian, Indonesian and Filipino origin, with diverse legal status and length of stay in the Netherlands, participated in five online focus group discussions. Thematic analysis of data was informed by concepts from the Precaution Adoption Process Model and Protection Motivation Theory. Awareness and knowledge of preventive measures was shaped by limited Dutch proficiency, access to understandable information and interference of misinformation. Engagement by preventive measures was subject to COVID-19 threat appraisal and the ease with which complex behavioural messages could be translated to individual situations. Perceived vulnerability of undocumented migrants in particular, motivated information-seeking. A strong social norm to keep with cultural and religious practices, and limited opportunity for preventive behaviour in work and home context hindered uptake of preventive behaviour. Preventive measures brought about job, food, and housing insecurity, and increased barriers in access to healthcare for undocumented migrants. Migration-related, sociocultural, and socioeconomic factors shape uptake of preventive measures. Preventive measures negatively impact work, housing and access to healthcare of undocumented migrants. Our results suggest importance of multilingual information tailored to literacy needs; education and modelling of behaviour; and, regulations to ensure continued access to financial and material resources to minimise negative spillover effects. Results were incorporated in two policy briefs advising local and national government. Collaboration with municipal health services lead to multilingual public health information.

Key messages:

- Migration-related, sociocultural, and socioeconomic factors shape uptake of preventive measures.
- Preventive measures negatively impact work, housing and access to healthcare of undocumented migrants.

Abstract citation ID: ckac131.048
The EU response to NCDs: a content analysis on building resilient post-COVID health systems

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Background:

Non-communicable diseases (NCDs) impose a heavy burden on healthcare systems of countries in the European Union (EU). An estimated 91.3% of all deaths and 86.6% of DALYs in the EU-28 were attributable to NCDs. It is imperative that the EU act on mitigating this challenging health issue and help create trajectories for building resilient health systems. Using qualitative analysis, this study examines the question of how the European Commission 2019-2024 is planning to mitigate the impact of NCDs on health systems, while taking into account the COVID-19 pandemic.

Methods:

Content analysis was applied to understand how NCDs are framed and how an EU narrative is constructed to mitigate the impact of NCDs on health systems by the European Commission. A total of 44 documents were analysed, including speeches, press releases, newsletters, statements and policy documents. In vivo coding was performed using the software package ATLAS.ti 9. Unique codes were simplified and clustered into descriptive themes with a high level of abstraction.

Results:

This study identified five main themes: ‘health plan’, ‘COVID-19’, ‘future direction’, ‘collaboration and solidarity’, and ‘persuasion’. Themes show that the Commission is emphasising the impact of the pandemic and the relevance of policies tackling NCDs for developing EU-wide resilient health systems. By calling for more cross- and multi-sectoral collaboration, like creating a European Health Union, the Commission hopes to create the right climate for a European framework for cooperation, which can help develop harmonised and resilient EU health systems.

Conclusions:

Although increasing health systems resilience is high on the Commission’s agenda, it seems that there are no actionable points for Member States in terms of addressing national health policy. We recommend the Commission looks towards eliminating this observed disconnect and creating actionable points in line with Member States’ health systems’ capabilities.

Key messages:

- Our findings show emphasis is placed on EU-wide health policies, more robust health systems, and the collective power of the EU. However, there are no concrete actions coupled with these concepts.
- COVID-19 highlighted the limitations of national policy for protecting health systems against cross-border health threats. It tested the Commission’s resolve in pushing for more European cooperation.

Abstract citation ID: ckac131.049
Public Health benefits by implementing digital symptom diaries for COVID patients from Cologne

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Background:

High rate of people infected with SARS-CoV-2 and their contacts in Cologne, Germany required innovative tools for notification, monitoring and reporting. The digital tool for COVID19 (DiKoMa) provides self-service symptom diaries allowing (a) the stratification for prioritized telephone contact by the health authority and (b) training a machine learning (ML) model that predicts infections with prevailing dominant variant (PDV) from early symptom profiles (SP).

Methods:

Pseudononymized SP covering the first week of diary recordings were included for training (16646 index, 11582 contacts). A balanced random forest (BRF) model was trained to differentiate early predictive symptom patterns of different PDV and contact persons. Model evaluation was performed using sex and age stratified cross validation (CV), the model was validated on SP recorded from days 1 and 6.

Results:

From 03/20 to 02/22, 90478 indeces and 75444 contact persons reported symptoms and health status, covering 46% and 42% of all reported cases, respectively. Diaries contained between 1-52 entries (566791, median 2). Daily analysis of entries, prioritized according to age, prevalent co-morbidities and detoriation of symptoms allowed risk adjusted follow up even during phases with high case notification rates. The top 5 predictive factors of the BRF were immunization, cough, dysgeusia and dysnosmia, fatigue, and sniffles to differentiate infection between wildtype, three PDV and contact persons (CV AUC 80.6%, Validation AUC 77.1%).

Conclusions:

The use of digital symptom diary surveillance helps to provide appropriate medical support for patients on a large scale. Machine learning shows potential for symptom based risk assessment to differentiate PDV for future outbreaks and can thus become a valuable tool alongside specific laboratory diagnostics.

Key messages:

- Digital symptom diaries are a powerful and widely accepted tool to attend COVID19 patients in isolation. They allow risk stratification for follow up and are a low-threshold service.
- Machine learning supports index case identification by symptom analysis and can thus become a valuable tool alongside specific laboratory diagnostics.

Abstract citation ID: ckac131.050

COVID-19 vaccination intent and associated factors in healthcare workers: cross-sectional study

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Background:

Considering the vaccine hesitancy recorded among healthcare workers (HCW) during the 2009/10 influenza pandemic, we aimed to examine the COVID-19 vaccination intent of HCW at one of the largest hospitals in Germany and to identify associated factors.

Methods:

We conducted a cross-sectional anonymous survey at LMU University Hospital in Munich, Germany, between February 25 and March 20, 2021. Data was collected on COVID-19 vaccination intent as main outcome and on potential associated factors.

Results:

In total, 2555 HCW completed the survey; 48,3% (n = 1325) of them had already received at least one COVID-19 vaccine dose. Of those not yet vaccinated 51,7% (n = 1320), 83,6% (n = 1104) reported intention to get vaccinated, while 10,2% (n = 134) were undecided and further 6,2% (n = 82) reported refusal. Disagreeing that everyone should receive the generally recommended vaccines was associated with refusal (RR = 529,500, p = 0,000) while being vaccinated against influenza in the 2020/21 season was linked with lower likelihood of refusal or indecisiveness (RR = 0,124, p = 0,000; RR = 0,182, p = 0,000). Low or partial conviction of the effectiveness and safety of COVID-19 vaccines were linked to refusal (effectiveness; RR = 485,471, p = 0,000; RR = 9,247, p = 0,000; safety: RR = 116,829, p = 0,000; RR = 5,423, p = 0,025). Feeling ill informed about COVID-19 vaccines was associated with refusal and indecisiveness (RR = 25,900, p = 0,000; RR = 21,104, p = 0,000).

Conclusions:

At the beginning of the vaccination campaign in Germany, a small proportion of HCW at LMU University hospital was hesitant on receiving a COVID-19 vaccine. Factors associated with refusal or indecisiveness were a sceptical attitude towards vaccines in general as well as feeling ill informed about COVID-19 vaccines, especially regarding their effectiveness and safety. Having received an influenza vaccine was associated with COVID-19 vaccination intent.

Key messages:

- The presented results provide insight into the reasons for hesitancy of HCW against COVID-19 vaccines, indicating a pattern-like behaviour in the acceptance of novel vaccines by HCW.
- The evidence from our analysis can help inform the communication aims and emphases of vaccination campaigns among HCW within similar organizational contexts or in future outbreak scenarios.

Abstract citation ID: ckac131.051

Willingness to participate in a COVID-19 follow-up study and symptoms 1.5 years after infection

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Introduction:

Data on willingness to participate in population-based long-COVID studies are sparse. We invited all citizens of Essen aged 18-74 years with a positive SARS-CoV-2 PCR test between Mar-Aug 2020 and assessed COVID-related symptoms in responders ~1.5 years after infection.

Methods:

The invited population included 1282 infected citizens (48% women). At the time of testing 64% reported symptoms. We asked responders about past and current symptoms, hospitalization, smoking, sport, pre-existing conditions (heart attack, stroke, diabetes), subjective health status as compared to before infection, assessed BMI, and performed descriptive statistics.

Results:

We investigated 255 participants (50% women, 19-73 years, response rate 20%) ~20 month (median) after the PCR test. 95% reported symptoms at the time of testing: 67% fatigue, 58% taste disorders, 56% limb pain, 55% odor disorders, 54% headache, 50% cough, 43% fever; 10% needed hospitalization, 3% intensive care, 1.6% artificial ventilation. Compared to the non-hospitalized the formerly inpatients were more often male (62% vs 49%), older (56±13 vs 49±14 years), less often never smokers (42% vs 53%), had a higher BMI (31±7 vs 28±5 kg/m^2), and more pre-existing conditions (23% vs 10%). Compared to before infection, 53% rated their current health worse, with a higher rate among inpatients (81%). After ~1.5 years, 55% still reported symptoms: 25% fatigue, 20% concentration disorder, 18% breathing problems, 13% odor and 11% taste disorders. Persistent symptoms were more common in inpatients than in non-hospitalized (69% vs 53%).

Conclusions:

Symptomatic individuals are more likely to participate in a COVID19 follow-up study than asymptomatic ones. This may overestimate the number of individuals with long-term symptoms in population-based long-COVID study populations. However, persistent symptoms seem to be more likely in formerly inpatients compared to non-hospitalized individuals with former SARS-CoV-2 infection.

Key messages:

- Symptomatic individuals are more likely to participate in a COVID19 follow-up study than asymptomatic ones.
- Persistent symptoms seem to be more likely in formerly inpatients compared to non-hospitalized individuals with former SARS-CoV-2 infection.

Abstract citation ID: ckac131.052

Analysis of a test system for the detection of SARS-CoV-2 in children attending school

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Background:

During the COVID-19 pandemic, in order to keep schools open and reduce SARS-CoV spreading, SARS-CoV-2 positive paediatric patients (PP) need to be isolated early. The aim of this study was to describe the appropriateness of school hot spot (HS) for SARS-CoV 2 testing based on open access of PP in a paediatric hospital in Turin, Italy.

Methods:

A cross-sectional study was performed between September 2020 and March 2021. The data collected included: date of swab execution, type of swab, execution setting of the swab, result of the swab, sex, age of PP and the mean value of the Rt (reproductive number) of pandemic in the Piedmont region. We collected data about PP from four different hospital settings (HS, Emergency department, day hospital and hospital wards) of Regina Margherita Children's Hospital (Turin, Italy). We analyzed a sample of 13,283 PP (aged 0-19 years) testing for SARS-CoV-2. The main outcome was the likelihood of testing positive in different settings and in different age groups.

Results:

In Our sample, females were 45.8%. The median age was 6.8 years (IQR 3.0-11.2). The swabs executed in all the hospital settings had a lower likelihood of resulting positive compared with the school HS setting. Newborns below 3 months (adj OR 1.85, 95%CI 1.14 - 3) and patients aged between 11 and 13 years old (adj OR 1.32, 95%CI 1.07 - 1.63) reported a higher probability of a swab tested positive compared to adolescents. Instead, children aged between 3 months and 2 years (adj OR 0.77, 95%CI 0.61 - 0.96) and aged between 3 years and 5 years (adj OR 0.66, 95%CI 0.53 - 0.83) were less likely to result positive.

Conclusions:

We found a high prevalence of PP positive to the test for the detection of SARS-CoV-2 at the school hot spot compared with other settings. The open access modality to the nasopharyngeal swab was effective in identifying PP with COVID-19. Public health authorities should implement this testing modality in order to reduce SARS-CoV-2 infections in PP.

Key messages:

- Open access testing system to detect SARS-CoV-2 is important to do as many tests as possible to identify COVID-19 patients and isolate them in the pediatric population.
- The open access testing modality to detect COVID-19 patients saves time for doctors who, instead of carrying out the patient history, can devote themselves to other clinical activities.

Abstract citation ID: ckac131.053
First year of the pandemic: Years of Life Lost due to COVID-19 in Serbia

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Background:

The first case of COVID-19 in Serbia was reported on 6th March 2020. Since then, Serbia has registered several epidemic peaks, which have led to a considerable increase in premature mortality. Basic evaluation of COVID-19 premature mortality burden needs to include frequency of COVID-19 deaths among different age-groups.

Methods:

All-cause mortality data disaggregated by age and sex, population estimates and remaining life expectancy for different age-groups were acquired from the Statistical Office of the Republic of Serbia. Years of Life Lost (YLL) due to COVID-19 were calculated for the period from March to December 2020. European Standard Population was used for calculating age-standardized mortality rates. We acknowledge the support from the BoCO-19 - The Burden of Disease due to COVID-19 project coordinated/led by Robert Koch Institute and supported by the WHO Regional Office for Europe.

Results:

In 2020, there were 127,572 YLLs due to COVID-19, with 81,147 of YLLs (63.6%) attributable to men and 46,425 (36.4%) to women. Contribution of COVID-19 to the total all-cause YLL was also higher in men comparing to women: 11.39% and 7.80%, respectively. Three epidemic peaks were observed in 2020, together composing two thirds (65.6%) of total YLLs due to COVID-19. December was the month with the greatest burden, accounting for 45.8% of all YLLs due to COVID-19. Crude YLL rate for COVID-19 was 1849.1 per 100,000, or 1733.5 per 100,000 after standardization.

Conclusions:

Registered COVID-19 deaths accounted for one tenth of total YLLs in Serbia in 2020, with men contributing almost twice as much to that number compared to women. On average, 12.32 YLLs originated from each registered COVID-19 death. Further studies need to assess the impact of the COVID-19 epidemic on avoidable mortality trends in Serbia.

Key messages:

- COVID-19 deaths comprised one tenth of all-cause YLLs, with two-thirds of COVID-19 YLLs attributable to men.
- To reduce premature mortality burden, epidemic peaks need to be prevented.

Abstract citation ID: ckac131.054
Non-COVID activity in French emergency department during COVID-19 pandemic (March 2020 to March 2022)

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Background:

The COVID-19 epidemic and mitigation actions had major impacts on health and healthcare use by the French population. Since 2004, the French public health agency daily collects individual data of visits in the emergency departments (ED) OSCOUR® network (94% of national visits in 2022). We aimed to analyse the evolution of non-Covid ED visits from 2020 to March 2022, in order to identify potential indirect impact of the epidemic.

Methods:

The main medical diagnosis (MD) coded in ICD-10 from each ED visit from 2017 to March 2022 was classified into 17 ICD-10 chapters and in 95 disjoint subgroups of pathologies. The observed numbers of ED visits by age group and by chapters/subgroups were compared to expected numbers, estimated using an overdispersed Poisson regression model based on 2017-2019 data.

Results:

The observed numbers of ED visits for all chapters and for a large part of subgroups were significantly lower than the expected numbers during the three lockdowns in all age groups and progressively returned to the expected level in 2021. A change in the pattern of a limited list of subgroups was observed: ED visits for purpura, chronic blood diseases and neurologic disorders in children decreased during the first lockdown and remained under the expected level until March 2022. Inversely the number of ED visits for mental health and wheezing in children, for pulmonary embolism in adults and for neoplams in the elderly increased and remained over the expected values until 2022.

Conclusions:

Syndromic ED system was a pillar of the French reactive surveillance of direct and indirect impacts of COVID-19 epidemic. The changes observed for different subgroups of pathologies may reflect a negative impact of the epidemic, a positive effect of protective measures on the spread of other infectious diseases, a modification in the organization or in the use of health care in specific domains. Further studies using hospitalization data could explore these hypotheses.

Key messages:

- Existing syndromic surveillance system implemented before the emergence of SARS-COV2 enabled to monitor non-Covid-19 visits to emergency departments and assess changes in patterns of pathologies.
- An increase in the number of emergency department visits during the COVID-19 epidemic was observed for mental health in children, for pulmonary embolism in adults and for neoplams in the elderly.

Abstract citation ID: ckac131.055
Integrating mental health into emergency preparedness and response: lessons learned from Covid-19

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Introduction:

The COVID-19 crisis has disrupted health systems all over the world. In a survey by the WHO, 93% of the countries reported disruption in their mental health services. This research assessed the extent to which mental health was included in the national response to the COVID-19 pandemic in African countries. It also explored barriers and enablers to mental health integration into the COVID-19 response. Lessons learned from COVID-19 can help improve the response to future public health emergencies.

Methods:

A web-based survey was sent to mental health focal points in 55 African countries. The survey assessed the perceived degree of implementation of the Inter-Agency Standing Committee (IASC) "14 Globally Recommended Activities" for mental health response to COVID-19. This was followed by in-depth interviews to explore barriers and enablers to mental health integration into the COVID-19 response.

Results:

Responses were received from 28 countries. Lack of political will, poor funding, limited human resources, and weak pre-existing mental health systems were the key challenges in addressing mental health needs during COVID-19. Participants highlighted the need to capitalize on the increased attention to mental health during COVID-19 to support its integration into the emergency preparedness and response plans and strengthen health systems in the longer term. They have also stressed the importance of sustaining and strengthening the new partnerships and service delivery models that emerged during the COVID-19 pandemic.

Conclusions:

The number of recommended mental health activities implemented during the COVID-19 pandemic varied considerably across African countries. Several factors limit mental health integration into emergency response. However, there are signs of optimism, as mental health gained some attention during COVID-19, which can be built on to integrate mental health into emergency response and strengthen health systems in the long term.

Key messages:

- Capitalize on the increased attention to mental health during COVID-19 to support its integration into the emergency preparedness and response plans and strengthen health systems in the long term.
- Sustain and strengthen the new partnerships and service delivery models that emerged during the COVID-19 pandemic.

Abstract citation ID: ckac131.056
Health Emergency and Disaster Risk Management During the COVID-19 Pandemic: A Case Study from Italy

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Background:

The COVID-19 pandemic has profoundly impacted societies, influencing countries' Health Emergency and Disaster Risk Management (H-EDRM) systems. By taking Italy as a case study, this research aimed to investigate the response to the pandemic focusing on challenges, response strategies, lessons learned and implications for H-EDRM, with an emphasis on health workforce, health services delivery and logistics.

Methods:

This was a retrospective observational study using qualitative methodology. Data was collected via semi-structured interviews and analyzed according to the H-EDRM framework. Multiple interviewees were selected to obtain a holistic perspective on the Italian pandemic response. Stakeholders from five sectors (policymaking, hospital, primary care, third sector, lay community) from three of the most impacted Italian regions (Piemonte, Lombardia, Veneto) were interviewed, reaching 15 interviewees in total.

Results:

With regard to human resources, the main themes concerned the shortage of personnel, inadequate training, poor occupational health, and lack of multidisciplinarity. Regarding health services delivery, interviewees reported weakness of public health, hospital, and primary care systems. With regard to logistics, the following themes emerged: inadequate infrastructures, shortage of supplies, issues with transportation systems, and weak communication channels. Lessons learned stressed the importance of considering pragmatic disaster preparedness and the need for cultural and structural reforms.

Conclusions:

Implications that emerged from this study can inform advancements in disaster management in Italy.

Acknowledgments: This study was conducted in collaboration with the Department of Public Health and Health Policy, Hiroshima University, Japan and funded by the World Health Organization Kobe Centre for Health Development (WKC-HEDRM-K21001).

*ALC and EP are both first authors

Key messages:

- Findings show that great interconnection of sectors is key in overcoming challenges and for future disaster preparedness.
- Lessons learned contribute to translating the H-EDRM precepts into practice.

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Women's experiences of accessing vaccines during pregnancy and for their babies during COVID-19

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Background:

COVID-19 changed access to healthcare, including vaccinations, in the United Kingdom (UK). This study explored UK women's experiences of accessing pertussis vaccination during pregnancy and infant vaccinations during COVID-19.

Methods:

An online cross-sectional survey was completed, between 3rd August-11th October 2020, by 1404 women aged 16+ years who were pregnant at some point after the first UK lockdown from March 23rd 2020. Ten follow-up semi-structured interviews were conducted.

Results:

Most women surveyed were pregnant (65.7%) and a third postnatal (34.3%). Almost all women (95.6%) were aware that pertussis vaccination is recommended in pregnancy. Most pregnant (72.1%) and postnatal women (84.0%) had received pertussis vaccination however, access issues were reported. Over a third (39.6%) of women had a pregnancy vaccination appointment changed. COVID-19 made it physically difficult to access pregnancy vaccinations for one fifth (21.5%) of women and physically difficult to access infant vaccinations for almost half of women (45.8%). Nearly half of women (45.2%) reported feeling less safe attending pregnancy vaccinations and over three quarters (76.3%) less safe attending infant vaccinations due to COVID-19. The majority (94.2%) felt it was important to get their baby vaccinated during COVID-19. Pregnant women from ethnic-minorities and lower-income households were less likely to have been vaccinated. Minority-ethnicity women were more likely to report access problems and feeling less safe attending vaccinations for both themselves and their babies. Qualitative analysis found women experienced difficulties accessing antenatal care and relied on knowledge from previous pregnancies to access vaccine appointments.

Conclusions:

COVID-19 disrupted access to vaccinations in the UK. Vaccine services must ensure equitable access to vaccine appointments during ongoing and future pandemics including tailoring services for lower income and ethnic minority families.

Key messages:

- Pregnancy and infant vaccines was disrupted by COVID-19 with women feeling less safe and having difficulties accessing vaccinations with ethnic minority women more likely to report access issues.
- Equitable access to routine pregnancy and infant vaccine appointments must be prioritised during future pandemics, including considering tailoring services for different population groups.

Abstract citation ID: ckac131.058
Mortality in Covid-19 patients hospitalized in a teaching hospital in Italy during the first 3 waves

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Introduction:

In Italy a Covid-19 pandemic pattern was observed, characterized by several waves, with an excess total mortality of 178000 deaths. Alessandria, Italy is the Piedmont province with the highest proportion of mortality from Covid-19 in the first 4 months of 2020, compared to the rest of the region.

Objectives:

To analyze mortality in patients hospitalized for Covid-19 in the Alessandria Hospital (AO AL), considering the first 3 waves.

Materials and methods:

Subjects aged ≥18 with a diagnosis of Covid-19 admitted to the AO AL in the first 50 days of the first 3 waves were included. The first wave started on 24 February 2020 (first day of available data by the Ministry of Health), the second wave on 14 September 2020 (first day of the 2020/21 school year), the third wave on 15 February 2021 (peak of cases detected by the Italian College of Health). The causes of death were obtained from the National Institute of Statistics death cards and codified according to the International Classification of Diseases, 9th revision, classification.

Results:

We included 825 subjects (median age: 73 years; male prevalence: 60.7%). The subjects hospitalized in the first wave were 464, in the second wave 255, in the third wave 106. A total of 309 subjects died (37.5%), of which 218 in the first wave (70.6%), 69 in the second wave (22.3%), 22 in the third wave (7.1%). The most frequent causes of death were "Covid-19 pneumonia" (61.5%) and "respiratory distress syndrome" (19.4%). Death occurred after hospital discharge in 40% of cases. 6 months after admission, the survival rate was 53% among patients of the first wave, 73% and 78% for those of the second and third wave. Patients hospitalized in the first and second waves showed a greater risk of death compared to patients of the third wave (HR = 2.8; 95% CI 1.8-4.4 and HR = 1.4; 95% CI 0.8-2.2).

Conclusions:

Data showed a difference in mortality between the 3 waves with a statistically significant variation between the first and third waves.

Key messages:

- Data showed a difference in mortality between the 3 waves.
- Data showed a statistically significant variation in mortality between the first and third waves.

Abstract citation ID: ckac131.059
Civil-military cooperation to contain COVID-19 epidemic in Israel- Lesson learned

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Issue:

Public Health Services (PHS) has a major role in controlling COVID-19. As the epidemic propagated, and due to limited resources, PHS in Israel reached it capacity to contain the outbreak. Following a political decision in June 2020, the Home Front Command (HFC) of the Israeli Army was assigned to integrate in operating the National epidemiological efforts, while the PHS remained responsible for policy, setting guidelines and supervision.

Problem:

The civilian PHS and the military HFC had to establish cooperation, institute new hierarchical structure and divide the responsibility, despite the differences in organizational cultures, financial and human resources. Additionally, inter and intra organizational interests had to be resolved.

Results:

Formal and informal efforts were needed to bridge between the two organizations, while utilizing the comparative advantage of each agency. PHS has experience in controlling outbreaks, well-established intra-organizational communication, high professional identity, commitment and familiarity with different populations in Israel. HFC is a flexible, creative, learning and fast-responding organ, experienced in controlling emergencies and has well-established chains of command. HFC is supported by IT and intelligence officers. Organizational disadvantages had to be resolved. PHS is deficient in resources, has limited capacity in operating staff during irregular hours, and is obliged to share the health leadership and authority with the army. HFC has to confront high rotation of its manpower, difficulty in succumbing to non-military guidelines and regulations and possible mistrust between the army and special populations, such as Arabs or ultra-religious Jews.

Lessons:

Civil-military epidemiological cooperation can boost the National response in containing epidemics. Policymakers from each agency should use leadership skills to encourage integration while being sensitive to the needs and expectations of all participants.

Key messages:

- Civil–military epidemiological cooperation boosts the National response in containing epidemic. Mutual organizational sensitivity is crucial for constructive integration by leaders from each agency.
- Civil–military epidemiological cooperation boosts the National response in containing epidemic. Mutual organizational sensitivity is crucial for constructive integration by leaders from each agency.

Abstract citation ID: ckac131.060
Determinants of COVID-19 vaccine uptake among healthcare workers and the general population in Cyprus

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Background:

Vaccination is a critical intervention in the fight against the coronavirus disease 2019 (COVID-19) pandemic. Various levels of COVID-19 vaccination acceptance have been observed around the world. However, a high percentage of the general population and healthcare professionals (HCPs), refuse the COVID-19 vaccination. This study aims to examine the factors influencing COVID-19 vaccine uptake among HCPs and the general population in Cyprus.

Methods:

An online cross-sectional study was conducted, using a self-administered questionnaire to collect information covering various potential determinants including sociodemographic and health-related characteristics, trust in the healthcare system, satisfaction with it, utilization of preventive healthcare services, COVID-19 vaccination information, and general vaccination knowledge.

Results:

A total of 2582 participants completed the survey, with 53.5% of individuals in the general population, and 70.0% of the HCPs received the COVID-19 vaccination. We found that as the age increases by one year among the general population, the odds of being vaccinated against COVID-19 increase by 1.02 units (95% 1.00-1.03, p-value = 0.035), whilst those with increased trust in national healthcare authorities' guidelines (OR = 3.96, 95% CI: 3.41-4.61) and increased vaccination knowledge scores (OR = 1.11, 95% CI: 1.05-1.18) were significantly more likely to be vaccinated. Furthermore, male HCPs (OR = 1.91, 95% CI: 1.01-3.59), and those who reported increased trust in national healthcare authorities' guidelines (OR = 5.38, 95% CI: 3.65-7.95) were significantly more likely to be vaccinated.

Conclusions:

Public health policymakers can use national campaigns and long-term planning to build public trust in national healthcare authorities and educate and raise awareness about the benefits of vaccination. Such strategies could pave the way for adequate vaccine uptake and prepare the public for unfavorable scenarios, such as future pandemics.

Key messages:

- Our results revealed the importance of vaccination knowledge and trust in healthcare system in respect to COVID-19 vaccination uptake.
- The urgent need for national campaigns and long-term planning to build public trust in national healthcare authorities.

Abstract citation ID: ckac131.061
Home care for vulnerable populations with special needs during a disaster in Germany

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Background:

In Europe, too, the risk of natural, technical, or man-made disasters and public health emergencies has been growing for some time. The situation of vulnerable populations with special needs receiving intensive home care such as people of all ages with oxygen therapy, peritoneal dialysis, parenteral nutrition etc. is rarely considered in this context. This issue is addressed by the sub-project ''Safety and Nursing'' of the AUPIK consortium on ''Maintenance of home care infrastructure in crisis and disasters'' funded by the German Federal Ministry of Education and Research.

Methods:

Starting in April 2020, a systematic literature analysis was carried out, focussing on home care of populations with special needs during disasters. This was supplemented by an online survey with nurses and care workers (n = 101) and semi-structured interviews with managers of specialized home care services (n = 8). The survey data were analysed with descriptive statistics, the interview data with content analysis; results were cross-checked with the literature.

Results:

Home care providers are at best prepared for everyday tasks; even minor disruptions have far-reaching consequences. Although the impact of disasters such as large-scale and prolonged power cuts are hard to imagine, the experience with the COVID-19 pandemic and other current events (e.g., floods, heat waves) could at least raise awareness of the problem. However, there is hardly any preparation for disasters in home care yet, but there are high expectations of support from civil protection organisations or local authorities. That these, in turn, are not prepared to deal with populations with special needs in intensive home care, is overlooked.

Conclusions:

Home care infrastructure in Germany is currently inadequately prepared in terms of concept, staff, and equipment to care for vulnerable populations with special needs during disasters. Initiatives to improve disaster preparedness in home and long-term care are overdue.

Key messages:

- The situation of vulnerable populations with special needs during a disaster is a pressing public health and disaster nursing issue which needs to be considered more carefully.
- Public health nursing and health services research must contribute substantially to improving disaster preparedness in all health sectors and for all populations.

Abstract citation ID: ckac131.062
True death toll of COVID-19 in Georgia: estimates of the number of deaths from COVID-19

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Problem:

Georgia, in terms of Covid-19 attributed mortality, ranks 8th in the World.

Description:

In Georgia, there are no routinely conducted autopsies of the deceased. The identification of causes of death is based on the physician's clinical decision. Absence of autopsies, lack of experience with Covid-19, are key issues of Covid-19 death certification. Considering COVID-19 as a primary cause of death led to over-reporting of COVID mortality among patients with severe comorbidities. This affects the identification of underlying cause of death (UCOD) and leads to misclassifications.

Results:

2021 mortal cases with Covid-19 as the UCOD, were analyzed. Cases were grouped by the interval between testing and death: <1 day - 170 cases (1.5%), 2-44 days - 9468 cases (83.5%), 45+ days - 1694 cases (15%). The group of cases with time intervals of 2-44 days, was sub-grouped according to causes mentioned in death certificates: A - only U07 is indicated, B - U07&any chain-of-event condition (pneumonia, respiratory distress, respiratory failure, etc.), C - U07& 1 or more significant contributing conditions (diabetes, stroke, etc.). According to the analysis in the group, 2-44 days distribution was: A - 6%; B - 81%; C - 13%. U07 cases in groups A and C without any respiratory conditions mentioned were defined as 'unlikely' COVID-19 death (19% of total). From groups with time intervals of < 1 and 45+ days (1864) 72 cases were randomly selected for in-depth analysis by a panel of experts, using additional medical records. Out of these cases, the panel of experts considered 80%, as 'non-COVID-19' deaths.

Lessons:

If 'unlikely' and 'non-COVID-19' deaths aren't counted, the number of deaths is reduced by 29.5%. Lack of duration of a disease represents a limitation. A similar revision of all/2-44 day's interval COVID-19-related deaths is required to get a real number. Conduction of a verbal autopsy is necessary. Training on coding causes of death and existing regulations is important.

Key messages:

- There is an over-registration of COVID-19 as a UCOD.
- The lack of knowledge of death certification of cases with severe comorbidities and accidents leads to over estimates.

Abstract citation ID: ckac131.063
Bulgarian population – before COVID-19 and now

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Background:

The demographic picture in Bulgaria became worse and worse since the democratic changes at the end of the 20th century. Our country was at one of the first positions according to the level of death rate and the rate of population decline. The study aims to analyse the effect of the COVID-19 pandemic on the main demographic indicators in Bulgaria.

Methods:

Data from Bulgarian National Statistical Institute were used to analyse population growth and life expectancy and to calculate the death rate, birth rate, infant mortality rate, and the share of people over 65 years of age for 2019 in comparison with 2021.

Results:

In 2019 before the onset of COVID-19, the Bulgarian population consists of 6 951 481 people. In 2021 it declines to 6 838 937 people. The decrease in birth rate is not very significant - from 8.9‰ /2019/ to 8.5‰ /2021/. The analysis provides estimates of excess deaths observed during the peak of the COVID-19 outbreak in Bulgaria. The death rate is very much increased - from 15.5‰ to 21.7‰. The increase affects the female and male populations equally - from 19.6‰ for men in 2019 to 23.2‰ in 2021 and from 16.4‰ for women to 20.2‰. The life expectancy shows a certain decrease - from 74.8 years /2019/ to 74.64 /2021/. Correspondingly, life expectancy was reduced for females- by 78.34 - 78.22 and for males by 71.37 - 71.11 years. The level of infant mortality is not changed - 5.6‰. People over 65 years are 21.6% of the total population during the compared period.

Conclusions:

The Bulgarian population is very strongly affected by COVID - 19 pandemic. The COVID-19 pandemic has caused a significant number of deaths worldwide but Bulgaria ranks first in the world in terms of mortality rates. Life expectancy decline reflects the impact of temporary epidemic mortality. The impact on children from the pandemic is not very significant for the country. Society should be making major and cost-effective efforts to reduce mortality.

Key messages:

- The sharp change in demographic realities has significant effects on the country's economy.
- The deterioration of natural growth exacerbates the need to increase labour productivity in areas with the fastest declining populations.

Abstract citation ID: ckac131.064
Impact of COVID-19 on the essential healthcare services at primary healthcare level

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Background:

The COVID-19 pandemic triggered numerous challenges for the healthcare systems worldwide, particularly affecting the continuity of essential health services in low- and middle-income countries. We explored the effects of the COVID-19 pandemic on the utilization and delivery of essential health services in Armenia.

Methods:

We applied a conventional qualitative study design using semi-structured in-depth interviews (n = 17) in public and private primary healthcare (PHC) facilities in Armenia (2021). Participants included physicians providing primary health services (e.g. endocrinologists, gynecologists/obstetricians, and pediatricians), regular PHC facility patients (e.g. adults with chronic diseases, parents of children), and policymakers. Iterative thematic analysis was done based on inductively emerged 3 main themes: patient-provider communications, maternal and child health services, and management of chronic diseases.

Results:

Overall, visits to the PHC facilities were decreased due to fear to contract COVID-19 coupled with lack of information, misinformation and panic. There was a lack of digital platforms for ensuring continuous patient-provider communication and phone calls were the main way of communication. PHC providers intentionally limited the number of maternal and child visits to only essential antenatal visits, newborn screenings and routine child immunizations. Still, the latter has suffered resulting in delayed and decreased vaccinations. The pandemic remarkably decreased the number of follow-up visits and monitoring of patients with chronic conditions resulting in more critical and severe conditions.

Conclusions:

The COVID-19 pandemic affected the provision and utilization of essential health services at PHC facilities by changing people's health-seeking behavior. Unified national-level guidance for PHC facilities is needed to direct the provision of essential services, effective health communication and usage of digital platforms.

Key messages:

- Though provider encounters should be limited during outbreaks, continuous provision of essential services is critical in the prevention of morbidity, complications and worsened disease severity.
- Efforts are needed to develop effective health and risk communication strategies and enhance appropriate usage of digital platforms to promote adequate health-seeking behavior among the public.

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Tobacco control is integral to global COVID-19 response: an opportunity to accelerate toward SDGs

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Issue:

Tobacco use intersects with the COVID-19 pandemic not only in terms of health consequences, but also on public health systems, economies, and the environment.

Description of the problem:

The global tobacco supply contributes significantly to environmental pollution of the natural ecosystems. The damage is compounded by tobacco consumption and its resultant waste, which leaves a significant carbon footprint on the environment, undermining the planet's ecological stability and intensifying climate change. Furthermore, tobacco use exacerbates inequalities and adds burdens to COVID-19-related mortality, which are major challenges to recovery from the COVID-19 pandemic.

Results:

he pandemic has provided a chance to combat tobacco use and accelerate efforts to alleviate these challenges and accelerate progress toward Sustainable Development Goals (SDGs). The MPOWER measures from the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) can play an integral part to boost sustainable and equitable COVID-19 recovery — Monitor tobacco use (article 20); Protection from tobacco smoke (article 8); Offer help for tobacco cessation (article 14); Warn about the dangers of tobacco (article 11); Enforcing bans on tobacco advertising, promotion, and sponsorship (TAPS) (article13); and Raise tobacco taxes (article 6).

Lessons:

To accelerate recovery, it is critical to call for actions for governments and policy-makers to strengthen synergies and policy actions to emphasise tobacco control across equity, public health, climate actions, and counteract against the tobacco industry during and beyond COVID-19 as global authorities pledge to achieve the SDGs.

Key messages:

- Global authorities must create better synergies on policies with a prime focus on reinforcing tobacco control to recover from the pandemic.
- The WHO FCTC MPOWER measures can play an integral part in COVID-19 recovery to fight tobacco use and accelerate progress toward SDGs.

Abstract citation ID: ckac131.066
Facing COVID-19 in Georgia - left behind children coping better with COVID-19 precautions

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Background:

Georgia, a major migrant sending country, with about 39% of children living with their caregivers while at least one of the parents migrated (left-behind children, LBC) has been severely affected by the COVID-19 pandemic. The main aim of this study was to qualitatively explore LBC's perception and experience during the pandemic.

Methods:

Between December 2021 and January 2022, we conducted 39 (29 LBC, 10 non-LBC) individual in-depth interviews with schoolchildren aged 12-18 in a public school from a migrant sending region. We conducted life history narrative interviews and used a thematic analysis approach.

Results:

Preliminary findings show four salient themes: (1) Family members' first reactions to the pandemic influence children's emotional health irrespective of parents' working arrangements. Children express less stress and anxiety when families show emotional stability and are not overwhelmed by the pandemic; (2) All interviewed children find COVID-19 and home-schooling a challenge. (3) LBC express more intense fear about infecting their grandparents than non-LBC. (4) Closer family ties to parents and siblings and access to better equipment help LBC to cope better than non-LBC. LBC view a positive side of Covid-19 in being able to enjoy more time with a parent, who would have otherwise worked abroad.

Conclusions:

Overall, all children perceive the COVID-19 pandemic as a challenge, yet closeness with a returned parent and with siblings and more affluence helps LBC to cope better than non-LBC with COVID-19 precautionary measures like home-schooling.

Key messages:

- All children are affected by the COVID-19 pandemic. Emotional stability in the family is important in fostering resilience and coping mechanisms among children.
- LBC experience the added benefit of better equipped homes and enjoy the presence of the migrant parent at home.

Abstract citation ID: ckac131.067
What factors contribute to maintaining mental well-being during the COVID-19 pandemic?

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Background:

The COVID-19 pandemic posed numerous challenges for many people and first results indicate high variability of responses in mental well-being. Thus, this research aimed to identify longitudinal factors contributing to the maintenance of mental well-being despite the adverse life circumstances and derive recommendations suitable for the promotion of mental well-being in the context of future pandemic or similar stressful situations.

Methods:

We analysed representative longitudinal panel data of the Socio-Economic Panel (SOEP) from 15,122 adults (age range 18-99 years) who participated in the collaborative SOEP-CoV and RKI-SOEP surveys comprising self-reports of mental well-being (e.g., life satisfaction) and potentially relevant factors (e.g., control beliefs). By taking data from before (2015-2019) and during the COVID-19 pandemic (2020-2021) into account, we investigated different patterns of mental well-being trajectories and factors associated with the maintenance of mental well-being over time.

Results:

Preliminary results suggest that the majority of adults in Germany managed to maintain or even enhance their mental well-being in the considered time frame. Moreover, results suggest that certain factors seem to be of universal importance (e.g., altruism, locus of control) while others are particularly relevant for distinct mental well-being dimensions (e.g., life goals). Most decisively, the probability of experiencing mental well-being deterioration during the COVID-19 pandemic was enhanced in individuals with an internal locus of control.

Conclusions:

The findings revealed longitudinal factors that contribute to maintaining mental well-being during the COVID-19 pandemic. Promoting altruism, family-related life goals and external locus of control beliefs can help fostering resilient responses in the face of challenging life events such as the COVID-19 pandemic.

Key messages:

- Several factors (e.g., locus of control) offer the potential to maintain or even improve mental well-being in times characterized by the COVID-19 pandemic.
- To enhance preparedness for stressful life events such as the COVID-19 pandemic, the identified key factors should be included in basic universal public health promotion.

Abstract citation ID: ckac131.068
Estimated excess mortality figures in the year 2020-2021 in casentino municipalities (Italy)

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Background:

In 2020, the total deaths from all causes were the highest ever recorded in Italy since World War II (15.6% excess), with peaks during Sars-Cov2 waves and reductions in periods of national lockdown. On the contrary, in 2021, the total number of deaths from all causes reduced compared to the previous year. Analysing local mortality data, our study aims to assess whether, in the Casentino Valley (Arezzo, Tuscany), an excess of deaths from all causes occurred between January 2020 and December 2021 compared to the five years 2015-2019.

Methods:

We used the official mortality data from the Italian Institute of Statistics (ISTAT), and that are published in the Table of deaths by the municipality on March 2, 2022. From this database, we extrapolated all deaths from all causes between January 1, 2020, and December 31, 2021, in the 10 municipalities of Casentino. The data collected were processed using Microsoft Excel 2016 software. We then distinguished by total per month, gender, and age group and then compared these data with the previous five years' average by calculating the percentage change.

Results:

Overall, both the years 2020 and 2021, it is shown an increase in the deaths percentages compared to the previous five-year period, respectively 5.66% and 8.07%. In particular, there is an excess of mortality in November and December 2020. The increase in mortality is more remarkable for males (13% in 2020 and 20% in 2021). The highest percentage increase was recorded in 2021 for the 75-84 age group (+15%) and in 2020 for males over 85 (+29%).

Conclusions:

The data analysed confirms the excess mortality in 2020-2021 compared to the average of the previous 5 years in Casentino. There are peaks in November and December 2020, corresponding with the second wave of Sars Cov2 infection. The results obtained establish the basis for subsequent analyses that will verify the correlation of mortality peaks with the incidence of Sars-Cov2 cases in the territory studied.

Key messages:

- Between January 1, 2020, and December 31, 2021 there was an excess of all-cause mortality in our area.
- This excess mortality appears to be related to peaks in Sars-Cov2 infection.

Abstract citation ID: ckac131.069
Epidemiology of covid-19 in Mongolia: descriptive findings

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Background:

Mongolia is a landlocked country, and has been divided into 21 provinces plus the capital city Ulaanbaatar. In our country, Covid-19 was the first internal case (15 Nov 2020) and the first wave of pandemic occurred (peak at 14 Jun 2021) ten months later on World's first case and wave. The second and third waves were also delayed by two months, but the fourth wave occurred just in parallel (peak on 17 Jan 2022).

Methods:

This study was a retrospective cross-sectional study. We have compared incidence rate (IR) and case-fatality rates (CFR) in provinces by age groups based on publicly available data reported by MoH from January to December of 2021.

Results:

CFR in Mongolia was low (average 0.23%), and had a clear dynamic to drop from beginning to the present time (for I wave-0.49, and II-0.42, III-0.23, IV-0.04 correspondently). At the beginning of the III waves, we vaccinated 68.7% of the total population, and in the fourth wave, CFR significantly decreased. IR had two peaks: in the age group 30-34 (250.6) and over 85 (248.9). There was a strong correlation between age and morbidity. Up to age group 40-44 (0.12 %), there was a deliberate increase of CFR, further up to 65-69 ages (2.7%) gradual increase, and from age group 70-74 CFR rapidly increases reaching 10.5% at age group over 85. IR was higher in men aged 65 years and over. CFR was significantly higher in Ulaanbaatar city and Umnugovi province morbidity due to Covid-19 not being registered.

Conclusions:

Vaccination in Mongolia was a key factor in declining fatality. Umnugovi province is crucial for exports to China, so we suppose, government decisions strongly affected in fatality rate in this province, in terms of the evacuation of severely diseased patients to the capital.

Key messages:

- Vaccination is played important role in COVID-19 epidemiology.
- Burden of Covid-19 need to be investigated deeply in association with political decisions.

Abstract citation ID: ckac131.070
Modeling and analysis of psychological mechanism for preventive behaviors against the COVID-19

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Background:

The COVID-19 pandemic has dramatically changed human life style. People all over the world are still on the way to establish ''New Normal''. The purpose of this study was to construct a cognitive model that predicts preventive behaviors against the infectious disease.

Methods:

A total of 3,000 Japanese respondents aged from 18 to 86 years participated in a web survey in January 2021. The data of 2,913 respondents (1,633 males and 1,280 females) were eligible for analysis. The following information regarding cognitive characteristics was assessed: 1) Cognitive reflection ability (Frederick, 2005), 2) Experiential thinking style (Pacini & Epstein, 1999), 3) Germ aversion (Duncan et al., 2009). In addition to those characteristics, the participants were asked to answer 6 items to rate their preventive behaviors against the COVID-19, such as keeping social distance and wearing a mask. A structural equation modeling technique was used to test the causal relationships among the measures. We hypothesized that experiential thinking style and germ aversion would mediate the causal link between cognitive reflection ability and preventive behaviors.

Results:

Correlation analyses indicated that cognitive reflection ability was negatively associated with experiential thinking style, whereas experiential thinking style was negatively associated with germ aversion. Furthermore, the higher germ aversion was, the more the participants enforced the covid-19 preventive behaviors. Parameter estimation of the causal model using the measures by the bootstrap method indicated that the model acceptably fit the data with CFI of 0.997, TLI of 0.996, and RMSEA of 0.008 (95% CI = 0.004:0.011).

Conclusions:

The findings of the study suggest that there is a cognitive psychological process that induces preventive behaviors against the COVID-19. The results should be useful to improve public health interventions for future pandemics.

Key messages:

- A web survey was conducted for 3,000 Japanese adults to construct a cognitive model that predicts preventive behaviors against the COVID-19.
- The structural equation modeling indicated that the participants' experiential thinking style and germ aversion mediated the causal link between cognitive reflection ability and preventive behaviors.

Abstract citation ID: ckac131.071
Covid-19 Hospitalization Costs Assessment in an Italian Covid Hospital

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Introduction:

Many consequences resulted from the breakout of the COVID-19 pandemic in Europe, which have disrupted our economic, social and medical world. This allowed us to measure and assess the hospitalisation costs regarding the COVID-19 disease at Martini Hospital in Turin, one of the hospitals entirely committed to the COVID-19 care, between January and June 2021.

Methods:

In this single center retrospective study, we collected and analysed cost data on patients admitted at Martini Hospital in the time frame of January-June 2021 and compared the analysis with the same period in 2020, at a time when the hospital was not dedicated to Covid-19 patients. Cost data included full-time and temporary employees salaries, drugs, medical and non-medical supplies and equipment and facility utilities. We then estimated the cost per treated COVID-19 episode, in comparison with the cost per any desease including Covid-19.

Results:

The first 6 months of 2021 registered 2,136 hospital discharges, while same period in 2020 counted 4376. The mean duration of the hospital stay was 7,67 days in 2020 and 12,83 in 2021. The average charge per treated episode doubled (+52,5%) from Euros 8997 in 2020 to Euros 19026 in 2021. The mean revenue increased of 35% from Euros 3280 in 2020 to Euros 5041 in 2021. This is due to the major complexity of care required for Covid patients. As it is, in 2021 the average complexity index of 2.13 while in 2020 it was 1.39.

Conclusions:

Clinical management and treatment of COVID-19 economically strain the European health-care systems. The study of COVID-19 treatment costs, and their differences between 2020 and 2021 suggests an economic challenge for the entire Italian health system and emphasises the necessity to avoid the recurrence of such an economic impact by implementing effective infection prevention and control policies.

Key messages:

- The Covid-19 pandemic has been straining both the European health and economic systems.
- Studying the Covid-19 expenditures allows to frame unexpected new challenges regarding health-care systems.

Abstract citation ID: ckac131.072
Is it really possible to leave sars-cov-2 outside the door?

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Background:

In this historical period, it has become very important to live in healthy environments. By using everyday objects, cross-contamination is possible because of prolonged microbial persistence on surfaces. UV-C irradiation is an environmentally friendly method to disinfect objects as no harmful chemicals or heat are involved. This study aims to determine the virucidal activity, against SARS-CoV-2, of UV-C irradiation occurring in a designed UV device, 'Purity Capsule'.

Methods:

An experimental study was performed in September 2020. The 'Purity capsule' has an 11 W lamp (3.5W UV-C) positioned in the centre of the device. The lamp has a dome covered with a reflective, protective coating. Three metal carriers were placed at the maximum distance from the UV-C lamp in three different positions and tested at 30 and 60 seconds 3 times. The carriers were inoculated with 100 µL of SARS-CoV-2 viral suspension with a concentration of 106.5 TCID50 /mL. After treatment, laboratory procedures were used to transfer the treated virus from carriers to multiwell plates. The samples were compared with positive controls (not exposed to UV-C light) after incubation, at 37 °C in 5% COÕ · in a humidified atmosphere, for 3 days. The residual viral activity was tested by assessing the 50% infectious dose per tissue culture (TCID50%).

Results:

Tests performed at 30 seconds of UV-C irradiation show an average viral reduction of 4.0 Log10 (99.99%). All three tests performed at 60 seconds reached the maximum measurable log10 viral reduction: 5.0 Log10 (99.999%).

Conclusions:

The study assessed the effectiveness of the device in significantly reducing the viral load on all carriers regardless exposure time and distance from the UV-C light source, with no impact on the level of environmental pollution.

Key messages:

- UV-C light has the property of inactivating viral growth; its physical approach is considered a good compromise between cost and effectiveness.
- The device was effective in disinfecting all small everyday objects tested.

Abstract citation ID: ckac131.073
A time-varying SIRD model for dynamic vaccination strategies against COVID-19

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Introduction:

The COVID-19 pandemic has demonstrated how the optimal allocation of the limited doses of vaccine available represents one of the main useful measures to mitigate the transmission of the infection and reduce the mortality associated with it, especially at an early stage of the pandemic. The use of a compartmental model allows us to understand which population groups to vaccinate and to what extent to act depending on the type of health or social objective to be achieved.

Methods:

A time-varying susceptible-infected-recovered-deceased (SIRD) compartmental model, stratified into ten age groups, was developed on Italian data. Simulations were performed every 15 days from December 2020 to April 2021. An optimal vaccination strategy was achieved by minimizing deaths or infected, considering the total vaccine doses available.

Results:

We showed how the effects of a vaccination campaign can be planned in a way that maximizes lives saved and/or minimizes infections. Regarding the minimization of deaths, the model prioritizes the elderly (>80 years) and then those between 60 and 80 years, in all simulations. Regarding the cost function of new infections, the first simulation assigns all available doses to those over 90 years of age. In the later simulations, the doses are assigned mainly to the 20-29-year-old and the 89+ year old.

Conclusions:

Optimal allocation of available vaccine doses is useful in mitigating transmission of infection and reducing mortality. Application of the mathematical model can be useful at the beginning of an epidemic caused by a new pathogen, when data are scarce, and it is therefore necessary to introduce a standardized approach. This kind of simulation is useful to understand whether the implemented vaccination strategy needs to be recalibrated, too.

Key messages:

- Time-varying compartmentalised models can be used both to continuously inform decision-makers about changes in epidemic traits and to simulate the effects of targeted pandemic containment strategies.
- The application of compartmental models can be very useful at the onset of an epidemic to more successfully contain it and structure the health, political, and economic plan.

Abstract citation ID: ckac131.074
Healthy aging in place during the pandemic in Northern Italy

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Many elderly people would like to stay in their own homes as long as possible. Therefore, a focus on enabling factors for a healthy aging in place in needed. Italy was the first European country to be hit hard by the pandemic. These had an impact on people's everyday lives, on social participation and freedom of movement for all sections of the population. But especially elderly people were considered a risk group and were urged to leave their homes as little as possible. The project aimed to analyse the situation of elderly people in South Tyrol (Northern Italy), focusing on the characteristics of enabling factors for a healthy ageing in place. The main research question was: What kind of enabling factors ensure a healthy aging in place during the pandemic? Using a mixed-methods-approach, we conducted 10 semi-structured interviews (experts: social workers, health professionals, responsible persons from senior associations, ...) analysed by qualitative content analysis and a quantitative questionnaire (536 respondents, aged 60 to 101 still living in their own home) from 2020 to 2021. The questionnaire was distributed in digital and analogue form to reach a wider study group and to facilitate access to the research group despite the infection control measures or technical challenges. The results show that there were numerous changes in the everyday life of elderly people during the pandemic, which were described as particularly important for a healthy ageing in place. Based on the answers to the pandemic-related restrictions, 6 categories could be identified: Loneliness versus desire for social contact, mobility, emotions, needs, opportunities, restrictions. To be able to guarantee healthy ageing in place, we need to examine and promote these enabling factors in the long term.

Key messages:

- A focus on enabling factors for a healthy aging in place in needed.
- There were numerous changes in the everyday life of elderly people during the pandemic, which were described as particularly important for a healthy ageing in place.

Abstract citation ID: ckac131.075
USCA service utilization in the city of Florence (Italy) during the COVID-19 pandemic

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Background:

In order to support primary care during the first pandemic wave (March 2020), the Italian Government instituted multi-professional health teams called ''USCA'' (Special Continuity Care Units), which ensured continuity of care for COVID-19 patients who do not need hospitalization. The aim of our study was to compare the volumes of USCA service utilization in Florence (Tuscany, Italy) during the peak of home visits of three pandemic waves.

Methods:

This single-center study followed a retrospective cross-sectional design. The USCA of the Heath District of Florence served a population of 366,190 people. The following data were collected: home medical visits, nursing home (NH) visits, visits in health-care hotels. The peak periods of three epidemic waves were considered in the analyses: the second wave (23 October - 20 November 2020), the third wave (25 March - 22 April 2021), and the Omicron period (27 December 2021 - 6 February 2022). The maximum 7-day moving averages of the daily number of visits during the three periods were calculated. Relative percent differences for visits comparing the considered periods were computed.

Results:

Home visits during the third pandemic wave increased by 14% compared to the second wave (second wave: N = 1370, third wave: N = 1562), while a decrease was observed during the Omicron period (Omicron vs third wave: -21%; peak value: 41 vs 60). Visits in health-care hotels during the third wave doubled compared to the second wave. After the start of the COVID-19 vaccination campaign, NH visits steeply declined (third wave vs second wave: -95%; N = 323 vs 15; peak value = 14 vs 2 visits per day). During the Omicron period, NH visits increased by almost four times compared to the third wave period.

Conclusions:

The USCA service utilization was significant in all the analyzed periods. In a pandemic context, it is necessary to strengthen primary care services such as USCA, which have proved to respond to rapidly changing health needs.

Key messages:

- The USCA service is an innovative model of integrated home care that has proved to respond to rapidly changing health needs during all phases of the COVID-19 pandemic.
- The USCA service utilization was significant during all phases of the pandemic. The USCA service has introduced new ways of working and new relationships between services in primary care.

Abstract citation ID: ckac131.076
Resilience and life quality of health professionals in capital of Turkey during COVID-19 pandemic

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Background:

COVID-19 pandemic has had significant effects on physical and mental health of health professionals. It is thought that resilience protects individuals against mental illness and helps individuals cope with difficulties and stress more effectively. In this study, it was aimed to evaluate resilience, life quality and related factors of health professionals during COVID-19 pandemic.

Methods:

A cross-sectional study was performed among health professionals working at a tertiary hospital in Turkey's capital Ankara. An occupation based stratified sampling was done with taking alpha 0.05 and 1-beta 0.80. A questionnaire that consists of sociodemographic information, COVID-19 Impact on Quality of Life Scale and Connor Davidson Resilience Scale was used to collect data. The results of scales were divided into two parts by taking the median values as cut off points. Descriptive/inferential statistics and logistic regression were performed on IBM's SPSS 27.0 program.

Results:

A total of 987 participants were surveyed. 66% of them were female, and the average age was 36. Multivariate logistic regression analysis results that physicians (OR:1.48, 95% CI:1.05-2.07, p = 0.024) and nurses (OR:1.46, 95% CI:1.08-1.97, p = 0.013) have lower resilience. The impact of COVID-19 on quality of life was higher for the following groups; physicians (OR:2.07, 95% CI:1.43-3, p < 0.001), nurses (OR:1.61, 95% CI:1.10-2.36, p = 0.013), who have bachelor/higher degrees (OR: 1.54,95% CI: 1.02-2.31,p = 0.038), infected with COVID-19 (OR:1.33, 95% CI:1.02-1.74, p = 0.034), have COVID-19 related relative lost (OR:1.42, 95% CI:1.06-1.89, p = 0.016), and live with risk groups (OR:1.31, 95% CI:1.01-1.71, p = 0.042).

Conclusions:

Physicians and nurses who take care of patients one-on-one have lower resilience and higher decrease in life quality due to COVID-19 impacts. This result indicates a significant quality drop in health services is inevitable during pandemics and should be considered by the policy makers.

Key messages:

- Policies should be developed to increase the resilience of healthcare professionals so that they can effectively combat public health emergencies such as COVID-19 and not affect their quality of life.
- It is necessary to determine risk groups among health workers and plan training programs to increase resilience.

Abstract citation ID: ckac131.077
Management of vaccine-related issues during a pandemic emergency: activation of a referral center

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Issue:

Vaccine hesitancy (VH) and the challenges faced by healthcare workers (HWs) in evaluating the complex risk-benefit ratio of vaccines' threaten the effectiveness of vaccination policy. The threat is enhanced when new vaccines are adopted during a pandemic emergency. In Italy, the Emilia-Romagna Region (ERR) created a specialized referral board called Vax-Consilium (VC) to support and guide HWs.

Description of the problem:

During a pandemic emergency, rapid and appropriate vaccine implementation is necessary to protect fragile individuals and to encourage vaccine adherence among exposed groups. Challenges in the realm of vaccination emerge, especially when dealing with patients with a complex medical history or previous vaccine adverse events. HWs were able to consult VC via a standardized digital form after obtaining the patient's informed consent. After a multidisciplinary and evidence-based evaluation, VC provided a conclusive report on the individual vaccine risk-benefit analysis. No cost is charged to the patient.

Results:

During the anti-COVID-19 vaccination campaign in 2021, 148 interrogations were submitted to VC: 121 were evaluated, whereas 27 were withdrawn by the HWs or rejected because of insufficient documentation. Mean patient age was 44 years. No absolute contraindication was found, whereas in 23 cases VC recommended immunization with a different vaccine. The disciplines most frequently involved were neurology, angiology and cardiology.

Lessons:

VC implementation in EER proved highly effective. Indeed, during the pandemic, anti-COVID-19 vaccination coverage reached >90%. In addition, DTaP-polio-HBV-HIb and MMR vaccination coverage reached >95%. VC proved to be a high-quality public health service. Not only was citizens' trust in the healthcare system enhanced and was VH reduced, but HWs knowledge improved even in cases not considered in national and international guidelines.

Key messages:

- A specialized referral board (Vax-Consilium) could be an effective tool for enhancing citizens' trust in vaccines.
- A specialized referral board (Vax-Consilium) contributes to lowering VH and supporting HWs decision-making process.

Abstract citation ID: ckac131.078
Don't be scared to touch! Effectiveness of a new disinfection technology based on Ag ions & Zeolite

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Background:

Disinfection of contact surfaces has become common practice since the two-year Covid-19 pandemic. The transmission of microbial agents has long been the focus of public health and hygiene awareness campaigns. Indeed, the development of new disinfection technologies and approaches is attracting considerable interest in the scientific community. Mixed plastic powders with antimicrobial properties and silver ions that compromise the metabolism of microorganisms could reduce the contamination of the contact surfaces. We aimed to evaluate an inorganic antimicrobial agent (IAA) based on Ag ions and zeolite mixed in a resin.

Methods:

This experimental study was carried out at the University of Siena, Italy. Different objects were produced in two versions: i) with an IAA mixed in plastic resin; ii) with a standard plastic mixture. To the eye, the two versions were indistinguishable and were randomly contaminated with the hands of several operators. After the hand contamination, T0, we sampled the objects using RODAC plates at T1 (1h) and T2 (6h), incubating at 36 °C for 48 hours. Comparisons of the biocidal effect were made at T1 and T2. Statistical analysis was carried out with Stata.

Results:

The mean level of contamination of the objects made with standard plastic were, respectively 50 CFU (SD 36.5) at T1 and 20 CFU (SD 13.6) at T2. In comparison, the objects made with IAA resin showed a mean level of contamination of 10 CFU (SD 5.9) at T1 and 6 CFU (SD3.6) at T2. The objects made with IAA resin have shown a mean percentage reduction of contamination of 79.5% at T1 and 78.3% at T2.

Conclusions:

IAA resin reduced contamination on objects that came into contact with hands. Antimicrobial plastic blends, are a valuable aid in counteracting the spread of infection related to contact with surfaces and fomites. The public health system could support and raise awareness for using these innovative materials for everyday applications and in healthcare facilities.

Key messages:

- Inorganic antimicrobial agent based on Ag ions and Zeolite mixed in a resin are efficient in reducing the contamination on different items in a real-life context.
- Public health system have to support and sensitize to production with inorganic materials with proven antimicrobial properties.

Abstract citation ID: ckac131.079
Impact of the pandemic on surgical oncology in Piedmont, Italy: a retrospective observational study

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Background:

To prevent the spread of SARS-CoV-2, containment measures were implemented leading to huge healthcare changes worldwide. This study aimed to describe the impact of COVID-19 pandemic on surgical oncology healthcare in a large Italian sample.

Methods:

A retrospective observational study included 99651 patients admitted to the hospitals of Piedmont (Northern Italy) to undergo oncological surgery, provided in ordinary hospitalization. We compared data of 2020 with 2016-2019 mean values. Data were stratified by tumor site, year, month and admission way. Chi-squared tests were used to assess differences in the percentage of admission modes between 2020 and 2016-2019.

Results:

An overall reduction in oncological surgery (-12.3%) was observed in 2020 (n = 17923) compared to the mean of period 2016-2019 (n = 20432). A relevant decrease began in March (-11%), continued in April (-18%) and peaked in May (-26%). There was a greater reduction in surgery of breast (-19.2%), bladder (-17.5%), colorectal (-16.5%), kidney (-14.2%), prostate (-14%). Little or no difference was observed for liver (-5.2%), body of uterus (-0.54%), ovary (-0.07%), lymphoma (+4.5%). There was a marked reduction of non-emergency admissions (-13.6%), in particular for some tumor sites: colorectal (-19.4%), breast (-19.4%), bladder (-18.7%). The overall volume of surgeries following an emergency access was unchanged (-0.3%). The proportion of hospitalizations with emergency access increased ($p < 0.001$).

Conclusions:

Our results highlight the burden of the reduction in cancer surgery in 2020 and the risk of delays in diagnosis and treatment for time-dependent conditions. For cancers that can be diagnosed early thanks to screening, the reduction in surgery is likely to be an indirect consequence of discontinuing screening activities. Therefore, further studies are needed to assess, as soon as data are available, the trend in 2021, and to compare our results with those reported in other European countries.

Key messages:

- The COVID-19 pandemic caused a significant decline in cancer surgeries in 2020 in Piedmont, Italy. It is necessary to compare our results with those reported in other European countries.

- These results show an increase in the proportion of oncological surgical admissions following emergency access in 2020 compared to the average for 2016-2019.

Abstract citation ID: ckac131.080
Are we socially equally at risk of smoking during the COVID-19 pandemic? French data from 2009-2021

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Background:
Since 2020, the COVID-19 pandemic has greatly affected people including a significant increase in mental health difficulties. Cigarette smoking is found to be strongly associated with mental health conditions, which is why the pandemic might have influenced the secular decline in smoking rates observed over recent years. Persons belonging to socioeconomically disadvantaged groups may be particularly affected, both because the pandemic is found to exacerbate existing social inequalities and because this group was more likely to smoke before the pandemic. We examined the prevalence of smoking in a French cohort study, focusing on differences between educational attainment. In addition, we examined the association between educational level and interpersonal changes in tobacco consumption from 2018 to 2021.

Methods:
The TEMPO cohort study included 1785 French adults followed between 1991 and 2021. With four assessments of smoking status available before and two after the onset of COVID-19, we estimated the smoking prevalence over time stratified by highest obtained diploma. We studied interpersonal change in smoking status between 2018 and 2021 among 148 smokers, using multinomial logistic regression.

Results:
The prevalence of smokers was higher among those with low educational attainment compared with those with higher diploma at all timepoints. The difference between the two groups increased from 2020 to 2021 (4.8% to 9.4%). Smokers with high educational level were more likely to decrease their tobacco consumption from 2018-2021 compared to low educated smokers (aOR = 2.72 [1.26;5.89]).

Conclusions:
Current findings showed a widening of the socioeconomic gap over time in smoking rates, which emphasizes the vulnerability of persons with low educational attainment to smoking, also during the pandemic.

Key messages:
- The existing gap in smoking prevalence between lower and higher diploma groups has increased from 2020 to 2021, which may be a consequence of the COVID-19 pandemic.
- From 2018 to 2021, people with high school as highest qualification were less likely to decrease their tobacco use compared to higher educated people.

Abstract citation ID: ckac131.081
Impact of COVID-19 pandemic on population-based cancer screening: Interrupted Time Series Analysis

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Early evidence suggests that the COVID-19 pandemic may have reduced the proportion of individuals submitted to cervical, colorectal and breast cancer screening. However, the recovery from the pandemic impact was very heterogeneous. We aim to explore the impact of the pandemic on cancer screening and estimate the time to recover lost screening opportunities in Portugal. We used an interrupted time series to analyze the impact of the pandemic on the implementation of cancer screening. The study population was the eligible individuals screened for cervical, colorectal and breast cancer by month and health region between 2018 and 2021. We used Poisson regression with health region random effects to estimate the trend before and after the first lockdown (March 2020) and the impact of the first lockdown. We predicted the counterfactual evolution without a pandemic to estimate lost screening opportunities. The first lockdown resulted in 93,1% (95%CI 92,9-93,2), 89,4% (95%CI 89,2-89,5) and 84,1% (95%CI 83,8-84,3) decrease in the proportion of expected cervical, colorectal and breast cancer screening tests. Nonetheless, we document an increased trend difference between pre and post lockdown of 6,0% (95%CI 5,9-6,0) and 5,3% (95%CI 5,3-5,4), 3,7% (95%CI 3,6-3,7) per month. However, by December 2021, there are still many lost screening opportunities due to the pandemic - 293k cervical cytology tests (42,2% less than expected), 247k fecal occult blood tests (28,7%) and 388k mammograms (38,4%). The first lockdown resulted in an abrupt decrease in cancer screening. However, we document an increase in the cancer screening trend after the pandemic. Nevertheless, there are still considerable lost screening opportunities after 2 years.

Key messages:
- The pandemic caused a massive disruption in cancer screening. Although there was an increase in screening trends after the first lockdown, 2 years later, many lost screening opportunities remain.
- Population-based screenings need to increase the outputs to account for lost screening opportunities due to the pandemic.

Abstract citation ID: ckac131.082
Response to the COVID-19 pandemic in the legally deprived population of liberty in Cali (Colombia)

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With the COVID-19 pandemic, the challenge of reducing the transmission of the disease has led to new challenges in decision-making. The vulnerability of persons deprived of liberty led to the design of contagion mitigation alternatives. Since February 2020, at the Villahermosa Penitentiary and Prison Center in Cali, the Secretaría de Salud Pública (SSP) began a series of actions that intensified on March 11, when the WHO declared COVID -19 as a pandemic. The SSP, in an articulated work; configured a series of strategies aimed at mitigating the impact and speed of contagion, infectious disease doctors and internists were also summoned who provided recommendations and contributed to decision-making. An intervention model was designed, which was guided by two main processes: promotion and prevention actions and service provision actions. The articulated work and

the high commitment of the actors involved, the development of strategies for biosecurity, hygiene, isolation, rapid detection, and, above all, immediate control of symptoms and medical care on-site with adjustments that allowed managing patients inside the institution; It has meant that to date mortality is below 1% and that for the time being the situation is under control.

Key messages:

- The humanization of health service provision is essential to achieve effective results.
- The rapid and articulated responses made it possible to maintain a mortality of less than 1% in this population.

Abstract citation ID: ckac131.083
Over-the-counter Medication Use during Pandemic: Lessons Learned from Covid-19 in Lithuania

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Background:

Despite the growing awareness about nonprescription misuse of anxiolytics, there is not much evidence about people's behavior during the covid-19 lockdown when access to healthcare specialists was limited. Over the counter drug use has risen sharply in the past decades among college students and junior health care workers, yet, there are few studies reporting on the use of nonprescription medicine groups during the COVID-19 pandemic.

Methods:

A cross-sectional study among 163 second-year medical students of the Lithuanian University of Health Sciences was conducted in Kaunas, Lithuania with self-reported measures of anxiety and insomnia and comparing nonprescription medicine use for anxiety and insomnia before and during the covid-19 pandemic.

Results:

A near two-fold increase in the prevalence of anxiety and insomnia among Lithuanian medical students was reported during the covid-19 pandemic compared to before the onset of the pandemic ($p < 0{,}001$). The use of nonprescription medication increased during the pandemic ($p < 0{,}001$), in particular anxiolytics ($p < 0{,}05$). Once-weekly anxiolytic medication use increased from 8,0% before the pandemic to 14,7% during the pandemic. Regular nonprescription medicine use (2-3 times weekly) had more than tripled, from 2,4% to 9,2%. During the pandemic, almost a fifth of the respondents were increasingly searching for information on anxiolytic nonprescription medication online during the pandemic compared to before the pandemic.

Conclusions:

During the covid-19 pandemic, the prevalence of anxiety and insomnia increased among Lithuanian medical students, along with the practice of anxiolytic nonprescription medications. Lithuanian medical students increasingly practiced self-medication during the pandemic and found the information on nonprescription medication increasingly online, which offers opportunities for telemedicine.

Key messages:

- During the covid-19 pandemic, the prevalence of anxiety and insomnia increased among Lithuanian medical students, along with the practice of anxiolytic nonprescription medications.
- During covid-19, Lithuanian medical students increasingly retrieved information on nonprescription medication online instead of consulting a pharmacist, offering opportunities for telemedicine.

Abstract citation ID: ckac131.084
Religious pilgrimage and COVID-19. An observational report in Italy from contact tracing activities

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Issue/Problem:

Religious Mass Gathering (MG) represent one of public health challenges for Health Authorities due to potential spread of communicable diseases. This is much more true during a pandemic as COVID-19. Surveillance is crucial to prevent further spreading of infectious disease related to a religious MG.

Description of the problem:

During international contact tracing activities an increase of reporting of COVID-cases with a travel history to a Catholic shrine in Europe was observed, despite travel restrictions put in place. In order to promote public health actions as risk communication, a risk evaluation was conducted. A descriptive analysis was carried out: personal and vaccination data were collected; for cases, date and type of positive tests, date of symptoms' onset were collected; for high-risk contacts, date and type of negative tests at the end of follow-up were collected. Frequencies were calculated.

Results:

Six journeys back from Medjugorje were identified, with at least one positive case. All trips took place between 18/09/2021 and 29/10/2021. 31 positive cases out of 160 travellers were identified, with number of cases per travel ranging from 1 to 11.

Lessons:

Religious MG represent an important global health issue. Even though a specific surveillance was not activated, international contact tracing activities turned out a great source of epidemic intelligence and consequent surveillance and control activities led to risk assessment and communication actions.

Key messages:

- In the pandemic context, where travel restrictions were put in place, surveillance for Religious MG should be always implemented.
- Cooperation among all the stakeholders involved as Church, travel agency, Regional Health Systems and Government Bodies has to be promoted for specific surveillance in religious MG events.

Abstract citation ID: ckac131.085
Isostrain among tourism employees in Tunisia during COVID-19 pandemic

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Background:

Psychological and social factors related to work activity can improve or deteriorate the physical and mental health of employees. Since the COVID-19 pandemic, the psychological well-being of workers has been strongly affected. Particularly, jobs with isostrain characterized by high work demands and low work control, coupled with low social support, place employees at highest risk for poor mental health. We aimed to assess the factors associated with isostrain among employees in the tourism sector in Sousse.

Methods:

A cross-sectional study was conducted between September and November 2020 among tourism workers belonging to 12 hotels and restaurants in Sousse, Tunisia, using a self-administered questionnaire. 'Isostrain' was assessed using the Karasek questionnaire. 'Isostrain' is a situation where there is a combination of 'jobstrain' ('tension at work') and low social support (score below the median of the group). SPSS 20 software was used to analyze the data.

Results:

A total of 226 workers were included. The mean age was 38.2 ± 9.6 years. The sex ratio was 2.7. The majority of employees (64.8%) were working at workplace during COVID-19 lockdown. The prevalence of isostrain was 5.4%. Isostrain was reported by 5.7% of women (p = 1). All workers older than 50 years did not have isostrain (p = 0.6). Moreover, isostrain was found among 6.6% of workers with less than 5 years of work experience (p = 0.4), 4.8% of married employees (p = 0.7), and 7.6% of employees with a university education (p = 0.53).

Conclusions:

Isostrain can affect employees in the tourism sector. Social support should be promoted among workers to ensure good mental health.

Key messages:

- Prevalence of isostrain in tourism sector of Sousse during COVID-19 pandemic is quite high.
- Preventive strategies of mental health should be promoted at workplace in Tunisia.

Abstract citation ID: ckac131.086
Lessons from the epidemiological investigation efforts during the COVID-19 epidemic in Israel

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Background:

The COVID-19 pandemic caused a crisis in the Israeli healthcare system. The wave-like morbidity created an overload of epidemiological investigations, which led to delays and less than successful efforts to prevent infection. For this reason, Israel decided to mobilize the military for this purpose, creating a forced cooperation between the Ministry of Health (MOH) and the IDF, an expert in dealing with crises.

Aim:

To examine the implications of the forced encounter between the IDF and the healthcare system, including both tensions and cooperation efforts.

Methods:

Twenty in-depth interviews were carried out with MOH and IDF personnel in different roles at various levels towards the end of the second pandemic wave in Israel.

Findings:

The findings present a dual picture of cooperation and mutual respect, side by side with contradictions and conflicts. The feeling that the IDF came in to 'save the day' placed the healthcare people in an inferior position. Clearly, there was no explicit plan for division of authority. It was clear to the healthcare staff that they have the authority as the professionals, and to the IDF people that they have it as the 'saviors' brought in for this purpose. The healthcare people did see the potential of the military force mobilized for this purpose, but felt they were asked for their opinion only initially, when the military personnel had to study the system. As soon as they became familiar with it, they were no longer asked for advice, and control was given to the IDF. The findings also show that the MOH's qualitative professional approach often clashed with the IDF's action-based approach.

Conclusions:

The military was mobilized as a crisis expert in order to assist the healthcare system in managing said crisis, but in fact this assistance had many side effects. Managing expectations, division of authority and open, sharing communication may have been useful in preventing the conflicts and managing them.

Key messages:

- It is important to be aware of the a-symmetrical power relations of the military-healthcare system interface in order to create effective work and true, coherent cooperation.
- Management of expectations, organized division of authority and open, sharing communication may have assisted in preventing the conflicts raised and managing them.

Abstract citation ID: ckac131.087
How to handle occupational well-being of critical care workers. A lesson from the pandemic

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Background:

The PSIC study (Prospective Study of Intensivists and COVID-19) monitored the intensivists working in one of the two COVID-19 hub hospitals in Central Italy over 2 years from April 2020. This study showed how mental health varies in relation to the stressors posed by the different pandemic phases.

Methods:

In 4 surveys corresponding to the 4 pandemic waves, the intensivists were invited to indicate changes in work activity and measure their state of mental health using standardized questionnaires administered via SurveyMonkey.

Results:

During the pandemic there was a change in occupational stressors that led to insomnia, anxiety, depression, burnout, job dissatisfaction, unhappiness and intention to quit. The predominant stressors in the first wave were fear of unprotected exposure, distrust of safety measures, and compassion fatigue from having to inform relatives of the adverse outcome of treatment. In the second and third waves the workload, the monotony due to always following only one type of patient, the isolation, and the lack of time to meditate were the more relevant factors. The fourth wave added the stress deriving from interacting with anti-vax patients

Conclusions:

Specific prevention strategies have been developed and applied for each of the stress factors identified. Excessive workload and lack of time for meditation originated from lack of staff were remedied with extraordinary temporary hires. The management of compassion fatigue and relations with anti-vax people were addressed with specific policies and training. The monotony and isolation in COVID-19 wards can only be resolved through employee turnover in ordinary departments. Organizational and financial efforts are necessary to protect the health of intensivists during a pandemic.

Key messages:

- Monitoring of critical care workers during the pandemic waves indicated the preventive measures necessary to ensure their mental health and quality of care.
- Protecting healthcare workers is a priority.

Abstract citation ID: ckac131.088
A study on determinants of COVID-19 knowledge and preventive practices among Polish schools teachers

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Background:

Sufficient knowledge and preventive practices are crucial to control the spread of SARS-CoV-2. To date, some data regarding these issues have been reported among different professions, whereas such information is inaccessible in teachers.

Methods:

An institution-based cross-sectional study was conducted between May-June 2021 in 3 randomly selected Polish provinces, in 26 schools. An anonymous, self-administered questionnaire which included 10 questions related to COVID-19 knowledge and 13 questions about preventive practices was used. Each correct answer to the question about COVID-19 knowledge was given 1 point and question about preventive practices was given 1 to 3 point (max. 11 and 39 points respectively). Bi- and multivariable logistic regression models were fitted to identify the predictors of COVID-19 knowledge; simple/multiple linear regression analyses were done for factors associated with practices.

Results:

464 teachers were included (response rate was 55%), 92% females, mean age 45.6±10.2 years. The average COVID-19 knowledge score was 6.6±3.76 points; in 77% of teachers the knowledge level was >50%. The mean of preventive practices score was 15.8±1.78 points; 204 (55.1%, 95% CI 50.0% to 60.2%) respondents scored above the mean score of preventive practices. Wearing a mask (β: 0.09 95%CI 0.00-0.03), washing hands (β: 0.09 95%CI 0.00-0.02), avoiding crowds (β: 0.12 95%CI 0.01-0.07), and avoiding visiting relatives (β: 0.10 95%CI 0.00-0.07) were significantly associated ($p < 0.05$) with knowledge about COVID-19. Knowledge was the strongest predictor of avoiding crowds (β coefficient = 0.12).

Conclusions:

Significant number of school teachers had inadequate COVID-19 knowledge and were poorly engaged in COVID-19 preventive practices. As knowledge level strongly influences adequate preventive behavior, additional educational intervention is urgently needed for teachers to help them better manage the pandemic at the school setting.

Key messages:

- This study assessed COVID-19 knowledge and preventive practices, as well as related determinants among primary school teachers.
- This study assessed the attitudes of primary school teachers towards the Covid-19 pandemic.

Abstract citation ID: ckac131.089
Does political stringency change students' adherence to governmental recommendations?

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Introduction:

Knowing predictors for adherence to governmental recommendations is fundamental to guiding health communication in pandemic situations. This study investigated whether political stringency was associated with students' adherence to the COVID-19 governmental measures in the Nordic countries (Denmark, Finland, Norway, Iceland, and Sweden) and the United Kingdom (UK).

Methods:

We used data from a cross-sectional online survey, from university students in all Nordic countries and the UK (N = 10.345), in May 2020. Data on socio-demography, study information, living arrangements, health behaviors, stress, knowledge, and concern about COVID-19 infection supplemented with measures on political stringency from the Oxford Covid-19 Government Response Tracker were utilised. Multiple linear regression analysis methods were applied.

Results:

Around 66% reported that they followed governmental measures. Our model explained only 10% of the variation of adherence. The main predictors for adherence were older age, female sex, and being worried about the COVID-19 infection. More days since lockdown and political stringency were also associated with adherence to governmental recommendations in all countries. Sweden had the lowest willingness to adhere to governmental recommendations even though the strength of the association between political stringency and adherence was similar to other countries.

Conclusions:

Political stringency and congruent communication are important in ensuring adherence to governmental recommendations during the first wave of the COVID-19 pandemic.

Key messages:

- Political stringency is important to ensure adherence to governmental recommendations.
- Congruent communication is important to ensure adherence to governmental recommendations.

Abstract citation ID: ckac131.090
Vaccine Literacy, Covid-19 and influenza: a cross-sectional survey in Prato in the 2nd pandemic wave

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Covid-19 is a pandemic and an infodemic, with contrasting information regarding risk and preventive measures, including vaccination. This study aims to assess Vaccine Literacy (VL) of a sample of workers in the province of Prato (Tuscany, Italy) in the second wave of the Covid-19 pandemic (November-December 2020) and to analyze the relationship between VL and attitudes about Covid-19 and flu vaccination. A cross-sectional design was adopted. Sociodemographic characteristics, health information, vaccination behaviour for past and current flu season and intention to get vaccinated against Covid-19 were collected. A multivariate logistic regression was performed to identify predictors of getting a Covid-19/flu vaccination. The Italian Health Literacy tool on Vaccination (HLVa-IT) tool was used to measure VL. A total of 117

questionnaires were analyzed. Among them, 64.9% intended to get Covid-19 vaccine. The mean VL was 3.18 ± 0.43 (functional 2.87 ± 0.72; interactive-critical 3.36 ± 0.45) out of 4. Having more than one comorbidity was a negative predictor of intention to get Covid-19 vaccine (OR: 0.21 95%CI: 0.04 - 0.91). Regarding the flu vaccine, being vaccinated in the previous season was the only positive predictor of being vaccinated in the current season (OR = 24.25 95%CI 7.96 - 87.73). The study was conducted before the authorization of Covid-19 vaccines: little information about them may have contributed to VL not being related to the intention to get vaccination. The negative role of comorbidities could be due to fear of adverse effects on fragile health status. For flu vaccination, VL may have exerted a lower impact because of the positive experience with the flu vaccine in terms of safety and effectiveness in the previous seasons.

Key messages:

- The introduction of new vaccines should be supported by effective communication.
- Better knowledge of current vaccines and not just routine administration is desirable for greater personal empowerment.

Abstract citation ID: ckac131.091
Public Health Workforce training Laboratorium: Pilot e-Learning course on CBE and PBL models

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Background:

The National Institute of health (ISS), within the G20 Health Working Group, launched at March 2021 an innovative training Laboratorium, to strengthen the capacity and competencies of the Public Health Workforce (PHW) on prevention, preparedness and response to health crises. It was recognised in the G20 Declarations of Ministers of Health and Leaders and it was aimed to the development of training tools suitable for distance learning. ISS proposed the design of e-Learning courses based on an integration of WHO's Competency-Based Education (CBE) and Problem Based Learning (PBL) models.

Objectives:

Describe the design of a pilot e-Learning course based on CBE-PBL models, focused on Epidemic Intelligence (EI).

Results:

The pilot e-Learning course ''Use of Epidemic Intelligence systems with a particular focus on event-based surveillance for pandemic preparedness'' will be delivered by ISS e-Learning platform https://www.eduiss.it. By the end of the course participants will be able to evaluate the potential use/applicability of EI systems, focusing on event-based surveillance for preparedness and early warning at country/institutional level. CBE is the basis for articulating the outcomes and identifying the required competencies and PBL for creating learning activities associated to learning outcomes. Interactive tools (exercise, web pages, quiz and other activities) are associated to learning objectives. The course is offered to public health professionals free of charge, in English language. About 16 hours are required to complete all the activities and receive attendance certification.

Conclusions:

Continuously updated training of PHW is a hallmark to better face health challenges. In our proposal, the learning methodology integrates CBE vision with PBL approach, adapting both to e-Learning context.

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Key messages:

- Design an innovative e-learning course through synergic integration of two educational models crucial in public health, CBE and PBL.
- Adapt e valorize CBE and PBL models in the context of e-Learning.

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Migrant and ethnic minorities at higher risk of COVID-19 severe outcomes? A systematic review

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Background:

The Covid-19 pandemic has had a recognised impact in widening health inequalities, both between and within countries, with a major impact on socially disadvantaged population groups such as Migrants and Ethnic Minorities (MEMs). While there is growing evidence on the matter worldwide, data specific to the WHO European Region is scarce. The issue, however, is pressing, since it is estimated that almost 10% of the population living in the WHO European Region is made up of migrants. The aim of the study is to investigate the impact of Covid-19 on MEMs compared to the general population in terms of serious outcomes.

Methods:

We conducted a systematic review collecting studies on the impact of Covid-19 on MEMs compared to the general population in the WHO European Region regarding hospitalisation, intensive care unit (ICU) admission and mortality, published between 01/01/2020 and 19/03/2021. Fourteen researchers were involved in selection, study quality assessment, data extraction and analysis.

Results:

Of the 82 studies included, 15 of the 16 regarding hospitalisation for Covid-19 reported an increased risk for MEMs compared to the white and/or native population and 22 out of the 28 studies focusing on the ICU admission rates found an increased risk for MEMs. Among the 65 studies on mortality, 43 report a higher risk for MEMs. 82% of the studies were conducted in the UK.

Conclusions:

These findings highlight the disproportionate impact of Covid-19 on MEMs population, with an increased risk of all the adverse outcomes taken into consideration. Social determinants of health are among the main factors involved in the genesis of health inequalities: a disadvantaged socio-economic status, a framework of structural racism and asymmetric access to healthcare are linked to increased susceptibility to the consequences of Covid-19. These findings underline the need for policy-makers to consider the socio-economic barriers when designing health promotion plans.

Key messages:

- The combination of disadvantage socioeconomic conditions with COVID-19 transmission characteristics put migrants and ethnic minorities at a higher risk of facing sever health outcomes.
- The amount of evidence on the inequal impact of COVID-19 on migrants and ethnic minorities produced by European countries is poor. This gap must be filled to develop effective health promotion plans.

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Risk of SARS-CoV-2 infection in high and low-risk cohabitants, in Loures and Odivelas, Portugal

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Background:

Effective contact tracing, vaccination, and isolation of cases of SARS-CoV-2 infection and their high-risk contacts constituted measures to contain the spread of COVID-19. In Portugal, in October 2021, low-risk cohabitants were lifted the obligation to isolate. The aim of this study was to estimate the relative risk of infection for close contacts, regarding the type of close contact and being cohabitants.

Methods:

A descriptive longitudinal study, with an analytical component was performed. Sociodemographic and epidemiologic data from close contacts and confirmed cases in Loures and Odivelas, between October and November 2021, was collected from a regional database and from Trace COVID-19 platform. We performed a descriptive analysis and estimated the relative risk of SARS-CoV-2 positive test, stratified by type of contact and cohabitation, with 95% confidence level.

Results:

We identified 200 confirmed cases and 428 people who were close contacts, corresponding to 502 different close contacts (59 people had contact with more than a case). From 502 close contacts, 268 were classified as low-risk and 230 as high-risk. Full time cohabitation was present in 310 of close contacts. Between contact tracing day and the next 4 weeks, 58 (10.9%) of close contacts tested positive. Risk of high-risk contacts testing positive was 2.7 [1.5-4.6], compared with low-risk contacts. Risk of cohabitants testing positive was 3.5 [1.6-7.7], compared with non-cohabitants. Risk of a high-risk cohabitant testing positive was 2.2 [1.1-4.4], compared with low-risk cohabitants. There was no higher risk of high-risk cohabitants testing positive compared with high-risk non-cohabitants. Same was true for low-risk cohabitants and non-cohabitants.

Conclusions:

These results allow us to understand how to better stratify close contacts and apply isolation measures, according to the risk of testing positive. Further studies should be developed to assess the impact of other variables.

Key messages:

- We identified an increased risk of testing positive in high-risk contacts, and in cohabitants.
- Cohabitants could be stratified regarding being high or low-risk, with different measures being applied.

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Covid-19-related health literacy: a cross-sectional study in Israel

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Background:

The "infodemic" related to Covid-19 emphasized the importance of the public's ability to access, understand, appraise and use information to make decisions about health. This study aimed to:

1. Assess the components of Covid-19 related health literacy (Co-HL)
2. Examine the associations of socio-demographic variables and health status with Co-HL

Methods:

This study was conducted as part of the European Health Literacy Population Survey 2019-2021 (HLS19). A cross-sectional survey of a representative sample of adults in Israel was conducted in December 2020 using phone interviews and an online survey (n = 1,315). Five items measuring Co-HL were added. Multivariable regression models were used to assess the associations between socio-demographic variables and health status with Co-HL.

Results:

Of participants, 63% reported concern about Covid-19. The mean general HL was lower among those who reported concern about Covid-19 compared to those who worried less (p = 0.002). The most difficult component of Co-HL was "judging the reliability of information regarding Covid-19" (36% expressed difficulty). Older participants, those with low self-reported social status, and low self-assessed health, were significantly ($p < 0.05$) more likely to express difficulty in judging the reliability of Covid-19 information. Interestingly, education level was not significantly associated with Co-HL.

Conclusions:

Our results suggest that, to best promote the use of information on Covid-19 prevention, older people, those with low social status and those with poor general health should be prioritized for improving critical health literacy.

Key messages:

- Co-HL is unequally distributed in the population, warranting tailored health promotion efforts.
- It is vital to improve the ability of the population to identify reliable information about covid-19.

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The LoCo (Lockdown Cohort)-effect: Socioeconomic differences in fertility during the pandemic

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Background:

The economic and social disruptions caused by the COVID-19 pandemic and its mitigation measures may have affected fertility unequally across social strata. If a compositional change in maternal socioeconomic characteristics is confirmed, counterintuitive changes in future population health - the LoCo-effect - are likely.

Methods:

We analysed data from maternal inpatient discharge records containing births between January 2018 and November 2021 by Scottish Index of Multiple Deprivation (SIMD) quintile. We used monthly number of births before November 2020 to estimate expected monthly births after November 2020 and compared against observed births in each SIMD quintile. Further, we estimated associations between monthly average stringency of national mitigation measures (Stringency Index (0-100)) and births 9 to 13 months later using distributed lag models.

Results:

Between November 2020 and November 2021, there were 1301 (10.3%) fewer births than expected for the most deprived quintile (Q1; 953 (8.7%) and 375 (4.1%) less in Q2 and Q3). In the two least deprived quintiles, however, fertility remained mostly unchanged. A 10-point increase in monthly average Stringency Index in Q1 was associated with an average cumulative decrease of 8.5 births (95%CI: -14.1; -2.8, p = 0.006) 9 to 13 months later. Conversely, this estimate was a 4.4 increase (95%CI: 1.3; 7.5, p = 0.008) in Q5 and a 5.9 increase (95%CI: 1.4; 10.4, p = 0.013) in Q4.

Conclusions:
Apart from their exposure to pandemic and lockdowns, it is likely that, due to compositional changes in births, the observed LoCo started life, on average, more socially advantaged than previous birth cohorts in Scotland. We show a substantial decrease in fertility in the most deprived areas, while fertility remained little changed in the least deprived areas. Increases in the stringency of lockdown measures were associated with a decrease in births in the most deprived but an increase in the least deprived areas 9 to 13 months later.

Key messages:
- Between November 2020 and November 2021, there were substantial decreases in births among deprived areas in Scotland while fertility in the least deprived areas remained mostly unchanged.
- For these births, the observed compositional shift in maternal socioeconomic characteristics may lead to changes in current and future health and health needs – the LoCo (Lockdown Cohort)-effect.

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Training the Armed Forces personnel in COVID-19 contact tracing: a Portuguese case study

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Background:
Local contact tracing teams needed to be reinforced in preparation for a peak in Covid-19 cases. The Portuguese Armed Forces showed availability and their members initiated a formal training facilitated by the Public Health Unit (PHU) of Amadora. Health systems must be prepared to respond to all threats, as the COVID-19 pandemic showed us the need for quick task shifting and the training of non-experts' workers.

Objectives:
The aim of the project was to develop contact tracing skills by non-health professionals, in the context of the COVID-19 pandemic. The training program was held online, with a total duration of 48 hours, distributed by the topics described: introduction to health and epidemiology concepts, the national guidelines, and the information systems (13h). We privileged demonstrative and participatory training methods, followed by continuous supervision of each contact tracing survey and constant feedback (35h). Learning support materials were sent out to assist the trainees, including written and video support.

Results:
More than 200 personnel - sailors, soldiers and airmen - were trained. Each Lisbon and Tagus Valley area PHU was reinforced with a team of military professionals in order to support the contact tracing process, with an increase in the number of surveys completed. We highlight as positive aspects: increased number of contact tracing surveys carried out; growth of inter-institutional partnerships; freeing up of specialized PHU resources to other important tasks. As for negative aspects we focus on the complexity in health communication, the limited time for training, and the lack of specific health knowledge of the trainees.

Conclusions:
This pandemic revealed the Portuguese need for a transdisciplinary approach in the provision of care, specially at a Public Health level. Training programs like these highlight the vital role of reshaping and reorganizing the healthcare workforce answering Public Health necessities.

Key messages:
- Training programs for non-health workers must be prepared to reinforce health systems when necessary. The reinforcement of contact tracing teams by the Portuguese Armed Forces was a great example.
- A transdisciplinary approach in the provision of care was essential during the COVID-19 pandemic. Specific training of non-health workers can be planned in time to respond to health threats.

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Where are the children of working parents during school closures?

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Italy was the first European country to be hit hard by the pandemic and in the context of the Covid-19 pandemic, there were several closures of education and care facilities. The first closure of education facilities lasted continuously from March to September 2020, followed by numerous shorter closures. However, if working parents continue to (have to) work, the question arises who will look after the children during this time when facilities close. To answer this question a quantitative survey of working parents during a 'hard closure' week in February/March 2021 was conducted in the province of Bolzano (Northern Italy). 3725 adults as parents of a total of 7,372 children from different households responded. Although not officially allowed, 53.4% of all participants sought help from people outside the nuclear family to bridge the situation, mostly from grandparents (79%; n = 1855). The situation that grandparents represented the main risk group at the time and could not yet have sufficient vaccination protection appears particularly worrying here. Other parents' coping strategies included working early in the morning or at night (23 %; n = 850), or leaving children unsupervised (25 %, n = 929).

Conclusions:
School closures shift families to new strategies, including unhealthy models of alternating work/childcare, 'illegal' involvement of third parties outside the nuclear family, and neglect of age-appropriate childcare. Our findings highlight that when childcare facilities are repeatedly closed, working families need additional support strategies to reduce contact and minimize secondary harms.

Key messages:
- When schools close, parents have to find new strategies for where to take their children, many have contacts outside the home.
- Grandparents (also as a risk group) play a major role in childcare even during a lockdown.

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Characteristics of COVID-19 cases with breakthrough infection in the governorate of Sousse, Tunisia

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Introduction:
In early 2021, Tunisia implemented a national COVID-19 strategy of vaccination aimed at disease elimination. In this study, we aimed to investigate the characteristics of the

breakthrough COVID-19 infection in the governorate of Sousse, Tunisia.

Methodology:

We conducted a cross-sectional study including all post-vaccination COVID-19 cases from March 2021 to August 2021. We collected data via 15-minute telephonic call interviews. We estimated the specific incidence rates (SIR) of confirmed cases by vaccine type and expressed them as cases per 100 000 inhabitants. Statistical analyzes were carried out using anonymous and codified Excel tables and SPSS 20.

Results:

Overall, we included 618 cases of breakthrough COVID-19 infection. The majority were female (sex-ratio = 0.8), and the average age of the overall cases was 55.7±14.5 years (range:19-91). Nearly half (49%) of participants had comorbidities, 19.6% were healthcare workers, and 17.9% were smokers. The majority of cases (70%) received at least one dose of Pfizer vaccine followed by CORONAVAC (15.6%; n = 96). Nevertheless, we found a higher incidence rate of COVID-19 among those vaccinated with SPUTNIK V (SIR = 1551.2) followed by SINOPHARM (SIR = 823.7). Fifty-eight percent of patients reported a poor adhesion to preventive measures, whereas 38.6% reported high respect for the preventive measures. COVID-19 infection led to hospitalization in 8.1% of cases, hospitalization in intensive care units in 2.1% of cases, and death in 1.8% of cases.

Conclusions:

The findings of our study highlight the low rate of severe cases of COVID-19 among the vaccinated population. Furthermore, we found a discrepancy in the effectiveness of vaccines in the prevention of transmission potential. Yet, many factors could influence the transmission and the severity of COVID-19 breakthrough infection from one region to another.

Key messages:

- low rate of severe cases of COVID-19 among the vaccinated population.
- discrepancy in the effectiveness of vaccines in the prevention of transmission potential.

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Factors associated with post-COVID-19 confinement vape use in young adults

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Introduction:

The use of Vape has increased during the pandemic due to the changes generated by it. Currently we have finished the conditions of confinement, so it is important to identify

Objective: To determine the factors associated with post-COVID-19 confinement vape consumption in young adults

Methods:

A cross-sectional, prospective study was carried out between January and April 2022, including men and women residents of Veracruz aged between 18 and 35 years, excluding participants with addiction treatment or with a diagnosis of a lung disease. A survey was applied through Google Forms to identify the factors associated with Vape consumption after confinement by COVID-19, including depression, anxiety and stress evaluated with the DASS-21 instrument (Cronbach's alpha between 0.79 and 0.87). For data analysis, SPSS v22 software was used, X2 test with Odds Ratio (OR) and 95% confidence interval (CI95%) and MannWhitney U test, assigning statistical significance with $p < 0.05$.

Results:

514 participants were included, with a prevalence of vape use of 28.5%. Physical activity, cigarette consumption by a family member, levels of anxiety, depression and stress showed a value of $p > 0.05$ for Vape consumption, while other factors (OR/95%CI) such as being female (0.6/0.4-0.9), identifying vape advertising on Facebook (0.35/0.19-0.65), having a family member who vapes (2.4/1.5-3.6), consuming cigarettes (4.2/2.7-6.4) and identifying vape advertising on Instagram (1.5/1.0-2.3) had values of $p < 0.05$

Conclusions:

Post-pandemic vape use is not affected by anxiety, stress or depression, identifying other factors that favor its use such as the environment in which it develops, such as being someone with a history of tobacco use, in addition to the family smoker and advertising on Instagram, which is a social network that often works as an aspirational image for users, a situation contrary to what is shown on Facebook.

Key messages:

- Vape consumption continues to be a post-pandemic public health problem, so it is necessary to reinforce educational measures on the subject and the post-Covid complications of its use.
- It is necessary to regulate vape advertising on social networks, as has been done with tobacco in different countries, since it can become a risk factor by showing aspirational images for users.

DC Global health and Europe's role in global health

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Decolonising global health in Africa: research agendas in public health, law, and human rights

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Background:

In recent years the Groningen Centre for Health Law ('GCHL' - formerly the Global Health Law Groningen Research Centre), Netherlands, has held annual summer schools on global health, law, and human rights. Responding to calls to decolonise global health (Fofana, 2021), in February 2022 GCHL convened an online academic colloquium to explore the issues in Africa. Panellists and discussants comprised leading African academics and advocates for public health, law, and human rights.

Objectives:

1. Identify priority current and emerging issues in global health, law, and human rights in the African region with, where possible, reference to the climate crisis.

2. Explore opportunities for identifying academic institutions, networks, and researchers working these issues across Africa.

3. Identify opportunities to support collaboration between institutions, networks and researchers and other actors to address the issues identified across the region

Results:

Top public health issues identified for further research included: public health law frameworks in Africa; One Health and climate change; inequality in the distribution of the determinants of health and disease; international trade and public health; the right to benefit from scientific progress (e.g. in accessing vaccines for COVID-19); gender-based violence; public health and agri-food systems; noncommunicable diseases; healthy diets; poverty; mental health; social protection; and plastic pollution. The first meeting of the network on health, law and human rights in Africa was held in May 2022. The second academic colloquium was held in July 2022, co-hosted with Moi University and the University of Nairobi, Kenya.

Conclusions:

Public health and legal academics in Africa are ready to engage systematically with European partners to address key health-related law and human rights issues of global interest. Research agendas should reflect African priorities, and collaboration should be led by African institutions.

Key messages:

- Capacity must be built to understand the links between public health, law and human rights in Africa.
- Collaboration with European institutions to build capacity in public health, law and human rights is welcome, however priorities should be identified by - and responses led by - African academics.

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Managing Innovation for Sustainable Health:rethinking training of health officials in fragile states

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There is great urgency for action to achieve the Sustainable Development Goals, especially in fragile settings, which face acute and complex challenges. Yet, the public sector may be limited in its capacity to address these appropriately, with devastating effects on the health of people and environment now and in the future. The challenges to sustainable health require professionals who are trained relevant competences. In 2020, Karolinska Institutet, Sweden, and Makerere University, Uganda, developed the Centre of Excellence for Sustainable Health under which a new partnership was established with Benadir University, Somalia, Kinshasa School of Public Health, the Democratic Republic of Congo, and Tinkr, Norway to develop training on innovation for sustainable health. The aim of ''Managing Innovation for Sustainable Health'' (MISH) is to strengthen the capacity to contribute to achieving sustainable health through innovation in the public sector. It targets managers in Somalia, DRC and Uganda from the public and private sector, academia, and civil society. It is one year long, part-time and delivered online with one study trip. It features three modules covering Agenda 2030 and Sustainable Health; Multisectoral Collaboration and Implementation Science; and Innovation and Innovation Management. Integration of participants' learnings into their professional role, mutual learning between participants, and an emphasis on applicability, all underpin the learning strategies of the program. Quality is monitored through expectation surveys, baseline mid and final impact assessments, module and final program evaluations. MISH has trained about 50 managers, 85% of which say that the training was useful. All partners are represented in both operational and strategic organizational bodies of the program. Our model shows what is possible through collaborative online international learning delivered by partnerships defined by teamwork, trust, and a dedication to true impact.

Key messages:

- There is great urgency for action to achieve sustainable health especially in fragile settings.
- There is momentum for higher education to leverage the opportunities of the covid-19 to rethink learning for the global challenges.

DD Achieving universal health coverage (UHC): reducing health inequity

Abstract citation ID: ckac131.102
Socioeconomic and geographic inequalities in colorectal cancer in Cyprus: An ecological study

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Background:

Colorectal cancer (CRC) is one of the main causes of mortality and morbidity worldwide. To date, the relationship between regional deprivation and CRC incidence or mortality has not been studied in the population of Cyprus. The aim of this study was to analyse the geographical variation of CRC incidence and mortality and its possible association with socio-economic inequalities in Cyprus for the periods between 2000 and 2015.

Methods:

A small area ecological study in Cyprus, with census tracts as units of spatial analysis, for the period between 2000 and 2015. The incidence date, sex, age, post code, primary site, death date in case of death or last contact date in case of alive for all cases of CRC from 2000-2015 were obtained from the Cyprus Ministry of Health. Indirect standardization was used to calculate the sex and age Standardize Incidence Ratios (SIRs) and Standardized Mortality Ratios (SMRs) of CRC while the smoothed values of SIRs, SMRs and Mortality to Incidence ratio (M/I ratio) were estimated using the univariate Bayesian Poisson log-linear spatial model.

Results:

There are geographical areas having 15% higher SIR and SMR, with most of those areas located at the east coast of the island. Higher M/I ratio values were found in the rural, remote, and less dense areas of the island while lower rates were observed in the metropolitan areas. An inverted U-shape pattern in CRC incidence and mortality was observed with higher rates in the areas classified in the second quartile of the socio-economic deprivation index and lower rates in rural, remote, and less dense areas. A different pattern emerged in the M/I ratio indicating a stepwise increase across increasing levels of socioeconomic deprivation.

Conclusions:

These findings can potentially provide useful information at local and national levels and can inform public health authorities to appropriately allocate resources for geographically targeted prevention and control plans to increase CRC screening.

Key messages:

- M/I ratio of CRC was positively associated with regional deprivation since a stepwise increase was found across increasing levels of rural-related socioeconomic deprivation.
- Interventions aimed at reducing the risks of CRC should primarily focus on socially deprived communities in Cyprus.

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SDG5 Gender Equality during the COVID-19 pandemic: an international comparative policy assessment

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Background:

The COVID-19 pandemic caused severe disruptions in healthcare systems and societies and exacerbated existing inequalities for women and girls across every sphere. Our study explores health systems responses to gender equality goals during the COVID-19 pandemic and which role these goals play in pandemic recovery policies.

Methods:

We apply a qualitative comparative approach. Country case studies (expert information, secondary sources) were collected in March/April 2022. The sample comprised Australia, Brazil, Germany, United Kingdom and USA, reflecting conditions of high to upper-middle income countries with established public health systems, democratic political institutions and gender equality policies. Selected topics: maternity care/reproductive services, violence against women, and gender equality/female leadership.

Results:

All countries tried to keep essential maternity and reproductive services open, but strong limitations applied especially for prevention and counselling services; at the same time, digitalisation/telemedicine supported service expansion. Violence against women and children strongly increased during the pandemic. Routine services were partly kept open and new helplines occasionally established, but no action was taken to scale-up mental health support and respond to new demand. A push-back of gender equality was observed across countries in all areas of health and social care, often coupled with strong increase in intersecting social inequalities; participation of women in decision-making bodies was generally weak and not monitored.

Conclusions:

Across countries, gender equality policies cracked under the pressure of the COVID-19 pandemic; this is true for countries with male and female political leaders, and for different areas of SDG5 and health. There is an urgent need for more effective intersectional gender equality policies and improved participation of women in global health and in health system recovery plans.

Key messages:

- Health systems failed to take action to protect SDG5 goals; gender and intersecting inequalities strongly increased during the pandemic.
- Building back better after COVID-19 will only be possible with an intersectional gender equality programme and feminist policy approaches.

Abstract citation ID: ckac131.104
Using Citizen Science to examine health and access to health care of uninsured patients in Germany

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Background:

Estimates suggest that numerous people live without health insurance in Germany. Existing evidence on uninsured patients' health and care use is scarce, specifically in Germany. The present study involves citizens' engagement to identify community perceptions of factors associated with health and medical care and to generate community-driven policy recommendations.

Methods:

Representatives of civil society, affected patients and citizens ('co-researchers') participate in a participatory health research project (MoveCitizenS) located in Bonn, Germany, using Photovoice and Community-based Mapping. The study is composed of five work packages over a 24-month period: (1) Photovoice workshops for co-researchers to produce, select and analyse photographs; (2) a series of workshops to conduct community-based mapping to identify barriers and facilitators of health care utilization; (3) workshops to co-design a cross-sectional survey of uninsured patients (n = 300); (4) project evaluation by co-researchers; (5) a dissemination strategy (e.g. advocacy event, exhibition) will be developed.

Results:

Procedures to facilitate the active engagement of citizens and patients are discussed. Preliminary results on community perceptions of uninsured patients' health and medical care and factors influencing health outcomes and care utilization are presented at the conference.

Conclusions:

This is the first citizen science study which facilitates the understanding of barriers and enabling factors of good health and access to medical care for patients who lack health insurance coverage in Germany. This case study of a participatory project can be adapted to a range of settings to integrate local perspectives to improve population health for all.

Key messages:

- Numerous patients in Germany are uninsured but evidence on their health and medical care is lacking.
- Using participatory methods to address these key questions is an important approach to generate suitable policy recommendations to meet the needs of the community and improve population health.

Abstract citation ID: ckac131.105
Prior activation of social work team process by pre-admission one-click automatic referral system

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Background:

Coronary artery disease (CAD) is the leading global cause of mortality. Coronary angiography (CAG) is often performed for CAD patients, and the mean length of stay (LoS) is 4 d. Requests to the social work team (SWT) are often delayed until just before discharge, causing unnecessarily prolonged LoS and reduced chances of obtaining financial support. If the SWT's support system is activated beforehand for scheduled CAGs, the LoS would be shorter and patients would be relieved of emotional and financial burdens.

Methods:

Collaborating with the cardiology and medical informatics departments, a one-click automatic referral system (OARS) was set up (January-May 2021). When cardiologists scheduled a CAG in the outpatient department, an OARS cue popped automatically for the medical aid recipients. The cardiologists could also activate the pre-admission OARS for other patients when necessary. Subsequently, the SWT responded on that day to discuss initiating the financial support process with the candidates. The rate of cardiologists' pre-admission referral to SWT, decision-making time on financial support provision, and proportion of patients receiving financial support were compared before and after initiating OARS.

Results:

After initiating pre-admission OARS, the rate of cardiologists' pre-admission referral to SWT increased from 17.8% (18/101: mean age, 64.6±12.0 y; 32 females; January-December 2020) to 59.1% (55/93: mean age, 64.0±11.8 y; 29 females; June-December 2021) ($p < 0.001$). Although the decision-making time to provide financial support did not change significantly (8.4±11.1 vs. 4.7±11.6 d; $p = 0.96$), the proportion of patients receiving financial support increased (45.5% [46/101] vs. 60.2% [56/93]; $p = 0.045$).

Conclusions:

By enhancing the cardiologists' pre-admission referral to SWT and success rate of receiving financial support, the proactive strategy of pre-admission OARS benefits CAD patients scheduled for CAG.

Key messages:

- By building a proactive referral strategy of pre-admission OARS, more CAD patients scheduled for CAG could obtain timely financial support and be relieved both emotionally and financially by the SWT.
- This pre-admission OARS might be incorporated for more disease entities for patients in need.

Abstract citation ID: ckac131.106

Racism in German medical education – Perspectives of racialized physicians and medical students

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Background:

The impact of racism on health and the quality of health care services for racialized patients have been the object of prior research. The experiences of racialized medical students and physicians, who operate in a field of tension between natural sciences and practical application and between a 'medical habitus' and exclusionary discrimination, have hardly been examined to date. The education of (future) physicians is an especially fruitful research area in the context of the study of institutional racism in the health care system, as informal everyday experiences come together with formal knowledge and normative learning.

Methods:

Based on expert consultations and preliminary interviews with civic stakeholders, teaching and learning materials in German medical studies were randomly sampled and used as a starting point for qualitative guided interviews with physicians and medical students in Germany who are themselves affected by racism. The first steps of the thematic analysis of these interviews are reflected upon and further developed in focus group discussions with the interviewees.

Results:

The study is particularly concerned with the question of how certain dimensions of racism in the health care sector are related, and how racist normativity appears in this context. This is concretized in the relationship between formal and informal medical curricula as well as in the interweaving of everyday experiences and teaching materials.

Conclusions:

There are different dimensions of relation between a hegemonic normativity in the medical curriculum and the everyday experiences of racialized medical students and physicians in Germany. Politics, faculties, publishers, and civic society may be the target of several recommendations for action regarding those diverse dimensions, e.g. the line between omission and stereotyping of several patient groups.

Key messages:

- Hegemonic normativity in German medical education is an important and challenging issue. There are several institutional levels of medical knowledge reproducing racism in the health care sector.
- Both racialized physicians and racialized patients are affected by symbolic and material forms of racism in the German health care system, which are interweaving and crucial on diverse levels.

Abstract citation ID: ckac131.107

Co-developing a tailored vaccination intervention with Congolese migrants: a participatory study

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Background:

Disparities in vaccination uptake among migrant populations are well documented. WHO and ECDC have sought renewed focus on participatory research that engages migrants in co-producing tailored initiatives to address vaccination inequities and increase coverage.

Methods:

This community-based participatory research study aims to engage Congolese migrants in co-developing a tailored approach to increase vaccine uptake. Phase 1 used poster walls and in-depth interviews with Congolese migrants ($n = 32$) to explore COVID-19 vaccination beliefs, experiences, and preferred information sources and communication methods, analysed iteratively and thematically in NVivo.

Preliminary results:

Institutional distrust has shaped this population's interpretation of the pandemic response and enabled vaccine misinformation and conspiracy theories to take hold. We found complex information networks and preference for Francophone, African and social media. Limited English proficiency and preference for the oral tradition restricted engagement with official public health messaging. Suspicion of government motives, low knowledge, and culturally specific perceptions about vaccination contributed to belief that breakthrough infections and need for COVID-19 boosters imply the vaccine is not effective. The population felt coerced by vaccination reminders and mandates, and were resultantly more hesitant to accept COVID-19 vaccination.

Conclusions:

The population's specific characteristics suggest that existing and trusted interpersonal networks and oral communication in first languages should be harnessed to spread credible information and encourage vaccine uptake, and mandate policies are unlikely to be effective. Training local role models to facilitate vaccination dialogues and myth-bust may be effective at changing behaviour. The next phases will gather more information from key stakeholders and engage migrants in workshops to co-design insight-driven, tailored interventions.

Key messages:

- Global policy-setting organisations have called urgently for participatory research that engages migrants in the co-production of tailored initiatives to address vaccination inequalities.
- Populations with strong interpersonal networks and low trust in public institutions may be receptive to tailored, community-centred dialogue approaches using local messengers and role models.

Abstract citation ID: ckac131.108
Constructing a socioeconomic status index for colorectal cancer screening evaluation

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Objective:

To construct an individual socioeconomic status index (ISESI) with information available in the Population Information System of the Region of Valencia, Spain, and use it to analyse inequalities in a colorectal cancer screening programme (CRCSP).

Methods:

Cross-sectional study. The study population was composed of men and women aged between 50 and 69 who were invited to participate in the most recently completed round of the Region of Valencia CRCSP in 2020, n = 1,150,684. A multiple correspondence analysis was performed to aggregate information in the Segmented, Integrated and Geographical Population Analysis Code from the Population Information System of the Region of Valencia into an ISESI. Data from the 2016 Region of Valencia Health Survey was used for validation. The relationship between CRCSP participation and the ISESI was analysed by logistic regression models.

Results:

The variables included in the index were nationality, employment status, disability, healthcare coverage, risk of vulnerability and family size. The most important categories for determining the highest socioeconomic status were being employed and not being at risk of social vulnerability, and being unemployed and at risk of social vulnerability for determining the lowest socioeconomic status. Index validation demonstrated internal and external coherence for measuring socioeconomic status. The relationship between CRCSP participation and the ISESI categorised by quartile (Q) showed that Q4 (the lowest socioeconomic status) was less likely to participate OR = 0.769 (0.757-0.782) than Q1 (the highest socioeconomic status), and the opposite was found for Q2 OR = 1.368 (1.347-1.390) and Q3 OR = 1.156 (1.137-1.175).

Conclusions:

An ISESI was constructed and validated using Population Information System data and made it possible to evaluate inequalities in colorectal cancer screening.

Key messages:

- An individual socioeconomic status index was constructed and validated using Regional Population Information System data.
- The Individual socioeconomic status index constructed allows to systematically evaluates inequalities in colorectal cancer screening.

Abstract citation ID: ckac131.109
Short and long-term inequity in outpatient medical use by the type of medical institutions in Korea

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Background:

Many countries agree with the horizontal equity that medical resources should be allocated according to medical needs, regardless of income. Although the short-term equity index calculated through cross-sectional data doesn't reflect the dynamics of individual income and medical use, it can be supplemented by the long-term equity index using panel data. Koreans tend to choose expensive but highly specialized services without considering their medical needs because they are free to choose service providers. This study aims to empirically examine how the patterns of outpatient medical use that are not based on medical needs differ in terms of short- and long-term equity for each type of medical institution.

Methods:

Using Korea Health Panel Survey(2014-2018), the equity of outpatient medical use(number of visits, medical expenses) of 10,244 people was measured by type of medical institution (tertiary general hospital, general hospital, hospital, clinic, and dentist). Wagstaff&van Doorslaer(2000)'s tool and Jones & Lopez-Nicolas(2004)'s tool were used to calculate the short and long-term horizontal equity index(HI), and mobility index(MI) to compare short and long-term inequity.

Results:

In tertiary general hospitals and dentists, there were short and long-term pro-rich inequalities($HI > 0$, $p < 0.05$). As a result of comparison, long-term inequality was greater in the number of visits ($MI < 0$), while inequality was easing in the long-term in medical expenses($MI > 0$) in tertiary general hospitals. In dentists, long-term inequality was less than short-term inequality in both the number of visits and medical expenses ($MI > 0$).

Conclusions:

The short-term equity index is likely to underestimate or overestimate inequity in our society, so a long-term perspective is needed. Inequality patterns for each type of medical institution should be considered in healthcare reforms for fair distribution of medical resources.

Key messages:

- Short-term equity index differs from the long-term equity index in outpatient medical use.
- The pattern of short and long-term equity indices may differ by type of medical institutions.

Abstract citation ID: ckac131.110
The role of income in the lives of people with long-term disabilities: A multi-country analysis

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Background:
Health is a fundamental human right. Yet, people become ill and die because they do not have enough money to access the necessary healthcare. Studies confirm that on average, more income translates to better health status. The magnitude of this relationship and its consequences beyond health like reintegration or spillovers are not widely understood but are expected to be significantly different among countries. This is especially the case in vulnerable populations like those with a spinal cord injury (SCI). This study aims to better understand the role that income plays in promoting health in people with SCI and their differences across countries.

Methods:
The research focus on three aspects, one, the estimation of the health income gap using years after the injury and a comorbidity index, two, the decomposition of different factors of this inequality with a special interest in the unmet healthcare needs, and three, their consequences in their social participation measured by the reasons of unemployment.

Results:
There are significant differences in health status by income and between countries. On average, the poorest income groups with SCI are up to 40 times more likely to be ill than people in the richest groups and live 4-6 years less after the injury. The working conditions and the unmet health care needs are important factors that explain that differences. In addition, the health status, the lack of sustainable employment opportunities, and workplace accessibility issues are the main issues to reintegrating into the labor market.

Conclusions:
Health inequalities are a global problem that affects people with long-term health conditions disproportionately to others without. Even in more equal and high-income countries with a universal health system, there are different realities for the people according to their income, where the estimations and solutions for the 'average' individual do not target the needs of people in the extremes.

Key messages:
- This study generates evidence about the role of income in health, lack of health services, and consequences in people with SCI across and within countries.
- To achieve the goal of health equity, it is important to target the different realities focusing on the needs of people who most need which goes beyond the health system and changes by income level.

Abstract citation ID: ckac131.111
The effect of social deprivation on the dynamic of the SARS-CoV-2 infection in France

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Background:
The association between health inequalities and the SARS-CoV-2 infection dynamic remains to be studied in France. The objective of this study was to analyse the relationship between an area-based deprivation indicator and SARS-CoV-2 infection indicators, during four epidemic waves running from August 4th 2020 to January 27th 2021 (second wave), January 28th to June 24th 2021 (third wave), June 25th to October 28th 2021 (fourth wave), and October 29th 2021 to March 29th 2022 (fifth wave).

Methods:
We analysed weekly indicators of SARS-CoV-2 infection, extracted from the national testing information system: incidence, positivity and testing rates. The associations of these outcomes with the European Deprivation Index (EDI) quintiles were estimated with negative binomial generalized additive models adjusted for epidemic waves, population density (sparsely, moderately, densely populated), region (random effect) and interactions between epidemic waves and the variables EDI, population density, and region.

Results:
The most deprived areas had a higher positivity rate than the least deprived ones during the second, third and fourth waves, but a lower rate during the fifth wave. They also had higher incidence during the third and fourth waves, but a similar incidence than the least deprived areas during the second wave, and even a lower rate during the fifth wave. The testing rate was lower in the most deprived areas than elsewhere, irrespective of the epidemic waves.

Conclusions:
People living in the most deprived areas were less likely to be tested and more likely to test positive than people living in less deprived areas. The lower incidence, positivity and testing rates during the fifth wave in the most deprived areas may be explained by the enacted change in policy whereby screening tests were no longer free. These findings may reflect structural differences in access to care and lower capacity to benefit from prevention measures by deprived populations.

Key messages:
- People living in the most deprived areas were less likely to be tested for COVID-19 irrespective of the epidemic waves.
- Health authorities should address the issues of social inequalities more rapidly and target prevention strategy to disadvantaged populations.

Abstract citation ID: ckac131.112
Healthcare use by children in North West London 2015-2019 by deprivation and integrated care access

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Background:
England has a health system offering universal coverage, but disparities in healthcare use are increasing. Between 2007-2017, children living in more deprived areas had higher rates of unplanned care (Emergency Department (ED) attendance and hospital admissions), whereas children from less deprived areas had higher rates of planned care (General Practitioner (GP) contact and outpatient appointments). More detailed research to find solutions for this divergent pattern is required.

Aim:
To assess the rates of GP contact, outpatient appointments, hospital admissions and ED attendance in North West London, by Index of Multiple Deprivation (IMD) decile of home postcode and access to an integrated care service providing linked care between multiple child health professionals 'Connecting Care for Children (CC4C)', for children aged 0-18 years between 2015-2019.

Methods:
Retrospective analysis of a de-identified database of integrated care records for 495,357 children.

Results:

Children from the most deprived decile had higher rates of emergency admissions (0.070 per child per year vs. overall mean 0.040), elective admissions (0.076 vs. 0.032), ED attendances (0.754 vs. 0.358) and outpatient appointments (1.702 vs. 0.756) between 01.01.2015- 31.12.2019. Children from the least deprived decile had the second highest rates of outpatient appointments (0.911 vs. 0.756) and GP contact (8.192 vs. 5.390) between 01.01.2015- 31.12.2019. Children with access to the CC4C service, despite being from more deprived backgrounds, had lower rates of emergency admissions (0.028 vs. 0.037) compared to patients with access to usual care. P values <0.001 in all cases.

Conclusions:

Greater deprivation was linked to higher rates of emergency admissions, but this was partially mitigated by access to more integrated healthcare models. Children from the least deprived decile continued to have disproportionately higher use of planned care.

Key messages:

- Despite universal health coverage, children from more deprived areas continue to have disproportionately higher use of unplanned care.
- Further research is required to explore whether integrated care solutions can reduce the burden on unplanned health services and inequalities in access to care.

Abstract citation ID: ckac131.113
How social capital enabled healthcare access and navigation by vulnerable people during Covid-19

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Background:

Healthcare systems have become complex and fragmented, negatively affecting healthcare access and navigation. This is especially the case for socio-economically vulnerable people, who encounter organisational and administrative hindrances trying to access care. These difficulties have worsened during Covid-19. Scholarly literature recognises that - by moulding navigation practices - social capital may mediate between potential and realised access to healthcare. However, little is known about how this mediating work practically unfolds.

Methods:

This case study aimed to understand how social capital might affect healthcare navigation practices. To do so, we investigated how the People's Health Lab (PHL), a community-based organisation, supported socio-economically vulnerable people in navigating healthcare during the Covid-19 pandemic in Bologna, Italy. Nine months of participant observation were conducted both in person and digitally from July 2020 to March 2021. Twelve semistructured interviews were also conducted with volunteers of the organisation. Fieldnotes and interview transcripts were analysed through Thematic Analysis.

Results:

PHL support activities addressed barriers to healthcare navigation by vulnerable people, which were found to be services fragmentation, bureaucracy and Covid-19 restrictions. Volunteers of the PHL connected vulnerable individuals to health services in manifold, flexible ways, working without standard operative protocols and relying on informal personal contacts within public services. This was found to be key in enabling navigation of healthcare during the first three waves of the pandemic.

Conclusions:

Our study provides evidence about how structural, linking social capital - the material and nonmaterial resources mobilised through the relationships between heterogeneous groups (the People's Health Lab, health authorities and vulnerable people) - can mediate access to fragmented healthcare systems by shaping navigation practices.

Key messages:

- Contemporary healthcare systems – including universal ones – have become complex and fragmented, posing access and navigation challenges to their users, especially those socioeconomically vulnerable.
- Linking social capital can mediate access to fragmented healthcare systems by flexibly mobilising material and nonmaterial resources through informal relationships between heterogeneous groups.

Abstract citation ID: ckac131.114
Epidemiological factors affecting health service utilization in diabetic patients in Ethiopia

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Diabetes-related deaths reached 2 million in 2019. The highest percentage of undiagnosed diabetes (59.7%) was observed in Africa, where accessibility to health services is pivotal to improving the outcome of diabetic patients. The study aims to assess the association between diabetic patients' epidemiological factors and accessibility to healthcare services in a low-income country. The retrospective cohort study included diabetes-related outpatient department (OPD) visits and hospitalizations from 01/01/2018 to 31/08/2021 at St Luke Hospital (Ethiopia). Potential predictors were sociodemographic factors, COVID-19 cases, mean monthly temperature, and precipitations. The ARIMA method was applied to OPD visits and hospitalizations time series. OPD visits increased over time ($p < 0.001$) while hospitalizations were stable. The time series model was ARIMA(0,1,1) for OPD visits and ARIMA(0,0,0) for hospitalizations. Diabetes OPD patients were 1,685 (F = 732, 43%). Females had an average of 16% fewer OPD accesses per month ($p = 0.002$). Patients missing follow-up were 801 (48%). The time between follow-ups was longer as age increased ($p < 0.001$). There were 57 fewer forecast OPD visits per month on average using COVID-19 cases as ARIMA regressor. OPD visits decreased differently by geographic area as COVID-19 cases increased ($p < 0.001$). Hospitalized patients for diabetes were 408, 85 (20.8%) newly diagnosed. The odds ratio (OR) of diagnosis at admission was lower as age increased (OR 0.98, $p = 0.009$). Compared to type 1 diabetes, hospitalized females with type 2 (117-39.7%) were fewer than males ($p = 0.019$). Readmissions were 52, 10 (19.2%) within 30 days, without OR difference by sex, age, or diabetes type. Despite an increase in OPD visits for diabetic patients over the study period, the number of losses at follow-up and diagnoses at hospitalization remains high. Gender and age influenced service utilization. Females' access to care is still problematic (concept of "missing women").

Key messages:

- Primary health care should be implemented to improve access to health services and diabetes management.
- Ensuring equity in healthcare accessibility should be a priority in low-income countries.

Abstract citation ID: ckac131.115
Inequality in access to COVID-19 vaccines: an annual experience in Verona (Italy)

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COVID-19 vaccination campaigns involved massive resources worldwide. However, the disparity in vaccine accessibility is a global issue. The study evaluated whether birthplace is a barrier to healthcare access in a high-income country (HIC). The retrospective cohort study included fully vaccinated adults in the Verona district between 27/12/2020 and 31/12/2021. In Italy, the vaccination was opened at different times according to the risk category. Two multiple linear regression models explored the relationship between (1) days before getting the first shot (IV) and (2) the distance between the municipality of residence and the vaccination point, and age, sex, and Income Group (IG, as defined by the World Bank). Distance (km) was estimated with Q-GIS. Results are reported as Marginal Effect at the Mean (MEM) with a confidence interval of 0.95. 500,001 first doses were included, with a mean age of 47 years (SD = 21) and a mean IV of 47.5 days. 6% of the sample was UpperMiddle (UMIC), 6% Lower-Middle (LMIC), and 0.3% Low-Income Countries (LIC). The mean age was higher for HIC ($p < 0.05$). Male outnumbered females in LMIC (61%) and LIC (69%), but not in HIC and UMIC ($p < 0.001$). LMIC and LIC were vaccinated at local facilities (5.8%) and pharmacies (4.2%) more than other groups (3%) and at hub centers less ($p < 0.05$). The IV was lower for subjects from HIC ($p < 0.05$) with a MEM of 24 [22; 26] for LIC, 21 [21; 22] for LMIC and 27 [26; 27] for UMIC. Men from UMIC (9 [4; 14]), LMIC (7 [6; 8]) and LIC (4 [3; 5]) had a higher IV than women. All variables being equal, IV decreased with age (MEM -0.48 [-0.49; -0.47]). Distance was shorter for LMIC and LIC than for HIC ($p < 0.05$). The MEM on the distance of the Income group was -2.8 [-3.5; -2.2] for LIC and -2.0 [-2.1; -1.8] for LMIC ($p < 0.05$). The Income Group of one's birth country is a barrier to vaccine accessibility in Italy, a HIC. Hence, we address public health workers to improve access to vaccination in community settings to narrow this gap.

Key messages:

- Birthplace Income Group could be linked to vaccine accessibility in High Income Countries.
- Public Health stakeholders should consider community and social barriers to healthcare access when planning health interventions.

Abstract citation ID: ckac131.116
Strategies to increase catch-up vaccination among migrants: a qualitative study and rapid review

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Background:

WHO's Immunization Agenda 2030 has placed renewed focus on catch-up vaccination across the life course to meet global targets for reduction in vaccine-preventable diseases through increased vaccine coverage, including among migrant groups who may require catch-up vaccination to align them with host country vaccination schedules.

Methods:

We did a global rapid review (01/2010 to 04/2022) to explore drivers of vaccine hesitancy among migrants followed by an in-depth qualitative study (semi-structured, telephone interviews) among recently arrived adult migrants (foreign-born, >18 years old, residing in the UK < 10 years). Interviews explored views on routine vaccination including accessibility, confidence and awareness. Data were analysed iteratively using thematic analysis.

Results:

63 papers were included in the rapid review, including data from 22 countries/regions. Multiple factors driving under-immunisation and hesitancy in migrants were reported, including language barriers, low health literacy, social exclusion, low cultural competency and accessibility in healthcare systems. Our qualitative study recruited 40 migrants (mean age: 36.7 years; 62.5% female) resident in the UK (6 refugees, 19 asylum-seekers, 8 undocumented, 7 labour migrants). Major barriers to catch-up vaccination included a lack of provider recommendation and low awareness, with vaccination viewed as only relevant to children. Hesitancy around specific vaccines, such as MMR, was often influenced by misinformation. Participants suggested that novel strategies such as walk-in or mobile access points, consistent provider recommendations, and translation of information into relevant languages, may enhance accessibility and uptake of routine vaccinations.

Conclusions:

Targeted and tailored information campaigns, versatile and proactive access pathways and education for healthcare staff on cultural competency will be needed to ensure uptake of catch-up vaccination among marginalised migrant groups.

Key messages:

- Newly arrived adult migrants face barriers to catch-up vaccination in host countries, which may hinder immunisation coverage and increase the risk of vaccine-preventable disease outbreaks.
- Health systems must develop novel mechanisms to proactively offer culturally competent and accessible catch-up vaccination services to adult migrants on and after arrival.

Abstract citation ID: ckac131.117
Health System Performance Assessment: Does Germany provide good access to healthcare?

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Background:

Providing equal access to health care is a major goal of health systems and a criterion for health system performance assessment (HSPA). The first systematic HSPA for Germany has been piloted in 2021. Access is one dimension of the conceptual framework (others are, e.g., population health, quality, and efficiency), which will be analysed in the following.

Methods:

Nine indicators to measure access were selected based on a systematic search of established instruments in (inter)national HSPA initiatives. Included indicators are availability and accessibility of services (e.g., waiting times) and financial risk protection, among others. Other criteria for the inclusion of indicators were data availability and international comparability. Indicators were evaluated in terms of their trend over time (2000-2020), in international comparison (e.g., Austria, Denmark, France), and according to various equity categories (e.g., age, gender, region).

Results:

The indicator access to palliative care could not be evaluated due to lack of data. Overall, access is good in Germany. Internationally, Germany performs better than average on most of the indicators, and its performance has improved over time. Physician density in the inpatient and outpatient sectors has increased since 2000 and is above the average of comparator countries. For some specialties, physician density in rural areas is lower than in urban areas, but the gap has decreased in recent years and does not apply to primary care. Furthermore, only 0.3% of the total population report having foregone care, although they had considered it necessary.

Conclusions:

Nine indicators were identified and calculated to assess the performance of the German health system in terms of access to healthcare. Access can be assessed as predominantly positive, but inequities exist. Identified gaps and future extensions, e.g., additional data sources, can provide impetus for evidence-based policy management.

Key messages:

- First systematic Health System Performance Assessment for Germany has been piloted.
- Access to health care is good in Germany, both over time and in international comparison, but inequities exist.

Abstract citation ID: ckac131.118
Gender inequalities in mortality in Lithuania: the HAPIEE Study

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Introduction:

Gender inequalities in morbidity and mortality are important problem in countries of Central and Eastern Europe. Mortality difference between men and women in Lithuania is one of the largest in Europe. The aim of this analysis was to identify factors that influence this difference in population-based sample of middle- and older-age men and women from Lithuanian arm of the HAPIEE Study.

Methods:

Data come from the Lithuanian part of international Health, Alcohol and Psychosocial Factors In Eastern Europe (HAPIEE) longitudinal cohort study. The analytical sample included 3729 women and 3062 men aged 45-74 years at the study baseline. The study outcomes were all-cause, CVD and cancer mortality (mean follow-up approx. 10 years). Gender difference in study outcomes, and the role of wide range of socioeconomic, demographic, behavioural, metabolic and psychosocial covariates in this association was tested by regression modelling.

Results:

There were 913 deaths (576 in men) during the follow-up. Men had higher odds of mortality compared to women: for all-causes OR 2.42 (95% CI 2.09-2.81); for CVD 2.48 (2.03-3.08); for cancer 1.92 (1.54-2.38). BMI was identified as an effect modifier for all-cause and cancer mortality. When adjusted for confounders such as smoking, alcohol consumption or paid work, and stratified for BMI, the gender difference reduced a little for CVD mortality but remained virtually unchanged for all-cause and cancer mortality.

Conclusions:

We found substantial and statistically significant gender inequalities in mortality in this Lithuanian study. We found that men aged 45+ years were approximately two times more likely to die than women, with CVD mortality difference being even larger. Additionally, most of gender difference in mortality remained unexplained by the main social, psychosocial, behavioural and metabolic risk factors.

Key messages:

- Large gender inequalities in mortality have been observed in this Lithuanian study of middle- and older-age men and women.
- Most of the inequalities have not been explained by available social, psychosocial, behavioural and metabolic risk factors.

Abstract citation ID: ckac131.119
Factors influencing the implementation of school interventions: a systematic review

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Background:

To investigate contextual factors that influence the implementation of obesity prevention interventions in school addressing children with low socioeconomic status (SES) is very important. Evidence about these factors helps to improve the implementation, which can promote the health of children with low SES and therefore reduce health inequity. We aimed to systematically identify, critically appraise and summarize the evidence on implementation of school-based interventions promoting obesity prevention for children with low SES.

Methods:

A systematic search in seven databases was conducted with the main inclusion criteria 1) school-based interventions and 2) age group 5-14 years. The Consolidated Framework for Implementation Research and its five domains and 39 categories was used to analyze the data deductively. If necessary, inductive sub-categories were defined within the categories. Contextual factors are assessed in the domain Outer Setting with four categories (A-D).

Results:

6.446 studies were screened and 16 studies fulfilled all inclusion criteria. Seven studies reported contextual factors in the four categories A. Needs & resources of parents (N = 4), B. Cosmopolitanism (N = 4), C. Peer pressure (N = 2), and D. External policy (N = 4) with seven sub-categories in total. In the following are examples for reported aspects in the sub-categories. In the sub-category D.2 Existing policy, policy in line with the intervention was a facilitator for implementation (N = 2), whereas lack of control over administrative changes and food served in cafeteria due to policy were reported as barriers (N = 2).

Conclusions:

Intervention research as well as applied health promotion should consider the complexity and interdependency of influencing factors for successful implementation. Albeit contextual factors are hardly changeable, they should be considered and addressed to reduce health inequity.

Key messages:

- More research is needed with detailed reporting of influencing factors, as detailed information is those of relevance for practice.
- Contributing to standardized analysis and reporting in implementation research by using a comprehensive framework.

Abstract citation ID: ckac131.120
Maternal educational inequalities in child's birth weight: ONS Longitudinal Study

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Background:

Studies found that maternal education is the most frequently assessed predictor of child's birth weight. Lower level of education was consistently found as indicator of lower child's birthweight. In turn, inequalities in child's birthweight have been repeatedly shown to be closely related to inequalities in later adult health. The aim of this project is to evaluate the association between the highest achieved level of maternal education and birthweight of single born babies in large

English and Welsh population sample, taking into account factors such as child's gender, parity, maternal age, partnership status, ethnicity, and household socioeconomic characteristics.

Methods:

Using Office for National Statistics Longitudinal Study (ONS LS) based on English and Welsh Census data, information from almost quarter of a million children born since 1981 to ONS LS sample mothers were used. Maternal education was categorised in 3 categories (below secondary, completed secondary education, degree and higher), and its association with child's birth weight was analysed by logistic regression accounting for range of available covariates.

Results:

Significant association between the level of education and birth weight was found in crude analysis ($p < 0.001$). When adjusted, the magnitude of the association with education gradient declined but remained highly significant and was found to considerably increase over the years. The birth weight difference between those born to mothers with below secondary education and those born to mothers with degree increased by more than 60 grams (p for change <0.001) between 1981 and 2016.

Conclusions:

These findings support previous evidence based on different population samples. According to our results, children of mothers with below secondary education tend to have lower birth weight. Our results suggest that the inequalities in birth weight by the highest education level achieved by mother significantly increased since 1981.

Key messages:

- Lower levels of maternal education predict low birth weight in children.
- The differences in birth weight by maternal educational demonstrate increase in inequalities over the years.

Abstract citation ID: ckac131.121

The paid sick leave and sickness benefits for universal health coverage: a scoping review

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Background:

The countries with paid sick leave (PSL) and sickness benefits (SB) mostly provide the benefit coverage to specific categories of workers, which results in health inequalities among employees in COVID-19. The PSL and SB are key factors to achieve universal health coverage (UHC) in that they protect access to healthcare and improve population health. This study attempted to investigate whether the policies helped achieve the UHC when they were expanded.

Methods:

This review followed the scoping review protocol of PRISMA-ScR. On April 6, 2021, we extracted the literature using the keywords 'paid sick leave', 'sickness benefits', 'paid sick day', and 'earned sick leave' from PubMed and Web of Science and added two studies through hand-search. All articles were written in English. We did not limit the publication date.

Results:

Forty-four selected studies were based in four single countries and the European Union. Most of the studies were published after 2010 (84.1%) and were conducted as cross-sectional (72.7%) studies. Not only workers who use PSL and SB but also children whose parents use PSL and SB increased their use of healthcare services and getting flu shots. Also, using PSL and SB decreased their unmet healthcare needs and emergency use. The various health status factors, such as infectious disease incidence, mortality, and presenteeism, also decreased.

Conclusions:

The provisions of PSL and SB offer individual and public health benefits by allowing employees and their families to use healthcare services. Group of employees, we can expect similar public health impacts on newly covered groups, thus contributing to achieving the UHC. Since more than 90% of articles are published from the United States, future studies need to evaluate the outcomes of health effects in various European or Asian countries.

Key messages:

- The provision of PSL and SB positively affects employees and their families by allowing them to use healthcare services.
- The expansion of PSL and SB contributes to the UHC by guaranteeing indirect medical costs that enable universal access to essential healthcare services.

Abstract citation ID: ckac131.122

Promote equal access to COVID19 vaccination: strategies of the Local Authority Toscana SudEst, Italy

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Background:

In the area of the Local Health Authority Toscana Sud-Est (LHA) 13,5% of residents are foreigners. We aim to assess the impact of our intervention to COVID-19 vaccination coverage.

Methods:

Since summer 2021, LHA has promoted vaccination sessions dedicated to foreign residents with free walk-in access, multilingual forms, flyers and TV interventions, cultural mediators and trained healthcare workers. We collected data about vaccination status of residents (28 December 2020-31 January 2022) and we analysed them using the software STATA to assess vaccine coverage by nationality and the effectiveness of our intervention. The results were adjusted for age and sex. We set significance level at $p < 0.05$.

Results:

On 31 July 2021, 78% of Italian residents (N = 685289) had received the first dose of vaccine, compared to only 43% of foreign residents (N = 106370). There was a 35% gap. On 31 January 2022, after our intervention, 89% of Italian residents and 71% of foreign residents had received the first dose of the vaccine. The gap was 18%. On 31 January 2022, 50% of residents of all nationalities had received two doses of the vaccine. A significant difference between Italian and foreign residents is still observed after adjustment for age and sex (OR 0.41 95% IC 0.40-0.41). Vaccination adherence is lower in females than males, for both Italian (OR 0.90 0.89-0.91) and foreign residents (OR 0.82 0.79-0.84). This is accentuated within some ethnic groups: Macedonians, Kosovars, Pakistanis.

Conclusions:

The creation of dedicated service guaranteed to reach a high vaccination coverage in all the nationalities and to reduce the gap between host and foreign residents. In foreigners it is lower than in the hosts, so it is necessary to investigate possible cultural factors that may influence hesitancy. A lower vaccination coverage in females, especially in foreigners, may be due to an inferior participation in social and working life as a consequence of the gender gap.

Key messages:

- The creation of dedicated interventions guaranteed to achieve high vaccination coverage in all nationalities.
- A lower vaccination adherence in females than males, especially in foreigners, may be due to an inferior participation in social and working life as a consequence of the gender gap.

DE Chronic diseases

Abstract citation ID: ckac131.123
Chronic diseases and multi-morbidity in persons experiencing homelessness: a cross-sectional study

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Background:

Persons experiencing homelessness (PEH) suffer a high burden of chronic diseases, yet face significant barriers in accessing health services. We describe and compare chronic diseases and multi-morbidity in PEH, housing exclusion and secure housing who lacked access to regular health services in the wake of the COVID-19 pandemic in Germany.

Methods:

Study participants were adults who sought care at clinics of the humanitarian organisation “Ärzte der Welt” in Munich, Hamburg and Berlin in 2020. The patients were categorised into three groups according to the European Typology of Homelessness and Housing Exclusion (ETHOS). We described socio-demographic characteristics, self-rated health, chronic diseases, multi-morbidity and SARS-COV-2 infections in each group. Logistic regression analysis was used to identify socio-demographic factors associated with higher odds of chronic diseases and multi-morbidity.

Results:

Of the 695 study participants, 333 experienced homelessness, 292 housing exclusion and 70 had secure housing. 92.3 % had no or limited health insurance and 96.7% were below the poverty line. Males and EU citizens were highly represented among PEH (74.2% and 56.8% respectively). PEH had lower self-rated health (47.8%, p = 0.04), and higher rates of psychiatric illness (20.9%, p = 0.04). In adjusted analyses, being 35-49 and $\geq$50 years was associated with greater odds of chronic diseases (AOR = 2.33, 95% CI = 1.68-3.24; AOR = 3.57, 95% CI = 2.55-5.01, respectively), while being male was associated with lower odds of multi-morbidity (AOR = 0.602, 95% CI = 0.38-0.9). Of the 18 symptomatic patients tested for SARS-COV-2 infection, 15 were PEH, of whom one tested positive.

Conclusions:

Housing was not a risk factor for chronic disease and multi-morbidity in this study. However, PEH reported poorer self-rated and psychiatric health. Strategies to improve access to health services for persons experiencing homelessness and housing exclusion are much needed in Germany.

Key messages:

- Research to highlight the health inequity, both in access and outcomes, in persons experiencing all forms of homelessness is much needed.
- This study provides data on a population disconnected from the formal healthcare system. Making such data visible is a step towards addressing the structural causes of social exclusion.

Abstract citation ID: ckac131.124
Epidemiology of Tuberculosis in Kazakhstan: Data from National Electronic Healthcare System 2014-2019

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Background:

Tuberculosis (TB) remains a global public health threat. WHO determined Kazakhstan as one of 18 high-priority countries for TB elimination in Europe, with reported TB incidence >20 cases per 100,000 population. There is a lack of comprehensive reseach of TB epidemiology in the country. This study aims to estimate the prevalence, incidence, mortality rates and survival hazard ratios of TB in Kazakhstan, using large-scale administrative health data records in 2014-2019.

Methods:

This is a population-wide retrospective study assessing 150 thousand TB (ICD10: A15-A19) patients’ incidence, prevalence and mortality. Demographic factors, diagnoses and comorbidities were analyzed. Univariate, bivariate and multivariate statistical analyses were performed. Cox regression and Kaplan-Meier survival analysis have been done.

Results:

Out of 150 thousand all TB patients, 61 percent were male and 94 percent had respiratory TB. During 2014-2019, the TB incidence, prevalence and mortality per 100K population declined (227-15.2), doubled (325.3-746.6) and increased (8.4-15.2), respectively. Age-specific TB incidence was lowest for 0-10 y.o., highest for 20 y.o. Being an old person, male, urban resident, retired, with HIV and diabetes was significantly associated with lower survival compared to a young, female, rural resident, employed, with no comorbidities.

Conclusions:

This was the largest TB study in Kazakhstan, presenting the country’s TB by demographic groups, incidence, prevalence, mortality trends, and risk factors against survival.

Key messages:

- During 2014-2019, the TB incidence, prevalence and mortality per 100K population declined (227-15.2), doubled (325.3-746.6) and increased (8.4-15.2), respectively.
- Being an old person, male, urban resident, retired, with HIV and diabetes was significantly associated with lower survival compared to a young, female, rural resident, employed, with no comorbidities.

Abstract citation ID: ckac131.125
The association between depression and quality of life in the elderly

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Background:

Depression is the most common cause of emotional disorder in older adults causing functional impairment and leading to lower quality of life (QOL). The aim of the study was to investigate the prevalence of depression, measure the perceived QOL and evaluate the impact of depression on life quality of older people in the community.

Methods:

We conducted a cross-sectional study in older people, enrolled in open day care centers and other healthcare facilities. To all participants the Greek validated version of the Geriatric Depression Scale (GDS-15) was applied to screen for depressive symptoms and the EQ-5D-5L scale to estimate their self-reported health status.

Results:

A total of 634 seniors participated in the study, 53% were females, mean age 78 years. 45.6% of the participants showed moderate to severe depression. Those who suffered from at least two chronic diseases (75.6%) were more likely to develop moderate or severe depressive symptoms compared to those with only one (19.3%) or none (2.2%) chronic disease. Increased risk of depression was observed in people with Parkinson's disease (56.5%), mental illness (47.1%), respiratory disease (40%) and stroke (35.1%). Regarding the EQ-5D-5L scale, 72% reported slight to extreme anxiety or depression, 68.2% slight to extreme pain or discomfort, 59.8% slight to extreme problems in performing usual activities, 59.8% in mobility and 40.1% in self-care, respectively. Significant differences were found between people with or without depression. Specifically, participants who reported slight to severe problems in all five domains of the EQ-5D-5L, showed higher levels of depression in the GDS-15.

Conclusions:

Our results revealed that elderly with depressive symptoms have a lower quality of life. Given the mutual relationship between chronic diseases, lower life quality and depression, assessment of depressive symptoms are needed in elderly population, mainly in people with multiple chronic diseases.

Key messages:

- Depression can be a predictor of poorer quality of life in older population.

Abstract citation ID: ckac131.126
The age of chronic diseases onset – the results of the longitudinal study

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Background:

A current aging of the European population call questions into how to protect a high quality of health in the elderly which was the reason to establish the longitudinal HAIE Project. As the baseline information, the longitudinal ELSPAC study results were used. The aim of the analysis was to learn a life-course-dependent risk factors of the onset chronic diseases in middle-aged population.

Methods:

The cohort includes data on both parents. Their number decreased during the follow up from 4,500 to about 1,000 parents. The selected questionnaire data of the cohort gained at consecutive intervals during the years 1990-2010 were analysed descriptively, according the distribution of data by respective statistical methods and survival analysis. Differences between curves were tested by log-rank tests (significance level of 5%). The SW Stata v.15 was used.

Results:

The mean age of mothers (N = 823) at study entry was 25.0 years (SD = 4.86), the age of fathers (N = 385) 28.8 years (SD = 6.05). Good self-reported health has decreased continually over time from more than 80% in both parents aged 30 to about 50% in the age of mid-forties. Most parents suffered from back pain, hypertension, and joint pain. The prevalence of diseases has raised over time. Problems with hypertension begin in women from the age of 38 (39 in men) and there was no statistically significant difference by sex ($p = 0.265$). Survival analysis found a significant difference by sex for depression ($p < 0.001$) and physician-confirmed back pain ($p < 0.001$), which affect parents from 35 years (significantly more in women than men).

Conclusions:

The processed analysis will refine the findings of the longitudinal Project HAIE (CZ.02.1.01/0.0/0.0/16_019/0000798) and subsequent projects monitoring the factors influencing healthy aging. The (C)ELSPAC studies are supported by the projects RECETOX RI (No LM2018121) and CETOCOEN EXCELLENCE (No CZ.02.1.01/0.0/0.0/17_043/0009632).

Key messages:

- About 50% of the mid-forties aged population did not declare good self-reported health. They suffered mostly from back pain, hypertension, and joint pain. The diseases prevalence has raised over time.
- The onset of hypertension begin from the age of 38 (39) with no difference by sex, depression and physician-confirmed back pain start from 35 years of age, significantly more in women than men.

Abstract citation ID: ckac131.127

This abstract has been withdrawn

Abstract citation ID: ckac131.128
People with diabetes have a substantial lower life expectancty

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Background:

People with diabetes live shorter lives on average than people without diabetes. This is not only because they have diabetes, but also more often other chronic diseases. This causes a greater risk of death. It makes a difference what kind of diabetes someone has. In type 1 diabetes, the natural immune system does not work properly. In type 2, an unhealthy lifestyle plays a role. An unhealthy lifestyle increases the chance that someone will get type 2 diabetes and the chance that that person will die of another disease, such as cardiovascular disease.

Methods:

RIVM has linked general practitioners' data from 2012-2019 to the vital statistics of the Dutch National Statistical Office. The population of people registered with and without diabetes were coupled with the mortality data. Making use of life tables, associated life expectancies were calculated. For people under the age of 45, no robust analysis could be made.

Results:

People aged 45 with type 1 diabetes live on average 13 years shorter than people without diabetes. For a 45-year-old with type 2 diabetes, that is on average 4 years shorter. The chance of dying is about 5 times greater for people aged 45 to 60 with type 1 diabetes than for people without diabetes of this age. This difference becomes smaller as they get older, because people without diabetes also get one or more diseases more often. In type 2 diabetes, the mortality rate for people aged 45 to 60 years is about 2 times greater than for people without diabetes. Again, the difference decreases as they age.

Conclusions:

A substantial lower life expectancy of 13 years for type 1 and 4 years for type 2 diabetes has different societal and policy consequences. Since type diabetes 1 is unavoidable, more attention should be given to living with this condition, while for type 2 prevention of for example overweight should get attention.

Key messages:

- People with for type 1 and type 2 diabetes have 13 and 4 years lower life expectancy.
- More attention should be given to prevention and to living with diabetes.

Abstract citation ID: ckac131.129
Case-mix and outcome variability in people with diabetic foot complications in England and Scotland

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Background:

We assessed the difference in survival rates for people with diabetes experiencing LEA in England and Scotland, using large databases held by the Royal College of General Practitioners (RCGP) and the Scottish Diabetes Register (SCI-DC).

Methods:

Observational retrospective study of T2D adults 18+ years with LEA between 1/1/2008-1/1/2018 from 1,800 general practices in England (7.4%) and all primary, secondary care units in Scotland. Significance tests were carried out using univariate odds ratios within each database.

Results:

On 1/1/2018, N = 127,100 people with T2D were registered alive in RCGP, with N = 1,052 (832 per 100,000) experiencing prior LEA, vs N = 2,200 (783 per 100,000) out of 280,908 in SCI-DC. Among them, England recorded N = 405 patients (72.5%) with prior DFU diagnosis vs N = 993 in Scotland (74.3%), with a median time DFU to LEA of 2.0 vs 2.4 years. The median time spent with LEA was 3.4 years in England vs 3.9 years in Scotland. After including those dying earlier, different univariate patterns were found for England and Scotland. In both networks, increased risk was found for those aged 50+ at first LEA, with prior history of acute myocardial infarction, peripheral arterial disease, ischemic heart disease, cerebrovascular event, higher glomerular filtration rate and major LEA first. In England, reduced risks were found for males (OR = 0.77, 95%CI: 0.64-0.93) and people with retinopathy (0.69; 0.57-0.82), while higher risk were found for hypertension (1.29; 1.09-1.54). In Scotland, lower risks were found for obese (0.59; 0.52-0.66) and those with DFU after LEA (0.74; 0.62-0.89), vs higher rates among those of non-white ethnicity (1.63; 1.19-2.23) and dyalisis (2.31; 1.75-3.07).

Conclusions:

Notable differences were found between England and Scotland in terms of characteristics associated with different outcomes following LEA among T2D adults. Multivariate analyses of aggregate patterns are currently ongoing to adjust for potential confounding.

Key messages:

- Routine datasets from England and Scotland showed a differential impact of case-mix characteristics on lower extremity amputations among adults with Type 2 diabetes.
- Information available from different clinical networks can be mapped against the available standard sets to compare health care outcomes of people with different complex conditions.

Abstract citation ID: ckac131.130
Knowledge, attitudes, practices on hepatitis C and HCV screening: an Italian cross-sectional study

Giuseppina Lo Moro

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Background:

Hepatitis C has the highest burden in the Eastern Mediterranean Region and European Region. This study aimed to explore knowledge, attitudes and practices towards hepatitis C and HCV screening, which has been large-scale implemented in Italy recently.

Methods:

An online nationwide cross-sectional survey was conducted (Italy, December 2021). Five outcomes were used: HCV knowledge (from 0 to 100%: 100% represents the lowest knowledge); not being aware of the screening; wrong attitudes in case of contact with positive people (from 0 to 5: 5 represents more wrong attitudes); having performed an HCV test; sharing of blood-contaminated objects. Multivariable regressions were run.

Results:

Participants were 813 (74.7% females; mean age 37 years, SD 12.4). The median score of HCV knowledge was 20% (IQR 16-24). There was a positive correlation between poor knowledge and wrong attitudes ($p = 0.001$). People who underwent an HCV test were less likely to have poor knowledge ($p = 0.040$). The 23.2% was not aware of screening existence. People who had a postgraduate degree were less likely of not being aware ($p = 0.004$). Investigating attitude score, the median was 0 (IQR 0-1). Increasing age was associated with wrong attitudes ($p = 0.020$). The 43.4% underwent an HCV test. This likelihood was greater for: residence in a municipality with more than 50000 inhabitants ($p = 0.032$); having at least one child ($p = 0.009$); considering oneself at risk ($p = 0.004$); being informed about HCV ($p < 0.001$). The 31.8% shared objects. Increasing age was associated with reduced odds of sharing ($p = 0.033$). The 72.4% would like to receive more information on HCV, preferring brochures and short videos.

Conclusions:

This study showed good knowledge and attitudes, with a substantial frequency of individuals who never underwent an HCV test or shared contaminated objects. It also suggested brochures and short videos may be the most acceptable ways to implement awareness campaigns in comparable European contexts.

Key messages:

- Italian general population had good knowledge and attitudes towards hepatitis C and its screening, while it showed poor practices.
- Most of participants were willing to receive more information on HCV, especially through brochures and short videos.

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Walk the path of cervical cancer elimination in Italy: current scenario and shared recommendations

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Issue/problem:

In 2020, the World Health Organization (WHO) called for the elimination of cervical cancer. In order to get it, vaccination against Human Papillomavirus (HPV), screening of cervical cancer and treatment of high-grade cervical disease and cancer must be implemented at country level.

Description of the problem:

Italy has implemented HPV vaccination and cervical cancer screening for many years. Nevertheless, nationwide data show that both vaccination coverage and adherence to screening programs are unsatisfactory as compared to the WHO 90 and 70 targets, namely 90% of girls fully vaccinated by the age of 15 years and 70% of women screened with a high-performance test (i.e., HPV-DNA test) by age 35 and again by 45.

Results:

In order to address the progress of vaccination and screening at regional level in Italy, a project was conducted in 2021-2022 in order to collect data on relevant indicators and issues. In particular, information was collected on both coverage indicators (for both vaccination and screening) adherence (for screening) and history and characteristics of the vaccination offer (e.g., targets, gratuity) and of screening (e.g., presence of clinical pathways, type of tests used). Collected data were shared with a multidisciplinary panel of experts on HPV-related diseases to issue recommendations to foster the elimination of cervical cancer in Italy. For this purpose, a survey was also conducted to identify potential actions in respect to vaccination, screening and treatment.

Lessons:

A great heterogeneity across Italian regions was observed. The following actions were identified to implement vaccination, screening and treatment: educational campaigns, reminders and active calls for both vaccination and screening and more interoperability of data and definition of clinical pathway involving a multidisciplinary medical team for the proper management of all HPV-related diseases.

Key messages:

- Actions are requested at national level to achieve the goals set by the global strategy for cervical cancer elimination with respect to vaccination, screening and treatment.
- Actions identified to foster cervical cancer elimination in Italy includes educational campaigns, reminders and active calls, better interoperability of data and integrated medical team.

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Pharmacist care in hypertension management: systematic review of randomized controlled trials

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Background:

Hypertension management remains a major public health challenge in primary care. Recent hypertension guidelines recommend the involvement of pharmacists for team-based care management of hypertension. Our objective is to systematically review the evidence of the impact of pharmacist care alone, or in collaboration, on BP amongst hypertensive outpatients compared with usual care. One major focus is to assess the heterogeneity in the effects of these interventions to identify which ones work best in a given healthcare setting.

Methods:

In collaboration with a medical librarian, a systematic literature search was conducted for any article published up to 22.10.2021 in MEDLINE, EMBASE, CENTRAL, CINAHL, Web of Science, and Trip databases. Randomized controlled trials assessing the effect of pharmacist interventions on BP among outpatients were included. The outcomes are the change in BP, BP at follow-up, or BP control. Results will be synthesized descriptively and, if appropriate, will be pooled across studies to perform meta-analysis. We published the study protocol in BMJ Open.

Results:

A total of 1768 study records were identified by electronic database searching and loaded to the systematic review management software Covidence. After removal of duplicates, 1744 were independently screened based on title and abstract by two authors

(VG, ST), and 242 full texts were evaluated. A total of 72 studies with 32641 patients are currently included for data extraction. These studies were published between 1973 and 2021 and conducted in different regions (North America: n = 34, Europe: n = 13, other: n = 25). The data extraction and analysis are ongoing. Results will be presented at the congress.

Conclusions:

This systematic review provides updated evidence on the effect of pharmacist intervention on BP management. Heterogeneity in the effect of interventions will be carefully evaluated which will help the implementation of effective interventions in various healthcare settings.

Key messages:

- Recent hypertension guidelines recommend the involvement of pharmacists for team-based care management of hypertension.
- This systematic review provides updated evidence on the effect of pharmacist intervention on blood pressure management.

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The association between body fat percentage and self-reported depression in the United Arab Emirates

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Background:

The United Arab Emirates Healthy Future Study (UAEHFS) is one of the first large prospective cohort studies in the region which examines causes and risk factors for chronic diseases among adult UAE nationals. The aim of this study was to explore the relationship between body fat percentage (BF%) and the eight-item Patient Health Questionnaire (PHQ-8) as a screening instrument for depression among the UAEHFS pilot study participants.

Methods:

We analyzed the UAEHFS pilot data to investigate the association between BF% and PHQ-8 adjusted for age and gender. We used multivariate logistic ordinal regression model. To impute missing values, 100 multiple imputations (MI) were performed using multivariate imputation of classification and regression tree. The statistical analysis was performed using R Statistical Software (version 4.2.0)

Results:

Out of 517 participants, data from 487 (94.2%) were analyzed after excluding participants who didn't fill out the questionnaires. The median age was 30 years (Interquartile Range: 23 - 38). There were more males (67.8%) than females in the UAEHF pilot data. Approximately, 64 (13.1%) of the participant reported depression. The prevalence of obesity was 35.2% in this study population. The estimated odds ratio of BF% from the fitted multivariate logistic ordinal regression model was OR = 1.046 (95% CI: 1.012-1.08), and OR = 1.03 (95% CI: 1.003-1.057) for the omitted data, and MI (sensitivity analysis) respectively.

Conclusions:

High body fat percentage was statistically significantly associated with high risk of reporting depression. Additional research is needed, using the main UAEHFS data (after recruitment is complete), to further investigate the association between body fat percentage and depression.

Key messages:

- Our results can help contribute to the knowledge based on current and potential population mental health in the UAE and Gulf Region.
- The main finding of this study that excess body fat is associated with an increased risk of developing depression and vice versa; thus, this could add to the future direction of mental health research.

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Combined Overview on Diverticular Assessment:a new score for the management of diverticular disease

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Background:

Diverticulosis is increasing worldwide as a public health problem. The Combined Overview on Diverticular Assessment (CODA) score, merging Diverticular Inflammation and Complication Assessment (DICA) and few clinical parameters, may reliably predict the occurrence of acute diverticulitis and surgery due to complications. Thus, the aim of the study is to confirm the value of DICA classification and to develop and validate the CODA endoscopic-clinical score.

Methods:

A number of 2198 patients, at the first diagnosis of diverticulosis/diverticular disease were enrolled in a multicentre, prospective, international cohort study. Participants were scored according to DICA classifications. A 3-year follow-up was performed. Survival methods for censored observation were used to develop and validate the CODA score for predicting diverticulitis and surgery.

Results:

The 3-year cumulative probability of diverticulitis and surgery was $\leq$4%, and $\leq$0.7% in CODA A; <10%and <2.5% in CODA B; >10%and >2.5% in CODA C, respectively. The 3-year cumulative probability of diverticulitis and surgery was of 3.3% (95% CI 2.5% to 4.5%) in DICA 1, 11.6% (95% CI 9.2% to 14.5%) in DICA 2 and 22.0% (95% CI 17.2% to 28.0%) in DICA 3 ($p < 0.001$), and 0.15% (95% CI 0.04% to 0.59%) in DICA 1, 3.0% (95% CI 1.9% to 4.7%) in DICA 2 and 11.0% (95% CI 7.5% to 16.0%) in DICA 3 ($p < 0.001$), respectively. The CODA score showed optimal discrimination capacity in predicting the risk of surgery in the development (cstatistic: 0.829; 95%CI 0.811 to 0.846) and validation cohort (c-statistic: 0.943; 95% CI 0.905 to 0.981).

Conclusions:

DICA endoscopic classification was confirmed to have a significant predictive value in terms of acute diverticulitis occurence/recurrence and risk of surgery. CODA score could provide a new risk stratification tool useful for everyday clinical practice and also with a significant public health impact in terms of treatment effectiveness and decision making.

Key messages:

- DICA endoscopic classification of diverticular disease is a clear predictor of the outcome of diverticulosis/diverticular disease.
- The CODA score, combining DICA and few clinical parameters, may reliably predict the occurence of acute diverticulitis and surgery due to complications.

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Higher VTE in a Roma population attributed to raised genetic risk and gene-environmental interaction

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Background:

Interactions between genetic and environmental risk factors (GxE) contribute to an increased risk of venous thromboembolism (VTE). Understanding how these factors interact provides insight for the early identification of at-risk groups within a population and creates an opportunity to apply appropriate preventive and curative measures.

Objective:

To estimate and compare GxE for VTE risk in the general Hungarian and Roma populations.

Methods:

The study was based on data extracted from a database consisting the results obtained previously in a three pillars complex health survey. DNA was genotyped for rs121909567 (SERPINC1), rs1799963 (F2), rs2036914 (F11), rs2066865 (FGG), rs6025 (F5), and rs8176719 (ABO) polymorphisms. Multivariable linear regression analysis was applied to test the impact of GxE on VTE risk.

Results:

Interestingly, the rs121909567 (SERPINC1) SNP was not present in the general population, however the risk allele frequency was 1.4% among Roma, which might suggest a founder effect in this minority. The risk of VTE was higher among depressive Roma subjects who carried the risk variant of rs2036914 (β = 0.819, p = 0.02); however, not for the general subjects. The joint presence of high level of LDL-C and rs2066865 increased the VTE risk only among Roma (β = 0.389, p = 0.002). A multiplicative interaction between rs8176719 and cancer was identified and higher for the Roma population (β = 0.370, $p < 0.001$). The VTE risk increased in the Roma population (β = 0.280, p = 0.001) but was higher in the general population (β = 0.423, p = 0.001) as a result of the multiplicative interaction between CAD and rs2036914 (F11).

Conclusions:

rs121909567 (SERPINC1) was confirmed as a founder mutation in the Roma population. As a result of higher genetic load and GxE interactions, the minority Roma population is at higher risk of VTE than the general Hungarian population.

Key messages:

- Our study revealed some evidence on the burden of the joint presence of genetic and environmental risk factors on VTE.
- A marginalized and segregated Roma community could need due attention for the prevention and control of CVDs.

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Association of HDL subfractions with cardiovascular risk in Hungarian general and Roma populations

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Background:

High-density lipoprotein (HDL) cholesterol levels are inversely associated with cardiovascular risk (CVR). However, HDL cholesterol is not a homogeneous lipid and can be subdivided into subfractions, which are not uniformly associated with CVR. Among Roma populations, the prevalence of reduced HDL cholesterol levels and, consequently, that of cardiovascular diseases is very high. However, it is not known how this reduction affects the different HDL subfractions and whether changes in their representation are associated with changes in CVR.

Methods:

The study aimed to investigate whether there is a difference in the HDL subfraction profile between the Hungarian general (HG) and Roma populations and to determine the association of the different subfractions with the CVR estimated by the Framingham Risk Score (FRS) and the Systematic COronary Risk Evaluation (SCORE) algorithms. HDL cholesterol was separated using the Lipoprint system, which separates 10 subfractions into three classes: large HDL (HDL-L), medium HDL (HDL-I), and small HDL (HDL-S). Analyses were carried out on samples of 100 control subjects (50 Hungarian general and 50 Roma individuals with normal lipid profiles) and 277 individuals with reduced HDL-C levels.

Results:

Our results show that Roma has reduced levels of the overall HDL subfraction profile, with significant decreases in HDL-6, and -7. Regardless of the estimation method, elevated levels (in mmol/L) of HDL-1 to 3 and HDL-L were significantly associated with reduced risk. A higher representation (in %) of HDL-1 to 3 subfractions have a significant risk-reducing, while HDL-8 to 10 have a risk-increasing effect estimated by FRS.

Conclusions:

The results of our study show that levels of CVR protective HDL subfractions are significantly lower in Roma individuals and their reduced levels are associated with increased CVR, suggesting that the distribution of HDL subfractions contributes to the overall unfavourable CVR profile of Roma.

Key messages:

- Levels of HDL-6 and -7 subfractions were significantly lower in the Roma population than in the Hungarian general one.
- The HDL subfraction profile of the Roma population is associated with a higher cardiovascular risk among them.

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Two-decade trends and factors associated with overweight and obesity among young adults in Nepal

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Background:

Young adults are vulnerable to obesity due to different life stresses and challenges, leading to risks of cardiovascular and metabolic disorders. Studies on the long-term trends of overweight and obesity, especially among young people in Nepal are scanty. The problems among this productive age group should be checked and prevented at the earliest. The study aimed to assess more than two decades of trends from 1996 to 2019 of overweight and obesity among Nepalese young adults (18-29 years) and the socio-demographic factors associated with it.

Methods:

We utilized data from the nationwide Demographic and Health Survey (DHS) and WHO STEPwise approach to surveillance (STEPS) survey. These surveys adopted multistage stratified cluster sampling techniques and used house-to-house structured interviews for data collection. We assessed the prevalence of overweight (BMI 25-29.9 kg/m2) and obesity

(BMI≥30 kg/m2) in 1996, 2001, 2006, 2011, 2012, 2016, and 2019 among 18,714 young adults in total, and evaluated the associated socio-demographic factors from the 2016 survey, using logistic regression model.

Results:

The preliminary study findings showed that from 1996 to 2019, overweight in women increased from 1.5% to 17.0%, and obesity from 0.1% to 3.4%. For men, overweight rose from 14.4% to 16.6%, and obesity from 1.3% to 2.5% from 2012 to 2019. Higher age was associated with higher odds of overweight and obesity compared to a younger age. Men were less likely to have overweight (AOR: 0.68, CI: 0.53-0.88) and obesity (AOR: 0.42, CI: 0.23-0.78) compared to women. Moreover, urban residents had higher odds of having obesity (AOR: 2.35, CI: 1.25-4.44) compared to rural residents.

Conclusions:

Overweight and obesity have rising trends among young adults in Nepal. Older age, female and urban residence were associated with higher odds of overweight and obesity. Therefore, the interventions targeted to the risk groups can help in curbing the increasing obesity trends in Nepal.

Key messages:

- The information on trends and the factors associated with overweight and obesity may help to identify needs and opportunities to halt the rising obesity trend and prevent risk factors.
- The study findings can guide in formulating a national strategy to combat overweight and obesity among Nepalese youths.

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Involving YOUNG people with Type 1 Diabetes in reSearch and the development of healTh cARe activities

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Background:

Typ1 Diabetes (T1D) us a complicated condition that requires constant monitoring and making many decisions. Living with T1D means to check blood sugar levels, inject oneself insulin, and be careful what you eat. In the life of a young adult there are a lot of things going on and youngsters don't want to control themselves all day and night. They want to rebel and feel free.

Methods:

Teenagers living with T1D are actively involved in the research process from data collection to data interpretation. Following the photo voice method the teenagers documented their everyday life with T1D by photographs and recordings (Summer 2021), and discussed their need and resources in group discussions. The visual and audio-data was structured on a muti-touchscreen for which a software was developed during the project. From the inductively formed categories, measures were derived together with the young people and transferred into an action plan, which was presented and discussed with decision-makers.

Results:

During the photo voice process, the teenagers identified 26 categories (i.e. nutrition, coping strategies, autonomy, etc.) that were important for describing their life with diabetes and there categories were categorized into 4 dimension: psycho-social, time, subject and space. The project-team used a systematic action planning process to develop 9 goals for an action plan to improve their life with T1D. They presented their action plan to local political leaders and stakeholders from different setting, such as health care and youth work. The responses during the stakeholder dialog were positively and there was agreement to achieve the defined goals.

Conclusions:

The photo-voice method was helpful in immersing the participants in the lives of young people with type 1 diabetes. Structuring and organizing the visual- and audio-data together was beneficial for the participatory process. Together, an action plan could be developed and discussed with decision makers.

Key messages:

- The photo voive method using digital tools (like smart-phones and multitouchscreen) is a route to empower young people and give them a voice.
- The participating patients are experts for their bodies and the disease and should be perceived and taken seriously as such.

Abstract citation ID: ckac131.139
Trends of hospital admissions and mortality of patients with dementia: descriptive study in Lombardy

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Background:

In 2017 the amount of people globally affected by dementia was estimated about 50 million and is predicted to increase to 132 million by 2050. Coping with dementia is one of the most important challenges of governmental organizations' agenda. The objective of this study is to analyse the hospital admissions trends and monitor the overall mortality in a population of older patients with dementia over the last two decades in northern Italy.

Methods:

This study is based on the healthcare utilization database of the Lombardy region (Italy), considering on hospital discharge records and death registry flows. Primary or secondary diagnosis at admission of dementia was coded according to the ICD9-CM. We carried out descriptive analyses of hospital admissions' data from 1 Jan 1999 to 31 Dec 2020 of older patients aged 65 or more. We then conducted a temporal analysis of mortality rate over the study period.

Results:

A total of 15,683,024 hospital admissions occurred during the study period. Over the last two decades, the prevalence of dementia among patients admitted to acute care hospitals remained around 1.1-1.3%. Considering the total of 183,268 patients with dementia over the study period, the average age at admission increased from 80.2 in 1999 to 83.3 years old in 2020, whereas annual mortality rate increased from about 1,950 to 3,230 deaths per 10,000 person-years. The mortality rate ratio of patients with versus without dementia fluctuated between 1.28 and 1.70.

Conclusions:

Our findings suggest that there is an ever-greater appropriateness of hospitalizations over the last two decades, supported by out-of-hospital care that led patients to hospitalization in increasingly late and serious phases of the disease. The present study has a great future potential as well as limitations, due to the dependence on a correct coding of cases by clinicians according to the ICD9-CM system.

Key messages:

- We observed an increased mortality among older people with dementia admitted to hospital over the last two decades.
- Our descriptive study, based on the Lombardy regional healthcare database, provides evidence of an increasing appropriateness of hospitalizations.

Abstract citation ID: ckac131.140
Trends in incidence of cervical cancer in England, 1985-2019

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Background:
Worldwide, cervical cancer is the 4th most common cancer in women. The highest incidence is observed in Africa (25.6/100,000) and the lowest in North America (6.1/100,000). Over 99% of cases are caused by human papillomavirus (HPV). In the UK, HPV vaccination has been offered to school children aged 12-13 years since 2008. We conducted a retrospective population-based cohort study to examine whether there have been changes in the incidence of cervical cancer in England during the past four decades.
Methods:
Individual level data for women diagnosed with cervical cancer in England during 1985-2019 were obtained from the Office for National Statistics/Public Health England. Average annual incidence rates were calculated by two age categories (0-49, 50+ years) and all ages combined during the seven five-year time periods (1985-89 to 2015-19). The percentage change in incidence was calculated as change in the average annual incidence rate from the first (1985-89) to the last time period (2015-19). Index of Multiple Deprivation (IMD) quintiles (2015-19) were examined to determine the social gradient of the disease.
Results:
During the 35-year study period, a total of 100,303 women with cervical cancer were registered in England. In women aged 0-49 years, the average annual incidence rates declined by about 20% (from 11.6/100,000 in 1985-89 to 9.3/100,000 in 2015-19), and in women aged 50+ years, the rates declined by about 64% (from 26.1/100,000 in 1985-89 to 9.5/100,000 in 2015-19). At all ages combined, the rate declined by 43%. With regard to the social gradient, about half of the cases occurred in women in the most deprived quintiles.
Conclusions:
There has been a steady decline in the incidence of cervical cancer in England over the past four decades. These findings are consistent with reports from other Western countries. The finding of relatively increased risk of cervical cancer among women from most deprived communities needs further investigation.
Key messages:
- Considering that over 99% of cervical cancers are potentially preventable, there is an urgent need to support low- and middle-income countries to roll out HPV vaccination programme.
- The difference in risk of cervical cancer by social gradient highlights the importance of reducing health and social inequalities.

Abstract citation ID: ckac131.141
Breast cancer trends in women in Cyprus: a population-based study between 2004-2017

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Background:
In Cyprus, breast cancer (BC) is the first in incidence and second in mortality cancer in women. A national screening programme (NSP), targeting women 50-69 years, was introduced in 2007. The aim of this study is to provide a better understanding of cancer trends.
Methods:
Data from the national population-based Cyprus Cancer Registry on adult women diagnosed with BC between 2004-2017 with follow-up until 2019 were analysed as follows: Joinpoint regression for age-adjusted (overall and by tumor stage at diagnosis - TSD) and age-specific rates (<50, 50-59, 60-69, 70-79, ≥ 80) incidence and mortality rates; 5-year age-adjusted Net Survival (NS) rates, overall and by TSD. TSD was categorised as localised, regional, and distant.
Results:
Age-adjusted incidence rate increased from 135.3 (2004) to 153.2 (2017) per 100,000, with an annual percentage change (APC) of 1.1% (95%CI: 0.4-1.9). The greatest increase was in the age groups ≥70 years. A positive time trend was found for localized cancers between 2006-2017, while for all other stages nonsignificant trends were detected. Age-adjusted mortality rate increased from 37.0 (2004) to 50.0 (2019) per 100,000 (APC: 2.7%; 95%CI: 1.9-9.4). Significant increases in mortality rates were detected in the age groups ≥70 years. By TSD, increased rates were found at localised and regional stages, however smaller increases were detected since 2007. NS rates for the most recent period (2014-2017) was 93% for localized, 81% for regional, and 32% for distant and did not significantly improve compared to the previous years.
Conclusions:
Trends in BC incidence continues to increase, especially in the older age groups and for early-stage cancers. As expected, since the introduction of the NSP, the incidence of localised cancers increased whilst the incidence of advanced stage cancer decreased, albeit non-significantly. Survival trends did not change but mortality rates for localised and regional cancers increased at a slower pace.
Key messages:
- The introduction of the national screening programme may have played an important role in the increasing BC incidence trends.
- Despite survival rates not improving since the introduction of the national screening programme, mortality rates for early-stage cancers show a less steep increase.

Abstract citation ID: ckac131.142
Prevalence of chronic diseases among United Arab Emirates University students: cross-sectional study

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Background:
Chronic disease burden is increasing globally. In Arab Gulf Countries, the burden has increased exponentially over the past five decades due to rapid economic growth and urbanization. In the United Arab Emirates (UAE), chronic diseases are the leading cause of mortality and economic burden, hence, there is need to explore their patterns for targeted interventions. Studies among university students in Europe and the United States show chronic diseases prevalence ranging from 16.5% to 30.0%, respectively. To our knowledge, this is the first study in the Gulf region to assess multiple

chronic diseases among university students. Our study describes the prevalence and patterns of multiple chronic diseases among UAE University (UAEU) students.

Methods:

We conducted a descriptive cross-sectional study among UAEU students ≥18years from July to October 2021. Online questionnaire was used to collect data. Self-reported chronic diseases were described and compared between male and female students using chi-square and t tests. Other students' characteristics were also explored. All analyses were conducted using STATA statistical software.

Results:

902 students participated in the study with mean age of 21.9±5.2yrs. 79.8% were females. 80.7% were undergraduates. The prevalence of self-reported chronic diseases was 23.0%. Obesity, Diabetes and Asthma/Allergies were the commonest (12.5%, 4.2% & 3.2%, respectively). 34.8% of the students were either overweight or obese. Overall chronic disease prevalence was similar between males and females [27.5% vs 21.8%, 0.104] though it was significantly higher among postgraduates, students who are older, married and have family history of diabetes. 4.7% of the students reported 2 or more chronic diseases.

Conclusions:

Our study showed that more than 1 in 5 of the students reported at least one chronic disease. This shows the need for proactive chronic disease screening and prevention programs to meet the health needs of the students.

Key messages:

- Prevalence of chronic diseases (Diabetes, Prediabetes, Obesity, Hypertension, Asthma/Allergies, Lipid disorders, Thyroid disorders, GI disorders, and CVDs) was high among the university students.
- Universities should commit to researching students' health and creating targeted health policies and interventions, as chronic diseases have direct and indirect negative impact on students' education.

Abstract citation ID: ckac131.143
The impact of smoking on immunological response to SARS-COV 2: a nationwide seroepidemiological study

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Background:

Smoking influences cellular and humoral immune responses and affects the immune system by increasing inflammation and decreasing activity against infections. The current study investigates the association between smoking and immunological response to SARS-CoV-2 in the Armenian population.

Methods:

We performed a nationwide cross-sectional seroepidemiological study among the adult population (≥18 years old) in Armenia. We used a multi-stage cluster random sampling to recruit participants from the capital city and all regions of Armenia. We invited selected participants to primary healthcare facilities to provide blood samples for antibody testing followed by a phone survey on demographic characteristics, smoking status, and other variables. Logistic regression analysis was used to test the relationship between smoking and having SARS-CoV-2 antibodies adjusted for other covariates.

Results:

3483 people participated in the study (71% women). The total sample included 16.8% current smokers (n = 571), 8.6% past smokers (n = 294) and 76.4% never smokers (n = 2538). The prevalence of SARS CoV-2 antibodies among current smokers was statistically significantly lower as compared with never smokers (46.9% vs 73.4%, p-value<0.001). In the multivariable logistic regression model, the odds of having SARS CoV-2 antibodies among the current smokers was 70% lower (OR 0.30, 95%CI: 0.22; 0.40) compared to never smokers, when adjusted for demographic factors and the time of PCR diagnosis of COVID-19. No statistically significant difference was found between past smokers and having SARS CoV-2 antibodies.

Conclusions:

In addition to being a risk factor for various chronic diseases, smoking weakens immune response to infectious diseases, including COVID-19, worsening the outcomes. The significantly lower level of antibody prevalence among smokers with previous PCR confirmed COVID 19 implies a poorer immune response to the infection and not a lower risk of getting the infection.

Key messages:

- Smoking weakens immune response and contributes to a higher burden of infectious diseases, such as COVID-19.
- Lower level of antibody prevalence among smokers indicates a poorer immune response to the infection rather than a lower risk of getting the infection.

Abstract citation ID: ckac131.144
Treatment burden and associated factors: a population-based survey in Central Denmark Region 2017

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Background:

Exploring treatment burden at a population level can provide evidence of the types of patients who need special attention and support. We aimed to determine factors associated with high perceived treatment burden in a population-based survey of adults living in the Central Denmark Region (23% of the Danish population).

Methods:

The Danish Multimorbidity Treatment Burden Questionnaire (MTBQ) was included in the 2017 Danish population health survey. 28,627 individuals aged 25 years or over participated (64% response rate). Individuals who reported having one or more medical conditions or attending regular health check-ups were asked to complete the MTBQ. A global MTBQ score was calculated (range 0-100) and both the continuous scores and a four-category grouping of the scores into no, low, medium and high burden were used to statistically assess the association between treatment burden and sociodemographic and health-related factors.

Results:

13,407 individuals completed the Danish MTBQ (mean age 59 years). Treatment burden was negatively associated with self-related health (rs = -0.45, $P < 0.0001$), health-related quality of life (rs = -0.46/-0.51, $P < 0.0001$) and positively associated with the number of long-term conditions (rs = 0.26, $P < 0.0001$) and perceived stress (rs = 0.44, $P < 0.0001$). Higher treatment burden was associated with young age, male sex, high educational level, unemployment, not living with a spouse/cohabitant, living with child(ren) and specific long-term conditions, including heart disease, stroke, diabetes and mental illness.

Conclusions:

This is the first known population-based study of treatment burden. The findings provide important evidence to policy makers and clinicians about sociodemographic groups at risk of higher treatment burden. We recommend that patient-perceived treatment burden is included when evaluating interventions targeting patients with long-term conditions and multimorbidity and health-care system reorganisations.

Key messages:

- Treatment burden is associated with poor health and health-related quality of life and, among others, young age, male sex, unemployment, not living with a spouse, and specific long-term conditions.
- We recommend that patient-perceived treatment burden is included when evaluating interventions targeting patients with long-term conditions and multimorbidity and health-care system reorganisations.

Abstract citation ID: ckac131.145
Comparing health insurance and survey data in estimating prevalence of chronic diseases

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Background:

Population prevalence of chronic conditions can be estimated from national health surveys and from administrative data sources such as insurance records. This study evaluated the agreement between the Belgian Health Interview Survey (BHIS) and the Belgian compulsory health insurance data (BCHI) in ascertaining chronic hypertension, hypercholesterolemia and diabetes in Belgium.

Methods:

The most recent cycle of BHIS (2018) provided the self-reported prevalence of diabetes, hypertension, and hypercholesterolemia among a representative sample of Belgian adults. For BCHI, the chronic conditions were attributed for every individual in the BHIS reviewing the medication prescription records identified using the ATC/DDD system. These two data sources were linked through unique identifiers by STATBEL. Disease prevalence, measures of agreement, and measures of concordance were estimated. Logistic regression was performed to determine the factors affecting agreement between BHIS and BCHI's disease classifications.

Results:

Data linkage was done for 9,753 individuals aged 15 years and older. From the sample, BHIS and BCHI respectively identified 5.9% and 5.6% diabetes cases, 18% and 24% of hypertension cases, and 18% and 16% of hypercholesterolemia cases. The kappa coefficient between BCHI and self-reported diabetes, hypertension, and hypercholesterolemia was 0.79, 0.59, and 0.49, respectively. Gender, age, and subjective health significantly affected the agreement in chronic condition classification between BHIS and BCHI.

Conclusions:

Data on reimbursed drugs is a potential alternative method in the surveillance of chronic diabetes. This procedure could be used in estimating disease prevalence but further validation is needed to evaluate its applicability and bias in other chronic conditions.

Key messages:

- BCHI is a possible alternative data source for the surveillance of diabetes in the population.
- BCHI overestimated hypertension and underestimated hypercholesterolemia prevalence.

Abstract citation ID: ckac131.146
The economic burden of Diabetes Mellitus in Belgium from 2013 to 2017

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Background:

Considering the growing prevalence of chronic disease and diabetes mellitus (DM) in Belgium, alongside population aging, insight into the economic burden of DM is essential for decision makers. To the best of our knowledge, there is no research on the subject in Belgium. Thus, our aim was to estimate the direct and indirect costs associated to DM in Belgium between 2013 and 2017.

Methods:

On a first phase, we performed a retrospective observational study, calculating the direct (i.e., ambulatory care, hospitalizations and medications) and indirect (work absenteeism, by multiplying mean daily wage and days absent from work) costs in the Belgian population with DM in 2013-2017. Data was retrieved from the Belgian Intermutualistic Agency (which manages compulsory health insurance) database and the Belgian Health Interview Survey database, namely DM prevalence, healthcare costs, days absent from work and sociodemographic and health factors. Subsequently, negative binomial regression models were used to assess the association of mean yearly costs to DM and adjustments for age, education level, physical activity, sugared drink consumption and body-mass index were included. Mean incremental costs were estimated through recycled predictions, considering the observed DM prevalence in Belgium in the study period and a counterfactual scenario with null prevalence.

Results:

We found a direct mean yearly incremental cost of €2 477 per DM patient, in Belgium, associated with age, low educational level and low physical activity. In the total Belgian population, the total yearly incremental healthcare cost of DM was €1.5 billion. Indirect yearly incremental cost of DM resulted to be not significantly different from the population without DM.

Conclusions:

DM has a major economic burden in Belgium, one that is expected to continue to rise in the future, alongside population aging. These results are essential for health planning and resource allocation.

Key messages:

- DM has a major economic burden in Belgium, especially when it comes to direct health expenditures with ambulatory care, hospitalizations and medications.
- Considering the growing prevalence of DM and population aging, these results are essential for health planning and resource allocation.

Abstract citation ID: ckac131.147
Cervical cancer rates in relation to the Roma population distribution in Slovakia in 2013 – 2020

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Background:

Globally, more than 300 000 women die due to cervical cancer (CC) each year despite its high preventability and treatability in its early stages. This study aimed to analyse CC rates at the regional level in Slovakia from 2013 to 2020 in relation to the distribution of the Roma population.

Methods:

An ecological study was conducted using data obtained from the relevant national and regional authorities in Slovakia. Mortality, incidence, precancerous lesions incidence and the number of colposcopy and oncocytology examinations per 100 000 females 15 years and older were calculated. Linear regression models were performed in the R Project to assess associations between the rates and the estimated percentage of the Roma population at the regional level after adjusting for the unemployment, at-risk-of-poverty rate, and average disposable household income per month.

Results:

CC mortality in Slovakia declined from 10.0 in 2013 to 7.1/100 000 in 2020 ($p < 0.05$). Average mortality ranged from 5.9 in the Presov region to 10.7 in Kosice. Incidence varied from 108 in 2019 to 160/100 000 in 2017, with the highest average rates in Bratislava and the lowest in Banska Bystrica (194 and 89/100 000). Precancerous lesions incidence rates significantly differed between the regions (400 in Kosice, 984/100 000 in Trnava). The average colposcopy and oncocytology examinations rates were found to be lower in Presov (177 and 226) and Kosice (166 and 223) compared to the other regions (318 and 283/100 000 on average). After adjusting for the selected factors, CC mortality ($p < 0.05$), incidence ($p < 0.05$) and both preventive examination rates ($p < 0.01$) were statistically significantly associated with the percentage of the Roma population.

Conclusions:

Substantial differences in CC rates and preventive examinations were identified at the regional level in Slovakia. To eliminate CC in line with the WHO Global Strategy, suitable approaches to reaching those at the highest risk should be implemented.

Key messages:

- Substantial regional differences in preventive examination and cervical cancer incidence and mortality rates were identified in Slovakia in relation to the distribution of the Roma population.
- Strategies to eliminate cervical cancer should be adjusted to the regional differences and seek alternative approaches for implementing screening in hard-to-reach communities at the highest risk.

Abstract citation ID: ckac131.148
Impact of a Cancer Diagnosis on Quality of Life among Cancer Survivors and their Partners

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Background:

Cancer survivors (CS) often experience physical, psychological and socioeconomic problems, which may have a negative effect on their quality of life (QoL). Additionally, cancer may also have a significant impact on patientś families, particularly their partners (PCS), who are typically the main informal caregiver.

Objective:

To estimate the association between a cancer diagnosis and a poor QoL among both members of the couples, according to sociodemographic, health-related and cancer characteristics.

Methods:

This cross-sectional study was based on data from the Sixth Wave of the Survey of Health, Ageing and Retirement in Europe - SHARE, conducted in 2015, in 18 countries. All cancer survivors (n = 2,040) who lived with a partner in the same household, as well as PCS (n = 2,040) were selected, and were country-, sex-, age- and education-matched (1:1) to non-cancer individuals (NC) and their partners (PNC), respectively. QoL was assessed using the Control, Autonomy, Self-Realization and Pleasure scale (CASP-12). The association between a cancer diagnosis and a poor QoL among both members of the couple was estimated through odds ratios (ORs) and 95% confidence intervals (95%CIs).

Results:

In nearly one-fifth of couples, both members reported a poor QoL (17.0%); this outcome was more frequently observed among CS than NC (OR = 1.31, 95%CI: 1.10-1.56). A tendency towards stronger odds of poor QoL among both couples' members was observed among CS who lived in urban areas (OR = 1.91, 95%CI: 1.30-2.80), with no multimorbidity (OR = 2.07, 95%CI: 1.14-3.76), as well as among those diagnosed <5 years (OR = 1.65, 95%CI: 1.21-2.24) and with cancers with a usually poor prognosis (OR = 1.82, 95%CI: 1.04-3.18), when compared with respective NC.

Conclusions:

A poor QoL among both couples' members was more frequent among couples dealing with cancer than those without cancer, which highlights the importance of closely monitoring CS and their partners, throughout the cancer survivorship course.

Key messages:

- Couples dealing with cancer more frequently reported a worse quality of life among both members, when compared with couples without cancer.
- The findings of this study highlights the importance of family-focused care from an early phase after the cancer diagnosis and throughout the cancer survivorship trajectory.

DF Climate change and health / Environment / Urban health

Abstract citation ID: ckac131.149
HBM4EU feasibility studies: Lessons learned in combining health and human biomonitoring studies

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Background:

The European Human Biomonitoring Initiative (HBM4EU) is a program protecting humans from the health effects of chemicals. The goal of HBM4EU is to make use of human biomonitoring (HBM) to assess human exposure to chemicals in Europe to better understand the associated health effects for citizens and to improve chemical risk assessment. Harmonisation and sustainable implementation of the HBM programme across Europe are important aims. In parallel to HBM studies, health examination surveys (HESs), dietary surveys, and disease specific health surveys are conducted in many European countries. In HESs, information collected by questionnaire(s) is supplemented with physical examinations and analysis of biomarkers from biological samples. HBM and

HES use similar sample and data collection methods and infrastructures hence combining the two is being explored.

Methods:

Within HBM4EU, three feasibility studies (Finland, Germany, and UK/England) were conducted to evaluate opportunities and obstacles in combining HBM and health studies. We describe the contents and differences of these feasibility studies, and discuss the matters of shared benefits, obstacles, and lessons learned.

Results:

Benefits of combining HBM and HESs include the use of shared infrastructures, participants receiving additional health information from HES, and higher participation rates. Obstacles can be encountered when obtaining ethical approval and during time-consuming and complicated preparatory phases. Recruitment of participants and low participation rates are common concerns and designing participant-friendly questionnaires is important. Unexpected events such as the COVID-19 pandemic can cause challenges to studies. Furthermore, experiences from several countries demonstrated that long-term funding for combined studies can be difficult to obtain.

Conclusions:

In the future, incorporating HBM modules into HESs can provide a feasible and cost-effective method to conduct HBM studies.

Key messages:

- The European Human Biomonitoring Initiative (HBM4EU) protects humans from the health effects of chemicals in Europe. HBM4EU uses human biomonitoring (HBM) to evaluate human exposure to chemicals.
- In addition to HBM studies, health examination surveys (HESs) are conducted. In the future, incorporating HBM modules into HESs can provide a feasible and cost-effective method to conduct HBM studies.

Abstract citation ID: ckac131.150
Building capacity to use legal tools to address climate change through a public health lens

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Background:

EPH Conferences have an increased focus on the health impacts of climate change. However, until 2021 EPHC abstracts did not address opportunities to challenge government inaction in national and international courts. ASPHER's European List of Core Competences for the Public Health Professional (2018) only mentions NCDs and data protection law. Yet litigation to address environmental degradation and climate change is well-developed in Europe and beyond. International environmental law was presciently framed as part of global health law by Joaquin Cayon in Laaser U. and Beluli F. A Global Public Health Curriculum. South Eastern European Journal of Public Health (2016).

Objectives:

1. Clarify the role of litigation in achieving environmental and climate goals
2. Highlight the role of public health practitioners (PHP) in documenting evidence of harms
3. Propose ways to build PHP capacity to use litigation to address related public health challenges

Results:

In 2021 EUPHA-LAW, EUPHA-ENV, the Faculty of Public Health (FPH) (UK) and partners co-hosted a multi-stakeholder, interdisciplinary, open-access webinar on public health, climate change and litigation with experts from WHO, Greenpeace, ClientEarth, Lancet Countdown and the Groningen Centre for Health Law (GCHL). A related workshop was held at the 14th EPHC. In March 2022, EUPHA-LAW, FPH, GCHL and the University of Liverpool hosted a webinar on climate action in the European Court of Human Rights. [Patterson et al, Post COP26: legal action now part of public health's environment and climate change toolbox, EJPH 31/5/2022.] EUPHA-LAW is preparing a toolkit for public health practitioners and a conference on public health litigation in 2023.

Conclusions:

There is keen interest in the public health community to better understand how litigation can address public health challenges including climate change and environmental degradation. Capacity building is needed.

Key messages:

- Climate litigation supported by interdisciplinary collaboration can strengthen government resolve and accountability for action to address environmental and climate commitments.
- Litigation can advance public health objectives even without a favourable court decision. Its value also includes the publicity and awareness generated and engagement of multiple stakeholders.

Abstract citation ID: ckac131.151
Mitigating effects of desert dust storms in asthmatic children: health visitors' perceptions, Cyprus

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Background:

Countries of the Mediterranean basin such as Cyprus are experiencing frequent desert dust storm (DDS) events that adversely impact children with asthma. As school health visitors (SHVs) have important role in asthma management, we examined SHVs practices and perceptions on asthma management and their level of engagement in school-based interventions to mitigate DDS- health effects.

Methods:

A descriptive cross-sectional survey was conducted among SHVs across state schools in Cyprus via an anonymous questionnaire, which rated the importance of asthma management measures (10-point scale), current implementation of these practices (1 = never - 5 = always), and regulatory authorities' preparedness to respond to DDS events (1-5 Likert scale).

Results:

Responses from 78 of the 93 SHVs (84%), with an average work experience of 13.5 years (SD 7.3), revealed discordance between high perception of the importance of asthma management measures and their actual implementation, with poor scoring especially in assessment of asthma control (M = 2.4, SD = 1.5), tracking school absenteeism (M = 2.1, SD = 1.0) and monitoring of asthma triggers (M = 1.9, SD = 1.4). Any DDS-related measures (e.g. air quality real-time monitoring, warnings, recommendations, awareness campaigns, etc) were implemented very infrequently. Ratings of authorities' preparedness were moderate (<3.5), and only slightly higher in the health versus the educational or other government services. SHVs who recognized the severity of DDS and potential impact on asthmatic children were more likely to support school-based interventions for DDS events (OR = 7.3, 95% CI: 2.1-25.3).

Conclusions:

Asthma management practices in school settings in Cyprus are suboptimal and responses during DDS are fragmented. While SHV's awareness and support for interventions is high, this is not reflected in current practices. A concerted effort is needed for adoption of policies and implementation of action plans for DDS within school settings.

Key messages:

- Suboptimal asthma management policies and practices were found to be implemented in schools in Cyprus, a country highly exposed to dust events.
- School health visitors recognize the health impact of desert dust on asthmatic children and support the plan for dust-mitigation programmes in schools, despite authorities' low preparedness.

Abstract citation ID: ckac131.152
Microplastics inhalation and their effects on human health: a systematic review

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Background:

Microplastics (MPs) are defined as small particles less than 5 mm in size occuring in the environment as a consequence of plastic pollution. MPs are classified into primary MPs, which are created for industrial uses, and secondary MPs, that derive from the degradation of larger plastic items. With the global increase in plastic production, MPs have become widely distributed in the natural ecosystems and have been charged with causing several detrimental effects on both the environment and on human health. Moreover, plastics often include additives to improve their properties, which may produce additional toxic substances. Humans can be exposed to MPs through different pathways, including ingestion, inhalation and dermal contact. The aim of this systematic review is to synthesize whether inhaled microplastics and plastic additives have negative effects on human health.

Methods:

MEDLINE, Scopus and Web of Science were searched starting from December 2021. The systematic review was conducted according to the PRISMA guidelines. Eligible studies were primary studies which reported the effects of inhaled MPs on the respiratory system. Appropriate quality assessment tools were used according to the study design of primary studies.

Results:

38 studies met the inclusion criteria. Most of the studies were conducted in vitro, while there was a scarcity of papers that investigated the effects of MPs in population cohorts. Preliminary results show that MPs can induce pro-inflammatory or pro-carcinogenic effects by different mechanisms, depending on particles' concentration, size, type and surface charge.

Conclusions:

Literature has underlined several negative health concerns resulting from the absorption of microplastics and plastic additives. By gathering this information, this systematic review sheds light on the possible threats of MPs inhalation to human health and discusses whether an implementation of new public health policies for the foreseeable future is needed.

Key messages:

- Inhalation is a major route of exposure to microplastics.
- Inhaled microplastics or plastic additives may have detrimental effects on human health, promoting respiratory diseases or carcinogenic processes.

Abstract citation ID: ckac131.153
Increasing urban health awareness using an interactive approach: evidence from a school-based study

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Issue:

Urbanization is a cause of climate change, as cities are where these changes are most visible. Climate change also leads to significant inequalities and health issues in urban settings. In this context, urban health promotion is mandatory to increase adaptive capacity. Since the late 1980s the World Health Organization (WHO) has emphasized schools' role in promoting health, as they can play a crucial role in increasing health awareness to future urban inhabitants.

Description:

The objective of this pre/post-interventional study is to measure the awareness of urban health and green spaces among high school students and to rise it through an educational intervention. Four interactive sessions were delivered to 319 students from 13 to 18 years old in a high school in Rome, Italy during spring 2022. Data was gathered anonymously and analysed using descriptive and inferential statistics.

Results:

A total of 192 (60%) students successfully completed the pre/post-intervention surveys. An increase in students' knowledge of urban health and urban green areas was observed. Before the intervention 11.8% of participants were aware of urban health, whereas after the intervention 87.5% were aware. A rise across different areas appeared to be related to how many times the teachers repeated that concept during the intervention. For topics discussed in more than one session, the increase in correct answers averaged 13.9%. Two different trends emerged from the data analysis: one whose post-intervention test improved on most of questions and one whose post-intervention test remained unchanged.

Lessons:

The results of the present study suggest that school-based interventions using interactive approaches on climate change and urban health are effective for increasing the knowledge level of scholars on these topics, and can be a useful way to promote health in an urban setting. This type of approach maintains high levels of concentration and interest in most students.

Key messages:

- Urban health training activities in schools are needed to empower youth who live in urban settings.
- Interactive sessions keep student concentration high and improve their participation.

Abstract citation ID: ckac131.154
Temperature related infectious disease mortality among infants and seasonality in Sweden, 1868-1892

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Background:

Climate conditions, such as ambient temperature, are crucial to infants' vulnerability to infectious diseases. However, little is known about how climate conditions, such as temperature and seasonality, affects infectious disease mortality among infants in high mortality settings. The aim was to investigate the association between ambient temperature, seasonality and cause-specific infant mortality.

Methods:

We applied a retrospective study design using parish register data from Sweden covering the period 1868-1892 in combination with daily temperature data. Population data and temperature data were combined in a time-series dataset, accounting the number of deaths per day by age group. Mortality due to water- and foodborn diseases, airborne infectious diseases, and other causes were modelled as a function of temperature exposure in the previous 14 days using distributed lagged non-linear models.

Results:

We found that airborne infectious disease mortality was not related to cold temperatures but rather to seasonality. At the 1st of february IIR was 2.98 (CI 1.30 - 6.85). The summer mortality peak due to water- and foodborne infections were associated with high temperatures and not with seasonality. At + 20 °C (the 99th percentile temperature exposure) IRR was 5.52 (CI 3.13-9.74).

Conclusions:

The increased vulnerability to infectious diseases of infants at high temperatures is a significant future risk, given the expected global warming in the coming decades.

Key messages:

- Airborne infectious disease mortality was related to seasonality while water- and foodborne infectious diseases were related to high temperatures.
- The increased vulnerability to infectious diseases of infants at high temperatures is a significant future risk, given the expected global warming in the coming decades.

Abstract citation ID: ckac131.155
Education in Urban Health: the experience of Public Health residents in an Italian high school

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Background:

Urban health has become an increasingly important aspect of Public Health curriculum for residents as people living in urban areas will substantially rise in the next 30 years so will their impact on health. Residents are both contributors and partners in creating sustainable solutions for their growing cities and can be involved in this aim as individual learners and also educators for younger students.

Objectives:

A group of 15 Italian residents in Public Health were involved in creating and delivering 4 lessons on urban health to 319 students at Nomentano High School in Rome during spring 2022. After the 4th lesson, semi-structured interviews were conducted with the residents in order to assess perceptions, acceptance, barriers and facilitators of the experience. Data was gathered anonymously and analyzed using standard qualitative methods.

Results:

All the residents answered the interview. Almost all reported the experience as highly impactful for training, team building, and increase in accountability. Most of residents also felt more confident on the topic of urban health and more involved in concrete actions for tackling pollution and climate change after delivering the lessons. Most perceived barriers mentioned were difficulties interacting with students, especially during the first two lessons, and their compliance. The opportunity to give lessons in the high school setting facilitated direct contact with students and better feedback was received.

Conclusions:

Giving responsibility and leadership roles to Public Health residents and involving them in the education of younger students could improve their self-confidence and feelings of value and helpfulness, especially for urban health and climate change issues sensed by youth. Further experiences in other settings, specialties, and countries could be valuable to notice differences related to age groups and personal involvement.

Key messages:

- The involvement of Public Health residents in education on urban health is highly impactful and well perceived for their personal growth.
- This kind of experience is applicable to other relevant topics in Public Health.

Abstract citation ID: ckac131.156
Introduction to the AQ-WATCH Project and the AQ-WATCH Toolkit to fight air pollution

Bastien Caillard

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Background:

WHO states that 9 out of 10 persons in the world do not breath clean air and 8 million people die prematurely from air pollution each year. The problem is well understood, but actions to mitigate it are lacking. The purpose of the EU-funded AQ-WATCH Project is precisely to develop effective tools based on the most advanced science technologies to help decision-makers in government and the private sector to address air pollution issues in regions of the world where they operate.

Objectives:

AQ-WATCH aims to develops a supply chain to generate innovative downstream products for improving air quality forecasts and attribution based on existing space/in-situ observations to improve public health and to optimize renewable energy in regions of the world. The project consortium includes research and business-oriented partners, who brings together the required expertise to define the optimal functionalities of these products to bring them to the market.

Results:

The AQ-WATCH products are organized into 5 modules: (1) Air quality atlas, (2) Air quality attribution & mitigation, (3) Dust and fire forecast, (4) Fracking analysis, and (5) Air quality forecast. They are developed for 3 target regions (Beijing, Colorado and Santiago de Chile) and are integrated into a unified user-interface, the AQ-WATCH Toolkit. Product developers and prime users in the target regions are constantly interacting, and the user feedback is collected, analyzed and included during the product development.

Conclusions:

Collaborative work done in AQ-WATCH shows strategic interaction between our research and business-oriented partners. Contributions from local parties are proven to be valuable for regional adaption of the products. A throughout dissemination including regional workshops is essential to ensure proper knowledge uptake by the target audience. Constant exchange with the private sector is required for a smooth transfer from scientific results to commercialized marketable products.

Key messages:

- The AQ-WATCH Project follows EU's initiative to utilize its space observations with added values to develop easily-accessible tools to fight air pollution applicable to regions of the world.
- The AQ-WATCH Toolkit is developed with iterative feedback exchanges between product developers and local users to address air pollution issues, and will be eventually exploited to the market.

Abstract citation ID: ckac131.157
Temperature and cardiovascular diseases: exploring associations in India and public health insights

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Background:

Climate change has far-reaching consequences on human health globally. Cardiovascular diseases (CVDs), the global leading cause of death, are climate sensitive, mainly to temperature. The temperature-CVD association is region-specific, with several studies from Europe but relatively few from low-and-middle-income countries (LMICs).

Methods:

We used a binomial regression model to analyze the association between apparent temperature and in-hospital CVD mortality in Puducherry city. A distributed lag non-linear model was used to capture the delayed and non-linear trends over a 21 day lag period to estimate the burden of in-hospital CVD mortalities attributable to non-optimal temperature between 2010 and 2020.

Results:

Tapp in Puducherry ranges from 23°C to 40°C. We found that the optimal temperature range for Puducherry is between 33°C and 35°C with respect to CVDs. Temperatures both above and below the optimal temperature range were associated with an increased risk of overall in-hospital CVD mortalities, resulting in a U-shaped association curve. Up to 20% of the CVD deaths could be attributable to non-optimal temperatures, with a slightly higher burden attributable to cold (11.2%) than heat (9.12%). We also found that males above 60 years of age were more vulnerable to colder temperatures while females above 60 years were more vulnerable to the heat. Mortality with cerebrovascular accidents was associated more with heat compared to cold, and ischemic heart diseases did not seem to be affected by temperature.

Conclusions:

Both cold and heat is associated with CVD mortality in Puducherry. The comparison of the results of this exploratory Indian study with those from European contexts show that the associations differ based on several factors. There are also age, gender and CVD type differences in Tapp attributable CVD mortalities. More region specific studies on Tapp- CVD mortality are needed from LMICs to better understand this association and build capacity.

Key messages:

- The regional burden of cold attributable CVD deaths needs to be considered along with heat. Age and gender specific differences in the association need to be further studied globally.
- The development regional and contextual climate-health action plans, as seen in some European countries, could be enhanced by such studies and reduce the burden of temperature attributable CVD deaths.

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Short-term exposure to PM2.5 and hospital admissions for respiratory causes in the Czech Republic

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Background and Aims:

The Regions Ostrava and Karvina are the most polluted areas in the Czech Republic. The aim of this study was the analysis of effect of ambient fine particles (PM2.5) on acute hospital admissions for respiratory causes.

Methods:

In the period 2013-2019, a total of 20,490 cases of acute hospitalization from respiratory causes (J00-99 according to ICD-10) was registered. The daily PM2.5 concentrations were measured at 5 stations. The analyses were performed in two ways: i) including extreme values (max. 224 μg.m-3) and ii) for PM2.5<60 μg.m-3 (5% of the highest values were cut off). The generalized additive model (GAM) for Poisson distribution was used for the analyses; the „thin plate regression spline" was applied to smooth the pressure, relative humidity and a temperature. The model was adjusted for meteorological conditions, incidence of acute respiratory infections, days off, the order of a day in a week and the area. The calculation was done for lag0 to lag3 days. The analyses were completed using the SW Stata v.14 and SW R v.3.6.1 with the use of mgcv package v.1.8-28.

Results:

The median age of patients was 57 years (IQR 4-75 years), 56% were men. The annual PM2.5 values ranged from 18.5 to 31.0 μg.m-3. Based on the fully adjusted model, a10 μg.m-3 increase in PM2.5 was associated with an increase in hospital admission of 1.0% (95% CI: 0.2-1.8%) for lag0 and lag2, 1.2% (95% CI: 0.5-1.9%) for lag3. The percentage changes for models with values of PM2.5<60 μg.m-3 were higher - 1.8% (95% CI: 0.3-3.2%) for lag0 and 3.3% (95% CI: 2.0-4.7%) for lag1-lag3.

Conclusions:

The analyses confirmed the effect of ambient fine particulates (PM2.5) on acute hospital admissions for respiratory causes in the regions Ostrava and Karvina.

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Key messages:

- A positive association was confirmed between short-term concentrations of PM2.5 and acute hospital admissions for respiratory causes (lag0-lag3).

- No statistically significant difference was found between the identified C-R functions and C-R functions published by the WHO for the relationship between respiratory hospitalizations and PM2.5.

Abstract citation ID: ckac131.159
Impact of seasonality on physical activity: a systematic review

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Background:
The purpose of this study was to collect and analyze the available scientific evidence of the impact of seasonality on physical activity (PA). PA refers to walking, biking, sports and/or active recreation.

Methods:
The systematic search was performed in the following databases: PubMed, PEDro, Cochrane and Embase. All publications from January 2015 to September 2020 assessing seasonal variations on physical activity development in adults were selected.

Results:
A total of 1159 articles were identified, of which 26 fulfilled the selection criteria involving 9300 participants from 18 different countries. The results obtained suggest that seasonality affects PA independently of the countries, pathologies of the participants and the tool to collect PA information.

Conclusions:
PA level varies across the seasons, with higher PA level in summer compared with other seasons, especially in winter. Sedentary behavior follows the opposite trend. Impact of seasonality variations should be considered in clinical research involving PA as a primary outcome as well as in interventions on PA promotion.

Key messages:

- Impact of seasonality variations should be considered in clinical research involving PA as a primary outcome as well as in interventions on PA promotion.
- Seasonality affects PA independently of the countries, pathologies of the participants and the tool used to collect PA with higher PA level in summer compared with other seasons, especially in winter.

Abstract citation ID: ckac131.160
Coping strategies and barriers to coping in climate-vulnerable Bangladesh: a qualitative study

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With the mental wellbeing of billions of people at risk due to climate change, more research is required to better understand mental health and psychological implications of climate vulnerability. This research contributes to understanding how people in climate vulnerable populations psychologically cope with stress with crucial implications for adaptation efforts. We conducted n = 60 qualitative in-depth interviews with men and women in Bhola, Bangladesh to elicit the lived experiences of a climate vulnerable population. We analysed data following the tenets of Grounded Theory. Through our inductive analysis, we found coping strategies where participants highlighted what they did when encountering stress, such as ‘Resignation’ or ‘Help Seeking’. Barriers to coping were, among others, limited ‘Efficacy’, ‘Time’ or ‘Stigma’. We categorized coping strategies with barriers as high-barrier coping strategies and, those without reported barriers, as low-barrier coping strategies. High-barriers restricted participants - especially women - in their coping efforts and led them to using low-barrier coping strategies. Some low-barrier coping strategies can be interpreted as maladaptive if used frequently, as they are unhealthy and draw upon resources needed to adapt for the future. Maladaptive coping strategies can thus impede long-term adaptation by reducing motivation and the ability and willingness to act. To enable adaptive coping, we recommend lifting the barriers to coping through community-led interventions where community workers create platforms for sharing problems and knowledge, such as group support meetings. Sharing and discussing could strengthen efficacy and open new opportunities for functional, adaptive coping. As the negative impacts of climate change will be felt globally with more intensity and frequency, enabling adaptive coping and removing barriers to coping in frontline communities will be essential to supporting physical and mental wellbeing.

Key messages:

- Barriers to adaptive coping strategies can lead people to using maladaptive low-barrier coping strategies, which draw upon resources needed for long-term adaptation.
- Enabling adaptive coping by lifting barriers to coping in climate vulnerable populations is crucial to strengthen adaptation efforts.

Abstract citation ID: ckac131.161
Safer school with near-UVA technology: novel applications for Environmental Hygiene

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Background:
Schools are crowded places where outbreaks can occur. Systems capable of disinfecting air and surfaces could reduce the risk of transmission of infectious diseases.

Aim:
to evaluate the effectiveness of a near-UVA (nUVA) LED ceiling lamp in improving environmental hygiene.

Methods:
This cross-sectional study was conducted for 2 weeks between November and December 2020 in a kindergarten in Siena, Italy. Four ceiling lamps with LED wavelength of 405 nm were mounted on the room ceiling. The distance of the lamps from the floor was 2.70 m and 2.0 m from the desks. We preliminary selected 12 points in different sites of the room by measuring their irradiance values. We randomly sampled between 8 and 12 pairs of Petri Dishes (PD) daily during the study, incubated at 22 and 36C°, at different irradiation times: 8, 12 or 36 hours. Paired controls were used before using the lamps (at time T0), which were automatically switched ON overnight and compared with treatment (at time T1). Air sampling was also performed at T0 and T1. Statistical analysis was performed with Stata 14. Significance was set at 95% ($p < 0.05$).

Results:
520 PDs were used in the study: 130 PDs at T0 matched at T1 incubated at 36 °C and as many at 22 °C. The mean level of contamination at T0 was respectively 249 CFU (95 % CI 193.1 - 305.0) at 36 °C and 535.2 CFU (374.3 - 696.1) at 22 °C. The reduction was significant ($p < 0.05$) at T1: we had 87.4 CFU

(56.3 - 118.6), equal to 65%, at 36C° and 149.6 CFU (83.7 - 215.4), equal to 72%, at 22C°. Different values were recorded stratifying for dose (irradiance per exposition time). A significant mean percentage reduction of air contamination was 95.3% (98.4 - 92.3).

Conclusions:

The system was able to improve the environmental hygiene of the kindergarten. The advantage of using this technology in the presence of people is very important in the context of controlling environmental contamination.

Key messages:

- Near-UVA are efficient in reducing the contamination level significantly in a real-life context, on the surfaces and of the air.
- Crowded places favour germ outbreaks. Hygiene control is essential to reduce the risk of transmission of infectious diseases.

Abstract citation ID: ckac131.162
Anticipating the unimaginable: Heat Health Warning Systems in Europe and Australia

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Background:

It has long been a maxim of climate and health research that heatwaves kill more people than all other natural disasters combined. Heatwave frequency, severity and duration have increased as climate change intensifies, and recorded temperatures during recent heat events now regularly surpass previous worst-case projections. Temperate zones, between 40°-60° north or south of the Equator, are particularly vulnerable, as small variations in mean temperature can trigger large-scale increases in morbidity, mortality and concomitant health service strain. Heat Health Warning Systems (HHWSs) combine temperature forecasts with public health actions to mitigate these impacts. However, in the absence of a consensus definition of heatwaves multiple systems have developed, and comparative analysis of the effectiveness of different HHWS and their interventions are hindered by lack of a common threshold metric for defining and predicting heatwave severity.

Methods:

This paper provides a comprehensive review of current HHWS and their evidence base in temperate zones in Europe, the United Kingdom and Australia - contiguous landmasses containing multiple jurisdictions with high heterogeneity in local HHWSs, in which single heatwave events trigger vastly different public health responses. A systematic review of available published and grey literature was undertaken to generate a schema of HHWSs in these zones. Results were then narrowed to review and synthesise evidence for each, with a focus on threshold effectiveness in predicting health impacts.

Results and conclusions:

Over twenty distinct HHWS are reviewed, with substantial variation in the evidence for their effectiveness. We make the case for a unified threshold metric for defining heatwaves, to facilitate research and identify warning systems which accurately predict health impacts and effectively communicate risk.

Key messages:

- Lack of definitional consensus and heterogeneity in threshold metrics hinders comparison of Heat Health Warning Systems.
- Accurate prediction and rapid communication of heat risk is crucial to prevent health impacts of heatwaves.

Abstract citation ID: ckac131.163
Exposure to PM2.5 and cardiovascular diseases in Portugal – the contribute of PMCardImpact project

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Particulate matter with a diameter of 2.5 μm or less (PM2.5) are one of the air pollutants more detrimental to human health, being responsible for around 400 000 premature deaths in Europe every year. The cardiovascular diseases (CVD) and air pollution are linked, with existing evidence of a causal relationship between exposure to particulate matter and cardiovascular morbidity and mortality. Under the scope of PMCardImpact, a national funded project, data collected from Portuguese air monitoring platform (2005-2021) (>60 stations) was used to estimate the attributable number of cases of acute myocardial infarction. The air monitoring data and parameters such as exposure-response factors will support the risk assessment in AirQ+ software (WHO Regional Office for Europe). Preliminary results showed that exceedances of Air Quality Directive in Portugal ranged between 0.1 % and 10.2% for PM10 and PM2.5 in 2019. Results obtained will include the number of cases of CVD attributable to exposure to PM2.5 in the Portuguese population. Four scenarios of exposure will be considered for presenting the results: current scenario of exposure, new WHO Air Quality guidelines, European Commission Air Quality Directive and lastly, a worst-case scenario. This assessment will be the starting point for calculation of the burden of disease of CVD that exposure to PM2.5 represent in Portugal. With a view to promote the science to policy interface, PMCardImpact project will make available to policy makers the needed supporting information to act, including actionable knowledge on air pollution trends and related health effects, to implement reducing air pollution policies.

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Key messages:

- PMCardImpact will make available to policy makers the needed supporting information to act to implement reducing air pollution policies.
- Risk assessment will allow to determine the number of CVD cases attributable to air pollution.

Abstract citation ID: ckac131.164
Drivers of Energy Consumption in Portuguese Hospitals - a panel analysis

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Background:

Buildings represent about 40% of global energy consumed, playing an important role in sustainable transformation.

Health institutions account for 10% of the energy consumed by the commercial sector, however public policies do not cover energy management in this setting. Energy poverty in hospitals, such as poor heating, affect patients' and workers' health and wellbeing. As such, this study aims to analyse drivers of electricity and natural gas consumption of Portuguese hospitals.

Methods:

Data regarding 25 hospitals in Portugal's National Health Service from 2015-2020 were analysed as logarithms in a panel of 18 trimesters, using Panel-corrected Standard Errors estimators. The PSAR model considers the presence of an autocorrelation within the panel, and the Hetonly modeling deals with heteroscedasticity and autocorrelation.

Results:

There is an elastic elasticity and a statistical significance of electricity and natural gas consumption in relation to the number of beds occupied, with a greater variation of natural gas than electricity consumption. In turn, there is a predominance of an inelastic elasticity of electricity and natural gas consumption in relation to the number of workers and number of emergency episodes.

Conclusions:

Energy consumption is highly influenced by the number of beds occupied, highlighting the need for a strategic management of energy and planning of hospital capacity. Overall, the positive absolute effects of the elasticities for energy consumption reveal that hospitals do not use effective measures aimed at rational and cleaner energy consumption, requiring a paradigm shift in the energy matrix. Increasing energy efficiency policies and environmental practices, such as autonomous energy production and renewable energies, might effectively contribute in reducing conventional energy consumption and associated energy poverty, which in turn improve patients' and workers' conditions within the hospital and their health and wellbeing.

Key messages:

- Strategic energy management and capacity planning can contribute to lower energy poverty and a paradigm shift in the energy matrix.
- Hospital sustainability policies must include energy management, including autonomous energy production and investment in renewable energies.

DG Digital health and communication

Abstract citation ID: ckac131.165

Health and medical apps - Same same but different? A review of definitions in public health and law

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The terms health app and medical app are often used interchangeably but do not necessarily mean the same. Medical apps can be regulated as mobile medical devices and therefore need to meet general safety and performance requirements. On the contrary, health apps are not part of this legal framework and do not need proof of their efficacy or guaranteeing data security. We need distinct definitions of health and medical apps to understand these terms better and regulate such technologies more effectively. We will provide an overview of health and medical apps definitions and a differentiation flowchart from public health and legal perspectives. A search in 6 databases identified 22 publications that defined health apps and 11 reports that described medical apps. The core elements of these definitions were identified through qualitative analysis. Health and medical apps share the same devices, technical functions and collect health data. While it can be highly challenging to decide which legal requirements have to be fulfilled by an app, we deem it unfit as a distinction criterion. It requires legal knowledge, which is neither suitable nor practical for users. However, medical device law is closely linked to the app's intended medical or health purpose criteria, which allows a clear differentiation. Additionally, the difference in the user group can be used for separation. Our suggestion for the definition would be that health apps are software programs on mobile devices that process health-related data on/for their user. They can be used by every health-conscious person to maintain, improve or manage the health of an individual or the community. As an umbrella term, health apps include medical apps. They share the same technological functions and devices as health apps. Health professionals, patients, and family caregivers are the main user groups of medical apps. Due to the intended use for clinical purposes, medical apps can be regulated as mobile medical devices.

Key messages:

- Separating apps based on legal regulation is impractical & can't be expected from all stakeholders. Differencing between health and medical apps requires the user group and the health aim of the app.
- Health apps include medical apps. Since 2019, medical apps in Germany contain digital health applications (DiGA). Since 2022, medical apps partly include digital care applications (DiPA).

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Health promotion and disease prevention with digital technologies for older people: Scoping review

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Background:

In the aging world digital technologies are needed to target the health needs of older people. This study aimed to identify digital technologies for health promotion and disease prevention for older people by performing a scoping review.

Methods:

A search of MEDLINE, PsycINFO, CINAHL and SCOPUS on 09.03.2022 identified 2150 studies. The inclusion criteria were: 1) Population: older people, 2) Concept: any digital health technology, 3) Context: health promotion and disease prevention in home or community settings. Preliminary study selection was performed automatically using the smart groups function in EndNote. Studies were clustered by digital technology type, health target, study design and study focus. Final study selection and data coding will be performed manually by two authors.

Results:

Of the 2150 studies, 1874 studies were excluded, 159 studies met the inclusion criteria 1) and 2), but addressed different contexts (digital competence, digital technology development, disease management) or setting (care) and 117 studies were included. Digital technology types were: 1) any technologies (digital, virtual, video, eHealth or telehealth), 2) internet websites accessed via computer, 3) SMS or mobile phones, 4) exergaming or 5) smartphones or wearables. Health targets were: 1) physical activity, 2) mental health and wellness, 3) nutrition or 4) cognitive functioning. Study designs included primary studies (randomized-controlled trials) or reviews (systematic or scoping). Study focus was on effectiveness, feasibility or evaluation of digital technologies.

Conclusions:

The health needs of older people are addressed by older technologies. Newer studies use heterogeneous terminology when referring to digital technologies. Future studies should focus on multiple aspects of healthy aging beyond mobility. More work is also needed to understand if and how a shift towards newer technologies occurs and if that is associated with health benefits in older people.

Key messages:

- Older digital technologies (computers and mobile phones) address the health needs of older people.
- Mobility is the main health target of digital technologies for older people in the context of health promotion and disease prevention.

Abstract citation ID: ckac131.167
Digital coping of parents in conflict-affected communities: a path to maintain health and well-being

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Background:

Mobile apps such as WhatsApp have become significant resources for information and social support in times of crisis. Little is known about the role WhatsApp groups play in the context of living in conflict-affected regions. Living in such areas is associated with myriad mental health impacts, and recent studies have identified parents of young children as highly vulnerable in this regard. The study's aim was to examine parents' digital coping with political violence in southern Israel.

Methods:

In-depth interviews were conducted with 21 parents of young children (<17) residing in communities near the Israel-Gaza border and who are members of local online parents' groups on WhatsApp. Data were analyzed to answer questions regarding the benefits and disadvantages that parents assign to online groups; and regarding the role of digital communication in maintaining health and well-being.

Results:

The findings reveal that online groups are often discussed as a shared and ubiquitous coping resource that supports mental health and well-being. Parents report they use the group to share ways to deal with the situation effectively and exchange social support, and as a space that facilitates community cohesion. Furthermore, during escalations, members perceived the group as the most trustworthy source of information. The groups' continuous availability had drawbacks as well. Some participants pointed to digital stress caused by the fear of missing out on information, or by information overload.

Conclusions:

Our results demonstrate the effectiveness of digital environments in helping parents cope with a collective stressor: a particularly worthy goal given that social media apps now constitute the primary online connection for most individuals. This has broad impacts on health promotion efforts for mental health issues related to political violence as well as other large-scale health crises such as the COVID-19 pandemic.

Key messages:

- Digital environments can serve as a platform for successful coping with collective stressors.
- Health practitioners should consider drawbacks when planning digital support efforts.

Abstract citation ID: ckac131.168
Digital phenotyping for monitoring and prediction of physical activity level during pregnancy

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Background:

Gestational diabetes mellitus (GDM) is one of the most common complications in pregnancy. Physical activity (PA) during pregnancy may reduce the adverse pregnancy outcomes. Digital phenotyping can develop interactive risk profiles to better reflect a person's daily mobility than traditional retrospective self-assessment questionnaires. Therefore, the aims of the proposed research are to 1) test the acceptability and applicability of the BEIWE app during pregnancy, 2) characterize daily physical mobility during pregnancy, and 3) describe differences in physical mobility in women with and without diabetes.

Methods:

This prospective cohort study will include 20 pregnant women with GDM and 20 without GDM from the Diabetes Center of the Medical Clinic or outpatient clinics of the Tübingen Women's Clinic, Tuebingen, Germany. The study was approved by the Ethics Committee of the University Hospital Tuebingen (004/2022BO1). At baseline (22 weeks gestation), participants will be instructed to download the app. Passive data (phenotypic information) is collected automatically during the observation period. The follow-up assessment will be conducted three weeks after delivery. The acceptance of the app and comparison of the groups with and without diabetes will be conducted through Statistical analysis.

Results:

Recruitment of participants has started and follow-up assessment is estimated to be finalized in fall 2022. Study design and results will be presented at the conference.

Conclusions:

PA during pregnancy has been associated with minimum risk of a pregnancy, and self-monitoring of PA via an app may play a role in improving pregnancy outcomes. However, the success of Apps depends on their validity and reliability, which lack evidence.

Key messages:

- The result of the study will develop a qualification measure for PA with no intervention.
- It also provides information for planning and conducting subsequent intervention studies.

Abstract citation ID: ckac131.169
Innovative Health Technologies to Improve Emergency Department Performance

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Background:
Emergency Departments (EDs) are increasingly pivotal, with a constant increment in their use, despite stable or declining fundings. Crowding can lead to disruptions and the COVID-19 epidemic has further burdened ED services. However, the pandemic has seen an increased use of telemedicine and digital health tools, which may be notably beneficial for EDs. This study offers a review of the latest available digital health technologies and their effectiveness to improve ED performance.

Methods:
We performed a narrative review to identify digital and technological innovations in EDs. The themes of interest were defined in 4 areas: Patient Assessment, Patient Experience, Resource Allocation, and Discharge. Data was analyzed by 5 independent reviewers who focused on different macro-areas. Disagreement on data was discussed with 2 independent tiebreakers.

Results:
Our search yielded 25 articles addressing 4 topics: Patient Assessment, Resource Allocation, Patient Experience, Discharge. We found that digital tools and Artificial Intelligence are powerful tools to detect, collect, and process data from patients, to improve healthcare delivery in EDs. The Resource Allocation category showed to be key in optimizing services already in place. New technologies showed effective to improve Patient Experience by curbing pain and anxiety. Innovative technologies demonstrated efficacy after Discharge when patients need guidance from clinicians for follow-up care.

Conclusions:
Our review shows evidence of increasing effectiveness of innovative tools in reducing wait time and improving performance and patient experience in EDs. Technology applied to resource allocation appeared to be the most effective category. Prediction algorithms could be used to improve workforce allocation and bed management. Critical care systems must meet the challenge of innovative technologies which can lead to a new era in healthcare delivery with improvements for patients and healthcare professionals.

Key messages:
- Digital innovation will have a significant impact on several dimensions of healthcare in the near future.
- Healthcare systems and EDs must meet the challenge of innovative technologies which can lead to a new era in healthcare delivery with improvements for both patients and healthcare professionals.

Abstract citation ID: ckac131.170
Attitudes of doctors of medicine and dental medicine towards contacting patients via social networks

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Background:
As the use of social networking sites (SNSs) has greatly increased among health professionals, it is necessary to investigate their use of SNSs. The aim of this study was to identify the patterns of SNS use for contact with patients between medical doctors (MD) and doctors of dental medicine (DMD) in Croatia.

Methods:
In collaboration with the Croatian Medical Chamber and the Croatian Chamber of Dental Medicine, a quantitative cross-sectional study was conducted on the use of SNSs and the attitudes of MDs and DMDs towards e-professionalism. Data were collected using online questionnaires. The data were analyzed using descriptive statistics.

Results:
A total of 753 responses were processed, 507 (67,3%) MDs and 246 (32,7%) DMDs. DMDs were significantly more likely to visit patients or their family members' profiles on SNSs (60,6% vs 33,3%, $P < 0.001$). The main reason for visiting a patient's or family member's profile is social communication, which is significantly more common among DMDs (46,3% vs 29,0%, $P < 0.002$). DMDs are significantly more likely to send friend requests from private SNS profiles to patients or their family members (15,0% DMDs vs 3,4% MDs, $P < 0.001$). Patients are much more likely to send friendship and connection requests on SNS to DMDs (91,1% DMDs vs 62,7% MDs, $P < 0.001$) who are also significantly more likely to accept these requests (76,8% DMDs vs 41,5% MDs, $P < 0.001$). MDs and DMDs would find the presence of e-professionalism guidelines useful (72,2% MDS vs 78,0% DMDs, $P = 0.103$).

Conclusions:
The results show that DMDs are more open to communicating with patients via SNSs. Results showed a difference between MDs and DMDs in both directions - in sending requests to patients or their family members and in positive responses to their requests for connection. The findings point to the need to develop guidelines for health professionals regarding e-professionalism.

Key messages:
- There are differences between MDs and DMDs toward communicating with patients using SNSs, DMDs being more open to the communication with patients.
- There is a need to develop guidelines for health professionals on e-professionalism with emphasis regarding how to professionally communicate with patients on SNSs.

Abstract citation ID: ckac131.171
The development of new Electronic Health Record Exchange Format Use Cases - an evaluating perspective

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The EU-funded X-eHealth project aims to lay the foundations for a common framework for medical imaging, discharge letters, laboratory results and rare diseases to advance an interoperable Common European Health Data Space for citizens and healthcare providers in accordance with privacy and cybersecurity regulations. To ensure sustainability of the project, it is crucial to assess whether X-eHealth is achieving its planned objectives and delivers tangible results. A key challenge in evaluating project outcomes lies in the partial lack of visibility of direct impacts due to a time lag of effects or attribution problems (i.e., identifying the main cause of a particular impact). In X-eHealth, we address this problem by defining a framework of Key Performance Indicators (KPI) that allows the monitoring of project outcomes. In addition, qualitative interviews with a focus on the following questions are conducted towards the end of the project to complement the evaluation:

- Does X-eHealth advance the integration process of eHealth services in Europe?
- Will X-eHealth lead to increased use of the new European Electronic Health Record Exchange Format (EEHRxF) specifications?

Although final results are not yet available, we expect X-eHealth to have a positive impact at all stakeholder levels by accelerating the implementation of EEHRxF through the harmonisation of health data, thus providing patients, health professionals and institutions with increased quality, safety and efficiency. There is little evidence to analyse the impact of eHealth policy interventions. For this reason, the present evaluation makes a significant contribution to impact research in this area. X-eHealth highlights the importance of international cooperation in creating a common framework for the future development of digital health in the EU. The continuous evaluation, moreover, facilitates a more efficient management of resources through KPI observance and the implementation of project results.

Key messages:

- X-eHealth aims to accelerate the implementation of the European eHealth Record exchange Format (EEHRxF) through the standardisation and harmonisation of health data.
- By evaluating and monitoring the project processes, it is possible to ensure the progress of the project and to measure the potential impacts of the outcomes on stakeholders and other target groups.

Abstract citation ID: ckac131.172
Use of Hashtags related to Covid-19 infodemics by bot accounts

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Background:

Along with the Covid-19 pandemic we need to fight an ‘infodemic’. Some of the most widespread social media platforms such as Facebook, Instagram and Twitter have implemented policies to combat the spread of misinformation about Covid. However, the online ecosystem is still full of health myths, hoaxes, and fake news that-either consciously or unconsciously-is propagated by social media users with different purposes, messages that can lead to attitudinal and behavioral changes which might result in inadequate health decision making

Methods:

We use Twitter Stream API to collect tweets about Covid-19 during the early outbreak. Then we filtered those tweets with hashtags related to three infodemic topics: 5g, bill gates, UV and hydroxychloroquine. Then, we use Botometer to obtain the probability that each account is a bot or not. We use bot classification along with network analysis (Louvain community detection) to delve into the subtopics and the use of hashtags.

Results:

The resulting data collection contains ~14M tweets from ~285K of different Twitter accounts. We selected only tweets written in English. Regarding 5G, the most important communities link China with the virus, are about ‘‘democratshateamerica’’ or conspiracy theories. Tweets about Bill Gates contain hashtags about Trump, America, or mention the batflu. Communities related with UV are about Trump disinfectant, or pointing out that tv channels spread fake news. Those tweets that mention hydroxychloroquine mostly contain hashtags that mention qanon or maga content.

Conclusions:

In this paper, we analyze the use of hashtags by accounts classified as bots. Using Louvain community detection we identify co-occurring hashtags. Using social network analysis we identify which hashtags are the most important within the conversation.

Key messages:

- We identify several communities around most important infodemic topics. Bots activity in most of the cases is about political content than spreading health misinformation.
- This method allows to find subtopics based on the use of hashtags. Which allow public health policies to prevent the spread of infodemics.

Abstract citation ID: ckac131.173
Mapping core characteristics of internet-based tools to maintain and improve population health

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Rapid developments and implementation of digital technologies in public health domains throughout the last decades have changed the landscape of health delivery and disease prevention globally. Many countries introduce digital interventions to their health systems to improve their populations’ health and make access to health care more accessible. Despite multiple definitions for digital public health and the development of different digital interventions, no study has analysed whether the used technologies fit the definition and the core characteristics of digital public health interventions. Digital public health for us means using digital tools to achieve public health goals. We conducted a scoping review to map the characteristics of digital public health interventions, see how the understanding of specific interventions differs between countries, and how they fit in the theoretical framework of digital public health definitions. Our review is the first to display the landscape of worldwide existing digital public health interventions that use information- and communication technologies. The study’s protocol was published in March 2022 in JMIR Research Protocols (DOI 10.2196/33404). We searched five databases (PubMed, Web of Science, CENTRAL, Ieee, and ACM) for publications. Given the broad search string, we retrieved 13,869 results screened for eligibility. A total of 1,429 publications were included for full-text screening. The study showed that the terms for specific interventions are related to the context in which they are used. Scandinavian countries displayed a different understanding of electronic health records (EHRs) than South American countries. We also identified that the separation between digital health and digital public health is blurry in praxis. Although interventions such as EHRs target individuals to improve their health, the collected data can also be pooled to allow research and the development of interventions on a public health level.

Key messages:

- When comparing interventions internationally, it's best to compare based on the characteristics of the intervention rather than on the name.
- Although, in theory, the distinguishment between digital health, digital public health, and public health became more precise in recent years, the practical reality between them remains still blurry.

Abstract citation ID: ckac131.174
Moving a youth trauma support group online: participatory adaption, usability and pilot test

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Background:

Posttraumatic stress poses a significant threat to a young person's development. Internet-based delivery could ameliorate barriers to care, but has mostly been tested with adults. This project aimed to (i) adapt the group intervention Teaching Recovery Techniques for online delivery through a participatory process, (ii) investigate the usability of the online format and (iii) pilot the new format.

Methods:

Adaption recommendations were generated through participatory workshops with service users and providers, and consultation with an advisory panel with professionals and parents. Usability testing was conducted with intervention leaders (n = 5) and youth (n = 5). The public involvement in the project was assessed through a multi-method approach including behavioural observations, questionnaires and field notes. A pilot study (n = 14) is ongoing.

Results:

The workshops focused on safety, participation and learning. Recommendations included an emergency response protocol, communication strategies, and guidance on intervention delivery. Whilst the advisory panel largely agreed, points of disagreement included workshop ideas around personalisation, where the panel conveyed the importance of consistency in manualised interventions. Usability testing highlighted the need for explicit guidance, particularly on safety processes.

Conclusions:

Online delivery of trauma group support requires adaptions to ensure positive group dynamics, learning and safety. Yet, some adaptions resulting from the usability testing were also relevant to the original format, pointing to the need for more extensive use of usability testing across intervention manuals. The young people, parents and professionals involved in the project provided rich and varied perspectives, illustrating the value of broad stakeholder engagement. The ongoing pilot study explores the feasibility of online delivery, including youth perceptions of the format.

Key messages:

- The varied perspectives in the participatory process highlighted the importance of broad stakeholder engagement for interventions to be equally evidence-based and adapted to the target population.
- The current pilot study explores the feasibility of online delivery, including youth perceptions of the format, in order to assess the potential for scale up.

Abstract citation ID: ckac131.175
Trauma support in your pocket

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Background:

Research indicates that technological approaches to the delivery of trauma-based support can help address structural and perceptual barriers. Yet, there is a lack of research on digital trauma support for children and adolescents. A systematic review of trauma apps identified 2 of 69 were for children, of which neither were evidence based. The aim of this project was to develop a trauma support app, co-designed with and for children and young people, based on a community-based group support program called Teaching Recovery Techniques.

Methods:

In a series of workshops utilising the Design Studio method, a team of 7 young people between 14-20 years (3 boys and 4 girls) co-created the app. The team were recruited via youth organisations and self-reported having experienced (undisclosed) trauma. The techniques presented in the manual have been prioritised via stepwise consideration of content session by session. Prototypes were developed based on the generated ideas and shared with the team for feedback.

Results:

Contributions of the young people to the design can be considered in three categories: mechanics, dynamics and aesthetics. Mechanics are the rules and interactions that inform the structure of the app. Dynamics refers to what the user can actually see, e.g. the outcome when the user presses a button. Aesthetics relate to the desirable emotional responses evoked in the user when they interact with the app. Beyond influence on basic aesthetics, such as fonts and symbols, the young people actively contributed to the user experience and gave great consideration to the emotional responses that could be evoked.

Conclusions:

Young people with personal experience of trauma can actively engage in the development of a digital trauma intervention. Design Studio was an effective method for the co-creation process, enabling the generating and converging of young peoples' ideas.

Key messages:

- Co-creating an app for trauma support with youth with experience of trauma was a feasible process for both researchers and youth.
- Using Design Studio, a collaborative workshop method, facilitated the co-creative process, allowing the youth to contribute to the mechanics, dynamics and aesthetics factors of the app.

Abstract citation ID: ckac131.176
Gauging Public Health Literacy needs through Google Trends: the COVID-19 vaccination example

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Background:

The rollout of the COVID-19 vaccination program in Portugal was one of the most successful in the world. However, there was still a challenge for Public Health services to determine the health literacy needs of the population in the context of a new vaccine and the uncertainty of the pandemic. The goal of this study was to evaluate the usefulness of Google Trends data to gauge the health literacy needs of the general population during the pandemic.

Methods:

A Google Trends search was performed for Portugal including 5 topics related to health literacy needs of the population (''vaccination'', ''scheduling'', ''isolation'', ''booster dose'' and ''vaccination certificate'') between the 28th of december 2019 and the 10th of march 2022. The variation shows the relative popularity of each term referring to the total number of Google searches during that period in a normalized scale of 0-100. The variation was compared to the number of doses administered daily in Portugal and key moments of the vaccination campaign as defined by the Directorate-General for Health in Portugal.

Results:

The terms ''vaccination'' and ''isolation'' had a steady rise in popularity from December 2019 to January 2021. The term ''vaccination'' was the most popular search term with peak popularity in July 2021 and a downward trend followed by an ascent to a lower peak in popularity in January 2022. The terms ''scheduling'' and ''vaccination certificate'' both followed a similar pattern, though at lower popularity levels. The term ''isolation'' was low on popularity since February 2021, with a significant rise and peak in January 2022. This variation relates to key dates during the Portuguese vaccination campaign.

Conclusions:

Google Trends data seems to correlate with key events during the Portuguese COVID-19 vaccination campaign. That data might be incorporated in the planning framework of health literacy activities for national and local Public Health services.

Key messages:

- Google Trends might be an important source of information for public health teams.
- There is a need for further research into how Google Trends data can be incorporated with other sources of information to inform health literacy activities.

Abstract citation ID: ckac131.177
How to design information strategies on e-mental health services for prospective healthcare providers

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Background:

Among prospective healthcare providers (HCPs) such as medical students, mental health problems are prevalent, but they seem reluctant to seek help. Barriers include fear of stigmatization or limited resources of counseling centers. Electronic mental health services (eMHSs) seem to be promising low-threshold and evidence-based tools for increasing treatment availability. However, uptake rates remain low. Reasons include skepticism and lacking awareness, which can be addressed through acceptance-facilitating interventions (AFIs) such as multi-attributes information strategies. To date little is known about how to design AFIs to meet prospect HCPs' information needs and preferences.

Methods:

Between August 2021 and June 2022, n = 21 semi-structured online interviews and n = 3 co-design workshops were conducted with medical and psychology students across Germany to define attributes and levels of information strategies. Interviews were recorded, transcribed and content-analyzed using MAXQDA.

Results:

Most students reported having little knowledge about eMHSs but would have liked to be informed at the beginning of their studies or as an integral part of their study program. We identified 5 attributes that information strategies should consist of: information source (e.g., student counseling center), information path (e.g., flyer), timing (e.g., during freshman week), recommendation (e.g., from HCPs), and quality criterion (e.g., evidence-base). Attributes included 4 to 6 levels. Concerning design preferences, students favored green or blue as colors, and short texts with images.

Conclusions:

For a comprehensive dissemination of eMHSs into the healthcare system, prospective HCPs need to be educated on eMHSs. This study gives first insight into how AFIs should be designed to inform prospective HCPs. Future research should focus on systematic variations of AFIs' attributes and their levels mimicking real-world decision scenarios through discrete choice experiments.

Key messages:

- Through tailored AFIs, prospective HCPs can be informed about eMHSs for both personal and professional needs.
- Our results give student counseling centers with limited resources clear guidelines on how to inform prospective HCPs on low-threshold eMHSs.

Abstract citation ID: ckac131.178
Expectations of patients for the implementation of new nursing technology

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Background:

New technologies, including robots, incidence detection or patient mobilization units, are increasingly assumed to support nurses in their routines while improving care quality. In the Nursing Care Centre Hanover study (funded by the German ministry of education and research), new technologies are implemented in a hospital ward and used by nurses in their routines. As part of this study, hospital patients were interviewed regarding the question: What are patients' expectations for the implementation of new technology into care delivery?

Methods:

Between August 2019 and February 2020, 17 semi-structured interviews were conducted with patients from the project ward. To stimulate a response, 8 presentation of technologies by video and text (3 per interview) were given during the interviews. Interviews were recorded, transcribed and coded by evaluative, qualitative content analysis. The coded material was then interpreted in light of the research question.

Results:

Patients anticipate positive and negative effects of new technology concerning themselves, but they also expect effects on nurses: Health, safety and health service quality improvements might be positive effects for patients, but they are concerned about emerging threads to health by unintended consequences. They raise concerns about the possible inabilities of elder patients to use technology properly. Patients expect physical and emotional stress release for nurses when using technology, but they fear the replacement of nurses. This would have negative consequences for patients, like social isolation due to being cared for by machines.

Conclusions:

Patients have ambivalent perceptions of new technologies in nursing care. They have a differentiated view of possible consequences, not merely for themselves but also for nurses. In general, they are positive about the implementation, but this must be carried out under certain conditions, so that technology is used in a supportive, but not replacing, manner.

Key messages:

- The patients' perspective must be take into account for the implementation of nursing technology to avoid negative, unintended consequences.
- Inclusion and consideration of older patients and their technology skills can be a relevant factor for advancing the adoption of new technology into care delivery.

Abstract citation ID: ckac131.179
Online information seeking and attitudes towards COVID-19 vaccination in Germany

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Background:

A large proportion of the European population seeks information about the COVID-19 vaccination on the internet. The population seems to split into those with positive stance on the vaccination and those with negative stance, but there are still individuals who do not have a final position yet. By now, there is a lack of understanding about the online information seeking behavior in these three groups. The current analysis sheds light on differences in internet usage and requested qualities of online information regarding the COVID-19 vaccination.

Methods:

An online survey with N = 1,000 people (18-74 years) living in Germany was conducted between November 26 and December 8, 2021. The questionnaire included closed questions about frequency, information channels, formats and reasons of online information seeking, as well as one open question about requested qualities of online content. We conducted bivariate analysis for differences in information seeking behavior and content analysis for the requests.

Results:

Information seeking behavior differed significantly by attitude towards the vaccination regarding frequency, almost all types of formats, three of ten listed information channels, and three of six reasons for online information seeking. Undecided participants and those who support COVID-19 vaccination used the internet more often than participants who are against the vaccination. Individuals supporting vaccination preferred reading text contributions (e.g. online articles). Informative videos were more often consumed by those who are undecided or against vaccination. Those who have not decided yet preferred online resources providing full information about side-effects and showing reliable facts by credible sources.

Conclusions:

Our findings support an online vaccination communication that is tailored to target groups with different attitudes towards the vaccination. Overall, online campaigns should focus on transparent, reliable and complete information.

Key messages:

- Online information seeking behavior regarding COVID-19 vaccination varies between individuals with different attitudes towards the vaccination.
- Online information about the COVID-19 vaccination should focus on transparency and reliable information.

Abstract citation ID: ckac131.180
The usage of DiGA, stratified by sociodemographic/ socioeconomic characteristics

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Background:

The German government undertakes efforts to implement DiGA into the statutory health insurance to improve its quality. DiGA are physician-prescribed applications for patients with certain diagnosed diseases, whose costs are covered by the statutory health insurers. DiGA have the potential to improve healthcare, but it is also possible, that the usage of these applications perpetuates existing health inequalities, summarized by the term Digital Divide; meaning that socially deprived populations are less able to benefit from digital technologies. The aim of this analysis is to determine whether differences exist in DiGA use by sociodemographic/ socioeconomic characteristics.

Methods:

The results based upon the analysis of an online survey involving 1,200 people (18-74 years) living in Germany between March 10 and March 18, 2022. The sample composition reflects the current distribution of age, gender, and place of residence in the federal states (uncrossed). The questionnaire focused, among other aspects, on the use of DiGA. A binary logistic regression was used for the analysis.

Results:

Compared to the lowest subjective social status (SSS), probands with a medium (OR 2.865) or a high SSS (OR 4.085) are more likely to use DiGA. Compared to the reference group (60 years and older), the 18-29-year- (OR 2.044) and the 30-39-year-olds (OR 1.952) tend to have a higher likelihood of using DiGA. The likelihood of the use decreases among probands with medium (OR 0.632) and high educational degree (OR 0.580) compared to the reference group (low education).

Conclusions:

In accordance with the results of existing studies, social differences could be identified regarding known determinants of health inequalities, like age and SSS. In this analysis, the highest degree of education does not appear as a predictor for an increased likelihood of use. Thus, further analyses are needed to address the influence of education, especially to develop a broader understanding of the DiGA use.

Key messages:

- It appears that DiGA are not equally accessible or used across different population groups, and thus indicating an already existing or emerging Digital Divide regarding the use of DiGA.
- Contrary to the broad assumption that higher expressions of health determinants are related to a higher likelihood of using DiGA, a higher degree of education decreases the likelihood of using DiGA.

Abstract citation ID: ckac131.181
Use and barriers to the use of telehealth services among the Arab population in Israel

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Background:

Telehealth services tends to be used relatively infrequently by minority populations, thereby exacerbating health inequalities. This study examines the individual, circumstantial and environmental factors that facilitate or hinder usage of telehealth among Israeli Arabs, who constitute 21% of the Israeli population.

Methods:

Data was collected through a telephone survey among the adult Arab population in October 2020 with 501 respondents (42% response rate). Analysis included logistic regression.

Results:

Most of the Arab population use the internet several times a week (93%) and have a smartphone (96%). The most popular telehealth service was telephone appointments with a doctor (66%). Two thirds have never used the health plan's mobile application, though most have no objection to using chat (75%) or video conversation (51%) with a medical professional. The most significant barrier to using telehealth is lack of awareness of services such as ordering medicines (23%). Conversely, factors that facilitate the use of telehealth include previous acquaintance with the doctor (91%); Arabic services (82%); and recommendation by health professionals (79%). Multivariate analyses indicate a strong positive correlation between education and the use of telehealth for written correspondence with a known health professional (p = 0.001).

Conclusions:

Telehealth services (e.g., phone appointments) which are already used widely by the Israeli-Arab population, should be retained and developed further. In parallel, digital health literacy and linguistically and culturally adaptation of digital services should be promoted. Awareness of those services should be enhanced through culturally adapted marketing and via recommendations from the family doctor.

Key messages:

- Identification of the barriers to the use of telehealth services among minority populations can help service providers reduce usage gaps between minority and majority population.
- The use of telehealth services should be simplified to suit people with a low digital health literacy.

Abstract citation ID: ckac131.182
Technology-aided community engagement for exercise promotion: a mixed-methods systematic review

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Background:

This review aims to provide an overview of evidence on feasibility and effectiveness in diverse populations of eHealth physical activity (PA) community engagement (CE) interventions. Increasing global PA levels would have a substantial positive impact on population health. Given their diffusion, eHealth technologies may address certain barriers to PA and reach wide audiences. The most recent Italian guidelines on PA highlight inequalities in health, which can be addressed using CE models. The potential scalability of successful eHealth CE interventions and the scarcity of previous reviews on the topic are reasons which convinced us to work on this paper.

Methods:

This mixed-methods systematic review utilized the Joanna Briggs Institute methodologies. Primary quantitative outcome measures were minutes of PA per week. Qualitative outcome measures included self-efficacy and user engagement. Data were processed using a segregated convergent design. A narrative summary and a meta-aggregation were performed for synthesizing quantitative and qualitative data respectively. Only the interventions where CE principles were fulfilled were analyzed.

Results:

Quantitative evidence supported effectiveness and feasibility of interventions to improve PA outcomes and related proxy indicators across studied populations. Qualitative findings suggest the utility of peer-support and that from other health care providers.

Conclusions:

Implementing CE in future PA interventions will be critical for producing an effective digital application with the potential for considerable impact in the real world. If supported by central governments and the European Union, entities such as primary care hubs and local health units with their professionals and CE capabilities may play the key role in implementing evidence.

Key messages:

- eHealth PA CE interventions work better when peer support takes place.
- Health systems could pursue these prevention strategies for population health gains.

Abstract citation ID: ckac131.183
Social networks and health information sharing in COVID-19 pandemic

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Background:

Understanding health information flow in social networks is important for designing effective health communications strategies and to achieve health literacy. Limited information is known about variation in social networks and health information sharing in the COVID-19 pandemic by demographic factors. Young people are of particular interest given their heavy exposure to digital media sources, which include considerable health misinformation.

Methods:

Hawai'i (n = 324) residents between 18-35 completed a Spring 2021 online survey including questions on health information flow in social networks: (1) how many they talked to and (2) listened to about health. Two Poisson regression models were fit with gender, education, and race/ethnicity predicting social network size.

Results:

Respondents were 67.6% female. Respondents discussed their own health with 2-3 people (M = 2.18, SD = 2.95) and listened to roughly the same number. Respondents who talked with a greater number of individuals about their own health were significantly more likely to have larger networks for listening to others (r (317) = .614; p< .001). In the model for discussing their own health, as education increased so did social network size. For the model predicting discussing others' health, gender was significant (p = 0.003); women listened to 30.6% more individuals than men. Most (73%) respondents had conducted a recent digital health search for either themselves or someone else, including for parents, grandparents, and children. Facebook (63%) and Instagram (58%) were the most popular online sources for COVID-19 health information.

Conclusions:

Understanding social networks and digital health sources in young people are important for designing effective health communications to reach all communities, especially those experiencing health inequities, given the amount of health misinformation circulating and the need to build trust in public health communication.

Key messages:

- Social networks provide access to critical health information including information obtained from digital sources.
- Gender and education were important predictors of social network size in COVID-19 health communications.

Abstract citation ID: ckac131.184
Communication on analgesia and sedation: parents' opinions in six pediatric ICU in northern Italy

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Introduction:

Communication between healthcare professionals and parents regarding analgesic and sedative treatments for seriously ill children is challenging. Although appropriate information may help parents during admission to the pediatric intensive care unit (PICU), some areas of communication may be missed.

Objectives:

To explore and describe the opinions of parents of children admitted to PICU about analgosedation, information received about it and its potential adverse effects, and suggestions for improving the comfort of hospitalized children.

Methods:

Parents' opinions were collected in six PICUs in northern Italy. Parents of children who were hospitalized for more than 48 hours and required analgesia and sedation were asked to provide opinions on the quality of information with respect to the treatments used, possible short- and long-term sequelae, satisfaction with efficacy, environmental factors perceived as disturbing, and suggestions for improving children's comfort.

Results:

Forty-eight parents participated. Information about analgosedation was rated, as was its effectiveness. Parents pointed out some interesting suggestions to improve their children's comfort during their hospitalization in PICU. On the other hand, it was found that information about possible complications, withdrawal syndrome, delirium, or difficulties in obtaining the desired level of sedation was often provided poorly or inadequately. In addition, wide differences were found between centres, particularly with regard to analgosedation side effects and withdrawal syndrome.

Conclusions:

Parents should receive early explanations of these potential complications. Even considering the limited number of participating PICUs, distributed exclusively in northern Italy, and the small number of participants, this is the first data collection focused on communication between health professionals and parents of children undergoing analgosedation treatment in pediatric intensive care units.

Key messages:

- This is the first data collection focused on communication between health professionals and parents of children undergoing analgosedation treatment in pediatric intensive care units.
- Information about possible complications, withdrawal syndrome, delirium, or difficulties in obtaining the desired level of sedation was often provided poorly or inadequately.

Abstract citation ID: ckac131.185
Knowledge, attitude and practice about the Personal Health Record among general population in Italy

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Background:

The Personal Health Record (PHR) is an online tool containing a person's health-related data, which can be shared with health professionals. This tool is widely used throughout Europe but is not very popular in Italy, despite its implementation being mandatory. This study aims to investigate knowledge, attitudes and practices (KAP) associated with the PHR among the general population in Italy, to identify the main obstacles in the usage of PHR and to establish strategies that lead to their resolution.

Methods:

A cross-sectional survey was designed and shared both online and on paper (in the waiting rooms of the outpatient clinics) to an opportunistic sample of people aged $\geq$18 years. Factors associated with a higher knowledge and willingness to activate the PHR were investigated through multivariable logistic regression analyses.

Results:

Preliminary results of the on paper survey (243 answers) showed that the median age of the participants was 45, 46% were women, 9% worked in healthcare and 68% had chronic diseases. Only 31% heard about the PHR, of which 22% showed a good knowledge of it. The 66% declared the willingness to activate the PHR and 92% agreed that the PHR is a useful tool for physicians to share information. Multivariable logistic regression models showed that those who were employed and those who were visited by a doctor in the last three months had a higher likelihood of having heard about PHR (OR 2.56, 95% CI 1.12 - 5.82 and OR 2.67, 95% CI 1.20 - 5.90 respectively). The likelihood of being willing to activate the PHR is lower for those who live alone, and is higher for those who are employed (OR 0.35, 95% CI 0.14 - 0.88 and OR 2.35, 95% CI 1.06 - 5.24).

Conclusions:

The results confirm the low level of knowledge and diffusion of the PHR in Italy, although a relatively high interest in this tool was highlighted, along with a favorable perception of its usefulness. Promotional interventions are needed to increase knowledge and awareness of this tool.

Key messages:

- Awareness about Personal Health Record among the Italian population is low. Despite this, a high level of willingness to activate this tool and a high perception of its usefulness were registered.
- Identifying factors that lead to lower awareness on Personal Health Record may help Public Health professionals to implement targeted promotional interventions aimed to increase the usage of this tool.

Abstract citation ID: ckac131.186
Digital health activism of patients with chronic diseases: discursive strategies and themes

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Background:

On the Internet, there are many online communities where people living with chronic life-threatening diseases can discuss their problems. On the one hand, digital health activism promotes patient empowerment and could lead to better disease self-management. But, on the other hand, digital health activism raises concerns as it undermines the monopoly of expert medical knowledge. The objective of the research was to reveal the main discursive strategies and themes represented in Russian-language online communities for people with chronic life-threatening diseases. It could help to gain a better understanding of the purposes and effects of digital health activism on patients.

Methods:

Data were collected through the popular Russian-language social networking site "Vkontakte". We selected open groups with memberships of more than 1000 users devoted to

HIV/AIDS, cancer, tuberculosis, and diabetes. Discourse analysis and thematic analysis were implemented.

Results:

Revealed discursive strategies include the patients' rights advocacy and resistance to the established order of health care. Three main types of discursive themes were identified:

a. Overcoming shortcomings of the health care system such as lack of qualified doctors, medicine shortage, and unethical behavior of health care personnel.

b. Overcoming the monopolization of expert medical knowledge and criticizing some treatment approaches.

c. Overcoming stigma and discrimination associated with disease both in healthcare settings and in everyday life.

Conclusions:

Research on digital activism of patients with chronic life-threatening diseases makes it possible to identify hidden discrimination practices and patient rights violations in healthcare settings. Members of online patient communities turn from objects of care into informed active subjects who critically evaluate medical prescriptions, are active in finding the better treatment, and in defending their rights.

Key messages:

- The research contributes to the revision of the paternalistic model of patient-doctor interaction.
- Attention to digital activism is important for the identification of hidden issues in healthcare.The research was supported by RSF (project No 22-18-00261).

Abstract citation ID: ckac131.187
Can YouTube be used as a credible source of information for COVID-19 vaccination in Italy?

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Background:

The COVID-19 pandemic led to an 'infodemic', as defined by the WHO, which made it difficult to be accurately informed on public health topics. For this purpose, many people use social media as a source of information, mainly YouTube. Given the great resonance of this platform, our study aims at assessing quality and reliability of its content regarding the COVID-19 vaccination.

Methods:

During March 2022, six searches were performed on the Italian YouTube platform using the following terms: ''Covid vaccination'', ''Covid vaccine'', ''Coronavirus vaccination'', ''Coronavirus vaccine'', ''Sars-Cov-2 vaccination'' and ''Sars-Cov-2 vaccine''. A total of 329 videos were analysed, after removing 271 duplicated videos, and classified in seven types of channel. The reliability of the content was evaluated through the HoNCode score, while quality was tested using the validated DISCERN tool.

Results:

The most frequent category was 'Internet Media' (33%), while the less frequent one was 'Educational Medical' (7%). The content reliability (i.e. HoNCode score) resulted higher for videos produced by medical healthcare workers than non-medical ones. Concerning the quality, the DISCERN score resulted significantly higher for the Educational channels (median 46.0 for medical and 41.3 non-medical ones) as compared to Internet Media (26.5) and New Agencies (24.3).

Conclusions:

Although YouTube has implemented a policy against misinformation related to the COVID-19 vaccination, the study highlights that there is extreme heterogeneity in reliability and quality of videos. Content produced by non-medical users, especially ''Internet Media'' and ''News Agencies'' categories should be evaluated with attention by users, as their quality is not appropriate to the importance of the topic.

Key messages:

- Because of to the heterogeneity of its content, YouTube should be evaluated carefully when used as a source of information for Covid-19 vaccination.
- Content produced by non-medical users, is generally of poor quality, not appropriate to the importance of the topic.

DH Epidemiology

Abstract citation ID: ckac131.188
Patient expectations do matter - experimental evidence on antibiotic prescribing decisions

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Inappropriate prescription of antibiotics remains a major contributor to the global antimicrobial resistance crisis despite clear linkages between antibiotic utilization and resistance spread. This study aims to better understand the simultaneous and independent effect of previous prescription behavior, patient expectation, and clinical uncertainty on antibiotic prescribing. This discrete choice experiment was embedded within a routine organizational climate survey administered to all physicians working in the Tuscany healthcare system administered between Nov 11 and Nov 20, 2019 (Qualtrics). Participants were provided with a patient encounter vignette and subsequently asked to in which of two alternatives they were more likely to prescribe antibiotics. The two alternatives varied in levels of clinical uncertainty, patient expectations, and the physician's past behavior. We fitted a conditional logistic regression model. Respondents included 1,436 hospital-based physicians, of which 52% were female, 78% practiced in a general hospital setting, and 33% were between the ages of 50 and 59. Results show that the odds of prescribing antibiotics decrease when a patient requests it (OR = 0.80, 95%CI [0.72,0.89]) and increase when the physician has prescribed antibiotics to a patient under similar circumstances previously (OR = 1.15, 95%CI [1.03,1.27]). We found no significant effect of clinical uncertainty on the odds of prescribing antibiotics (OR = 0.96, 95%CI [0.87, 1.07]). We show that patient expectation has a significant negative association with antibiotic prescribing among hospital-based physicians. Our findings inform the design of antibiotic stewardship programs in Tuscany and highlight the importance of cultural context in shaping the physician's disposition when confronted with patient expectations. We suggest shared decision-making to improve prudent prescribing without compromising on patient satisfaction.

Key messages:

- Health administrators should address patient expectations when designing hospital antibiotic stewardship programs.
- Physicians' past prescribing behaviour influences antibiotic prescribing decisions and should be considered during intervention design.

Abstract citation ID: ckac131.189
STOBE: A Long-COVID Syndromic Study using Real-World data in Brazil

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Background:

The COVID-19 pandemic has changed the way infectious diseases are perceived. Global healthcare systems have faced challenges since the start of the COVID-19 epidemic, particularly in developing countries. Some individuals with an acute COVID-19 diagnosis have developed symptoms persisting beyond 90 days. Long-Covid is the new term for this syndrome (LC). LC, on the other hand, is poorly known and appears to cause a wide range of symptoms, particularly among Brazilian patients. As a result, utilizing retrospective data from patients in Petrolina, Brazil's largest city in the northeast, we conducted an exploratory epidemiology study.

Methods:

A retrospective, cohort study design was used with a real-world dataset. The primary aim was to evaluate the prevalence of LC within Petrolina. The sample size was 1,164 LC patients. A comparative and subgroup analysis was conducted to evaluate demographics, comorbidities, clinical symptoms, and mortality. A k means model was used to assess disease severity using a clustering analysis based on the presence of comorbidities.

Results:

The prevalence of physical symptoms identified was 69·5%. The strongest physical symptom was fever with resultant of 64·09% followed by pain, 43·64%. The prevalence of autonomic and neurological symptomatology was 8·59% and 8·16% respectively. A higher prevalence of autonomic symptoms were reported among older men of Black and Caucasian in comparison to Pardo. Disease severity within the sample could be associated with the presence of comorbidities which were identified based on medication history. Pregnant women have high rate of comorbidities. 529 patients have at least one comorbidity and 28·73% of them are pregnant.

Conclusions:

It is useful to evaluate symptoms although a definitive diagnosis of LC is essential. This study provides insightful information around LC within a Brazilian population to develop better infection control protocols, as well as future management of similar pandemics.

Key messages:

- This study could potentially improve the prognosis and mortality among LC patients with comorbidities.
- Our findings could be combined with other regional datasets to predict pattern inferences of LC spread, prognosis and morbidity, including for multimorbidity and pregnant patients.

Abstract citation ID: ckac131.190
Locality based Approach for containment of COVID-19 Infections in Pakistan's High risk Districts-ICT

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Background:

In May 2020, considering gradual restoration of all economical activities the Government of Pakistan updated containment strategy from locking down the whole country to locking down high-risk areas to mitigate COVID-19 spread. All districts having $\geq$300 cases/100,000 population. COVID-19 case incidence and test positivity rates by real-time RT-PCR before and after zonal lockdown were compared to assess whether the locality-based lockdowns can be used as an alternative to country lockdown to contain COVID-19 spread.

Methods:

Smart lockdowns were implemented in ten localities in the Islamabad Capital Territory (ICT), having a population of 60,000 from 12 May 2020 to June 3, 2020. Movements were restricted. Entry and exit points were guarded by police. Any person with symptoms of fever, cough, or sore throat tested by real-time RT-PCR methods and reported within 24 hours of collection. To compare the rate of active cases and positivity rate by weeks, we performed a z-test for two proportions and set $p < 0.05$ as the level of significance.

Results:

The red zone had 60,000 persons in 2.00 square kilometers. The rate of active COVID-19 cases significantly decreased ($p < 0.0001$) during intervention from 300/100,000 population pre-containment time to 22/100,000 population after the first three weeks of lockdown. The COVID-19 positivity rate also decreased significantly ($p < 0.0001$) from 24% (24/78) pre-containment to 5.3% during containment. A total of 3800 people were tested in the following three weeks of intervention and 26 cases were detected.

Conclusions:

The smart lockdowns approach reduced COVID-19 transmission in the ICT district. This type of intervention was recommended to reduce the COVID-19 infection spread

Key messages:

- Reduced COVID-19 transmission in the ICT district.
- Keeping balance between life and economy.

Abstract citation ID: ckac131.191
Socioeconomic Inequalities in pediatric Metabolic Syndrome: mediation by parental health literacy

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Background:

Parental health literacy may explain the relationship between parental socioeconomic status (SES) and pediatric metabolic syndrome (MetS). For this reason, we assessed to what extent parental health literacy mediates the relationships between parental SES and pediatric MetS.

Methods:

We used data from the prospective multigenerational Dutch Lifelines Cohort Study. Our sample consisted of 6,683 children with an average follow-up of 36.2 months (SD 9.3) and a mean baseline age of 12.8 years (SD 2.6). We used natural effects models to assess the natural direct, natural indirect, and total effects of parental SES on MetS.

Results:

On average, an additional four years of parental education, e.g. university instead of secondary school, would lead to cMetS scores that were 0.499 (95% confidence interval (CI) 0.364; 0.635) units lower, which is a small effect (d 0.18). If parental income and occupational level were one standard deviation higher, on average cMetS scores were 0.136 (95%CI 0.052; 0.219) and 0.196 (95%CI 0.108; 0.284) units lower, respectively; these are both small effects (d 0.05 and 0.07, respectively). Parental health literacy partially mediated these pathways; it accounted for 6.7% (education), 11.8% (income), and 8.3% (occupation) of the total effect of parental SES on pediatric MetS.

Conclusions:

Socioeconomic differences in pediatric MetS are relatively small, the largest being by parental education. Improving parental health literacy may reduce these inequalities. Further research is needed into the mediating role of parental health literacy on other socioeconomic health inequalities in children.

Key messages:

- Parental socioeconomic status (SES) has a small inverse relationship with pediatric metabolic syndrome (MetS), which is partially mediated by parental health literacy.
- Targeting parental health literacy may reduce inequalities in pediatric MetS. It may also influence other pediatric socioeconomic health inequalities, but further research is needed.

Abstract citation ID: ckac131.192
The impact of the SARS-CoV-2 pandemic on cause-specific- mortality: a systematic literature review

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Background:

Although investigating the patterns of COVID-19 excess mortality (EM) is relevant, understanding the effects of the pandemic on cause-specific mortality is even crucial and should also be assessed, as this metric allows for a more detailed analysis of the true impact of the pandemic. The aim of this systematic literature review is to estimate the impact of the pandemic on different causes of death, providing a quantitative and qualitative analysis of the phenomenon.

Methods:

We searched MEDLINE to identify studies that reported cause-specific mortality during the COVID-19 pandemic. We adopted several inclusion criteria: original article; assessed at least one cause-specific mortality during the pandemic; assessed causes of deaths using the ICD-10 classification; reporting of at least one of the following outcomes: cause-specific mortality estimates or cause-specific EM; full-length articles. Several relevant data were extracted (e.g. publication year, data stratification, territory, country income level, all-cause EM, and cause-specific mortality, etc.).

Results:

The search identified 548 articles. After title, abstract and full-text screening, we extracted relevant data from the final set of 14 articles. Cause-specific mortality was reported using different units of measurement. Only 9 studies reported the statistical significance and/or confidence intervals. The most frequently analyzed causes of death were cardiovascular diseases (n = 11), cancer (n = 7), diabetes (n = 6), and suicide (n = 5). We found very heterogeneous patterns of cause-specific mortality, for all the specific causes of deaths, except for suicide and road accident.

Conclusions:

The impact of the pandemic on cause-specific deaths has been very heterogeneous and the analyses conducted so far are not exhaustive. We advocate for the urgent need to find a consensus to define uniform methodological approaches to establish the true burden of the COVID-19 pandemic on non-COVID-19 mortality.

Key messages:

- We reviewed the body of literature to estimate the impact of the COVID-19 pandemic on different causes of death, and to provide a quantitative and qualitative analysis of the phenomenon.
- We did not identify unique patterns of cause-specific mortality due to too varied approaches in terms of disease classification and coding, and methodologies used for estimating mortality.

Abstract citation ID: ckac131.193
Childhood adversity and risk of later labor market marginalization in young employees in Sweden

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Background:

The present study examined the independent and combined effects of childhood adversity (CA) and occupational class on the risk of future labor market marginalization (LMM) in young employees in Sweden. Occupational class (non-manual/manual workers) was also explored as a potential mediator.

Methods:

This population-based longitudinal cohort study included 556,793 employees, 19-29 years, residing in Sweden in 2009. CAs included parental death, parental mental and somatic disorders, parental separation, household public assistance, single-parent household and residential instability. Measures of LMM included long-term unemployment (LTU), long-term sickness absence (LTSA) and disability pension (DP). Estimates of risk of each LMM measure, between 2010 and 2016 were calculated as Hazard Ratios (HR) with 95% confidence intervals (CI), using a Cox regression analysis.

Results:

Those exposed to CA had an elevated risk for all measures of LMM. Manual workers with a history of household public assistance had the highest risk estimates compared to non-manual workers with no CAs (adjusted HR spanning from 1.59 (LTSA) to 2.50 (LTU). Regardless of occupational class, the risk of LMM grew higher with increasing number of CAs (e.g. adjusted HR of LMM in manual workers with 3+ CAs: 1.87, 95% CI: 1.81-1.94). These patterns persisted after adjustments for a range of confounders, including psychiatric and somatic morbidity. Last, we found a small but significant mediating effect of occupational class in the association between CA and LMM.

Conclusions:

Information on CAs are important determinants of LMM in young adults, and especially in manual workers.

Key messages:

- Those exposed to childhood adversity had an elevated risk of labor market marginalization, in terms of long-term unemployment, long-term sickness absence and disability pension.
- Information on childhood adversity is an important determinant of labor market marginalization in young adults, and especially in manual workers.

Abstract citation ID: ckac131.194
Socioeconomic differences in contact reduction in the first COVID-19-wave in Germany (CoMoLo-study)

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Background:

The COVID-19 pandemic has led to physical distancing measures across a range of countries to control the spread of the virus. Evidence referring to contact dynamics in different socioeconomic populations is still sparse and may contribute to the explaining of socioeconomic inequality of infections.

Methods:

Data came from two early COVID-19 hotspots in Germany using the CORONA-MONITORING-lokal study (CoMoLo). The sample (n = 3,637) was restricted to working age (18-67 years). We calculated the association of individual education and occupation status (low, middle, high) and self-reported private and professional contact reductions. Using weighting factors (adaptation to local age, gender and education distribution), we performed multivariate Poisson regressions (prevalence ratios; PR) with different sets of covariates: hotspot, age, sex, country of birth, household size, contact level before physical distancing measures and home office.

Results:

The descriptive analyses show a clear socioeconomic gradient in private (low education: 70,0%; middle: 79,1%; high: 86,2%) and professional contact reductions (low education: 54,6%; middle: 61,3; high: 77,2%). The multivariate analyses confirm these associations, with a stronger gradient for professional contacts (private contact reduction: PR low vs. high education = 0,83 [KI:0.74-0.93]; professional contact reduction: PR low vs. high education = 0,75 [KI:0.64-0.89]) as well as for professional contact reduction when occupational status is considered instead of education.

Conclusions:

Our results show disadvantages in groups with lower educational or occupational status in private and professional contact reductions in the first pandemic wave. This might result in a higher risk of infection. Preventive measures that a) adequately explain the importance of contact restrictions and b) facilitate the implementation of these reductions seem necessary to better protect structurally disadvantaged people during epidemics.

Key messages:

- Groups with lower educational or occupational status were less likely of being able to reduce their private and professional contacts in the first wave of the pandemic.
- Socioeconomic differences were more pronounced in professional contact reduction compared to private contact reduction.

Abstract citation ID: ckac131.195
Class inequalities in physical functioning trajectories before and after retirement

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Background:

Longer work careers are discussed, but inequalities in health trajectories among employees facing retirement remain poorly understood. We examined social class trajectories in physical functioning among ageing female employees ten years before and after transition to old-age or disability retirement.

Methods:

We used Helsinki Health Study cohort data. The baseline (2000-02) included 7168 women, aged 40-60, employed by the City of Helsinki, Finland (response 67%). Follow-ups took place in 2007, 2012 and 2017 (response 78-83%). The outcome was RAND-36 Physical Functioning subscale, range 0-100, with higher scores indicating better functioning. Social classes were upper and lower class, and covariates age, work conditions and health behaviours. Mixed-effect growth curve models were used to predict functioning scores and 95% confidence intervals (CI) 10 years before and after mandatory old-age or disability retirement.

Results:

Old-age and disability retirees lacked class inequalities in functioning 10 years prior retirement. Towards retirement transition, functioning declined and inequalities emerged. Among old-age retirees, the predicted score was 86.1 (CI 85.2-86.9) for upper class and 82.2 (81.5-83.0) for lower class. Among disability retirees, the score was 70.3 (67.8-72.9) for upper class and 62.2 (60.4-63.9) for lower class. Among old-age retirees, functioning declined and inequalities slightly widened. Among disability retirees, the decline plateaued and inequalities narrowed. Physical work and BMI somewhat attenuated the inequalities.

Conclusions:

Among female employees, functioning declined and class inequalities emerged towards retirement transition. Widening inequalities were seen among old-age retirees, but not among disability retirees. Preventing the decline of functioning and related inequalities would help safeguard a healthy and successful ageing among female retirees.

Key messages:

- As functioning shows a constant decline before and after old-age retirement, there is a need for slowing down the pace of the decline.
- Class inequalities in functioning tend to widen among old-age retirees; egalitarian measures are needed to turn the development to narrowing inequalities.

Abstract citation ID: ckac131.196
The effect of BMI at cancer diagnosis on survival of patients with head and neck carcinoma

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Background:

Previous findings suggest a positive association between body mass index (BMI) and survival from head and neck cancer (HNC). The aim of this study is to investigate the prognostic role of BMI at the time of diagnosis in a large international cohort of HNC patients.

Methods:

We performed a pooled analysis of studies included in the INHANCE consortium. Cases were adults with HNCs of the oral cavity, oropharynx, hypopharynx, and larynx. We used Cox proportional hazards models to estimate the adjusted hazard ratios (HR) for overall survival and HNC-specific survival, by cancer site. Subgroups analyses were performed according to smoking status and duration of follow-up.

Results:

The study included 10,177 patients from 10 studies worldwide with a median follow-up of 48 months; 3654 patients (35.9%) died from all causes, including 1202 (11.8%) from HNC.

Underweight patients had lower overall survival (HR = 1.69, 95% CI: 1.31-2.19) respect to normal BMI patients (BMI = 18.5-24.9 kg/m2) with consistent results across the HNC sites. In HNC-specific mortality analyses, the survival for underweight patients was not significant, except for underweight patients with oropharyngeal cancer (HR = 1.43, 95% CI: 1.11-1.83). Overweight and obese patients for oropharyngeal cancers had a favourable HNC-specific survival (HR = 0.50 (95% CI: 0.33-0.75) and HR = 0.51 (95% CI: 0.36-0.72), respectively). Among never smokers, overall BMI status was not associated with HNC-specific survival. Among ever smokers overweight and obese categories showed a favourable HNC-specific survival (HR = 0.69 (95% CI: 0.56-0.86) and HR = 0.70 (95% CI: 0.61-0.80)).

Conclusions:

Our findings show that high BMI values increase the survival rates in smoking patients with HNC, suggesting that a nutritional reserve may help patients survive HNC cancer. This effect, however, may be partly explained by residual confounding, reverse causation, and collider stratification bias.

Key messages:

- Our analysis reports the results of the largest available pooled analysis on the prognostic significance of BMI in the survival of 10,177 HNC patients from 10 studies worldwide.
- Lower overall survival was observed in underweight patients for all HNC sites and a lower HNC-specific survival was observed with oropharyngeal cancer. Adiposity could serve as a nutrient reserve.

Abstract citation ID: ckac131.197
Excess mortality during the coronavirus pandemic (COVID-19) in Poland

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The COVID-19 pandemic, has begun a global changes in the mortality model, exceeding its predicted levels under standard conditions. The aim of the study was to assess the phenomenon of excess mortality in Poland in 2020 and in the first half of 2021 compared to 2016-2019 based on the data of the Central Statistical Office. The number of excess deaths was defined as the difference between the deaths in 2021 and the average number of deaths in the previous years. In accordance with the Eurostat methodology the 2016-2019 average was taken as the reference point. In 2020, the number of deaths in Poland amounted to 485,259 and was higher by 14.9% than expected on the basis of mortality in 2016-2019 (the absolute excess number of deaths amounted to 67,112). 43% of the excess deaths were deaths caused by Sars-Cov-2, 27% other deaths among infected people, and 30% deaths among those without confirmed infection. In this group, the highest increases were recorded for deaths due to cardiovascular diseases, neurological diseases and mental disorders. In the first half of 2021, 270,662 people died in Poland, i.e. 23.9% more than in the corresponding period in 2016-2019 and 22.9% more than in the first half of 2020, whereas 58,096 people died due to COVID-19 (22% of all deaths). The highest increases for non-viral deaths compared to 2016-2019 were recorded for blood diseases and immune mechanisms (121.53%), infectious and parasitic diseases (90.76%), mental disorders (34.93%) and cardiovascular diseases (11.65%). Excess mortality is a very serious problem of the public health. The increased mortality in 2020 and 2021 was closely related to the pandemic, as direct COVID-19 victims accounted for the majority of the observed increases in mortality. However, attention should be paid to the growth in mortality related to other causes, mainly mental disorders, for which mortality increases most rapidly, which requires immediate action.

Key messages:

- The increased mortality in 2020 and 2021 was closely related to the pandemic, as direct COVID-19 victims accounted for approximately 90% of the observed increases in mortality in Poland.
- In the group of no-related with COVID-19 deaths the highest increases were recorded for mortality due to cardiovascular diseases, neurological diseases and mental disorders.

Abstract citation ID: ckac131.198
Acute Alcohol intoxication in Belgian adolescents: a retrospective hospital chart study

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Background:

Binge drinking by adolescents in Belgium is an increasing problem, according to emergency physicians who have recently alerted society about the increasing numbers of adolescents admitted to hospital due to acute alcohol intoxication (AAI). Until now, only estimations of the prevalence of AAI in adolescents are known and research about potential risk factors has not yet been conducted in Belgium.

Methods:

To gain more insight into the prevalence, medical characteristics, and context of AAI, a retrospective study in hospitals in the city of Antwerp was conducted. Medical charts of 10 to 18-year-old patients admitted with AAI between 2015 and 2021 were investigated and analysed.

Results:

Between 2016 and 2021, 547 adolescents with AAI were admitted to 5 of the 8 hospitals in Antwerp. In the University Hospital of Antwerp (n = 177) mean age at admittance was 15.9 years. Older patients had a significantly higher BAC than younger patients (U:2357, 1, p-value: <0.001). In 10% of the patients combined drug use was proven and in this group, BAC was significantly lower (U:209, 1, p-value: <0.001). 60% of the patients were transmitted to the hospital by ambulance and in 31% the ambulance was assisted by specialised medical care. In 18% of the cases, the police were involved. The results of the other hospitals are not yet known at the time of submission but will be presented at the EPH conference.

Conclusions:

According to the data so far, younger patients and patients with comorbid drug use are admitted with a lower BAC, which could be seen as a potential risk factor. This should be considered in developing preventive measures like sensitization. Moreover, in a noteworthy percentage, ambulances, specialized care, and police are involved, which contributes to high medical and social costs. However, data addressing demographics and the context of AAI were mostly missing. Therefore, prospective research is required to further investigate potential risk factors for AAI.

Key messages:

- A significant amount of adolescents with AAI are admitted in the city of Antwerp every year, with a mean age of 15.9 years old, which is below the legal alcohol age.
- Considering the high prevalence of AAI and the major impact it has on adolescents health and medical and social costs, it is necessary to decrease the prevalence of binge drinking in adolescents.

Abstract citation ID: ckac131.199
Birth order and sickness absence: register-based evidence from Finland

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Background:

In working ages, sickness absence is strongly related to persons' health condition. We studied how birth order was associated with receipt of sickness absence, distinguishing mental disorders, musculoskeletal disorders and injuries.

Methods:

A follow-up study based on the entire Finnish population was conducted for sibling groups born 1969-1982, in which each sibling was observed from age 35 years in the period 2004-2018. Focus was on within-family variation in first-time sickness allowance receipt. Stratified Cox regressions were estimated using Stata 16.

Results:

Each increase in birth order was associated with a higher risk of sickness absence. For mental disorders, the hazard ratio as compared to first borns was 1.03 (95% CI: 0.98, 1.08) of second borns, 1.10 (95% CI: 0.99, 1.22) of third borns, and 1.52 (95% CI: 1.25, 1.85) of fourth or higher borns. Corresponding numbers for musculoskeletal disorders were 1.12 (95% CI: 1.07, 1.17), 1.19 (95% CI: 1.09, 1.30) and 1.15 (95% CI: 0.96, 1.38), and for injuries 1.06 (95% CI: 1.01, 1.12), 1.09 (95% CI: 1.21, 1.14) and 0.96 (95% CI: 0.77, 1.20), respectively. These associations were notably stronger for women than men, but modestly influenced by mother's age at birth, educational level, occupation, income and family composition.

Conclusions:

The study was the first to provide evidence about an interrelation between birth order and sickness absence, utilising diagnose information and family fixed effects methods. A clear birth order pattern was observed for these main causes, but not for a residual group that consisted of other miscellaneous causes. Higher birth order was found associated with a higher risk of sickness absence, and particularly so for mental disorders and muscoloskeletal disorders in women. The underlying mechanisms behind these associations constitute an avenue for future research.

Key messages:

- Using sibling fixed effects, the study was the first to analyse if sickness absence by main cause is associated with birth order in working ages.
- First-born siblings were the least likely to be sick because of mental or musculoskeletal disorders, and the associations were notably more accentuated for women than men.

Abstract citation ID: ckac131.200
Prevalence of hepatitis B and C, HIV, and syphilis among people who inject drugs in Germany

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Background:

We piloted a future monitoring system among people who inject drugs (PWID) in Germany (DRUCK2.0). Monitoring is needed to inform and support the viral hepatitis/HIV/STI elimination process in Germany by providing regular up-to-date prevalence and behavioural data for this key population.

Methods:

PWID aged 16+ years who injected drugs within the last 12 months were recruited by time location sampling via low threshold drug services and opioid substitution treatment (OST) practices during routine services in Berlin and Bavaria between 01/06/2021 and 28/02/2022. All participants filled a questionnaire on sociodemographics, behaviour and access to care and were tested for hepatitis B and C (HBV, HCV), HIV and syphilis using capillary dried blood spots. All received a 10 Euro incentive voucher.

Results:

In total, 495 PWID were included, median age was 39 years [range 18-66], 68% (336/494) were male, and 23% (114/492) born outside Germany, mostly in eastern Europe. Of all participants, 58% (275/477) reported recent use of unsafe needles/syringes and 77% (372/485) detention experience. Current OST was reported by 62% (304/487). Prevalence was 46% (229/495) for cured HCV, 26% (130/495) for active HCV, 17% (80/482) for cured HBV, 1.2% (6/483) for active HBV, 2.7% (13/482) for HIV and 2.1% (10/473) for previous Syphilis. Serological HBV vaccination coverage was 24% (115/475). Of all, 95% (453/475) reported previous HCV testing. Of those with cured/active HCV infection 88% (296/337) knew about their infection and 56% (161/285) of them reported previous/current treatment.

Conclusions:

To decrease the heavy burden of infection among PWID in Germany, targeted measures regarding access to HCV treatment, HBV vaccination, and harm reduction (safer use measures, OST) need to be implemented and rolled out. Nationwide regular monitoring of indicators in this key population is needed to guide the elimination progress of viral hepatitis and HIV in Germany.

Key messages:

- High burden of active Hepatitis C infection and low Hepatitis B vaccination coverage among people who inject drugs in Berlin and Bavaria require improved access to treatment and prevention efforts.
- National Monitoring is needed to inform and support the viral hepatitis/HIV/STI elimination process among people who inject drugs in Germany.

Abstract citation ID: ckac131.201
Prevalence of blood-borne viral and sexually transmitted infections among homeless people in Berlin

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Background:

Risk factors associated with precarious living conditions make people experiencing homelessness (PEH) also highly vulnerable for blood-borne viral and sexually transmitted infections (BBVSTI) and tuberculosis (TB). The number of PEH in Germany is rising, yet little data is available on the infectious burden among this population. A pilot study assessed the prevalence of BBVSTI, TB, behaviours and access to medical services among PEH.

Methods:

We recruited PEH from April-June 2021 in five low-threshold medical services in Berlin. Behavioural data was collected via questionnaire-based interviews. Serological/molecular testing from venous blood samples was performed for Hepatitis B (HBV), Hepatitis C (HCV), HIV, syphilis and TB and from urine for Neisseria gonorrhoeae (NG) and Chlamydia trachomatis (CT).

Results:

Of 216 participants, 88% (191/216) were male and 73% (158/215) were born abroad. Mean age was 41 years (range 19-68). No health insurance was reported by 57% (123/216) and previous incarceration by 71% (153/214). Of all, 53% (114/216) injected drugs in the last 30 days, and 41% (89/216) reported unprotected sex in the last 12 months. Prevalence of active HBV was 1.9% (4/212), of active HCV 15.9% (34/213), and of HIV 2.8% (6/213). No active TB was diagnosed, while 14.4% (31/216) tested positive for latent TB infection. Active syphilis was found in 1.4% (3/212), NG in 2.0% (4/197), CT in 3.0% (6/197), and serological evidence of HBV vaccination in 26% (56/212). While 44% (96/216) of participants were ever tested for HCV, 71% (36/51) of those with HCV antibodies knew about their infection, 36% (13/36) of them reported previous/current treatment.

Conclusions:

Burden of HCV and HIV was high among PEH in Berlin, and risk behaviours were frequently reported. There is a need to improve access to regular health care, accompanied by low-threshold prevention offers in cooperation with drug and homeless services. A nationwide expansion of the study is planned.

Key messages:

- High burden of Hepatitis C and HIV among people experiencing homelessness in Berlin, Germany.
- Access of people experiencing homelessness to regular health care needs improvement, accompanied by low-threshold prevention offers in cooperation with drug and homeless services.

Abstract citation ID: ckac131.202
Healthcare-associated infections in a neonatal ICU before and during COVID-19: preliminary results

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Background:

Healthcare-associated infections (HAIs) are a frequent complication in neonatal intensive care units (NICUs). Hospital policies caused by COVID-19 pandemic may have played a role in HAIs development. The aim of this study was to describe and characterize over time the occurrence of HAIs in a NICU at the Policlinico Umberto I in Rome both before and during the COVID-19 pandemic.

Methods:

All infants of all birth weight (BW) classes with >2 days in the NICU, admitted from January 2018 to December 2021, were included. To assess the effect of the pandemic, we compared surveillance data from 2018-2019 with those from 2020-2021. Infections were defined using standard Centers for Disease Control and Prevention definitions.

Results:

We included 513 infants, 274 admitted in 2018-2019 and 239 between 2020-2021. NICU stay in days was similar in the two periods (14.4 and 15.3 respectively) but the number of patients who died in 2018-2019 (N = 13) was almost double that of 2020-2021 (N = 7). A total of 27 infections were recorded in the post-pandemic period compared to 9 recorded in the previous period, mainly central line-associated bloodstream infections (CLABSI) (7% vs 3.0%, p = 0.043), followed by ventilator-associated pneumonias (VAP) (3.0% vs 0.4%, p = 0.019). The incidence density of device-associated infections was higher in patients with lower BW class in both periods analyzed. Different microorganisms were isolated: in 2018-2019 K. pneumoniae (33.3%) and Serratia marcescens (33.3%) were the most found, while S. aureus (29.0%) and Staphylococci coagulase negative (51.6%) were predominant in the following years.

Conclusions:

Results indicate that patient management may have influenced the occurrence of HAIs during the pandemic. This reinforces the importance of the HAI surveillance protocol in the NICU, which monitors microbiologic isolates and medical device use for all classes of infants with BW.

Key messages:

- The Covid-19 pandemic has resulted in an increase in healthcare-associated infections occurrence in our neonatal intensive care unit.
- Monitoring device-associated infections in all BW classes of infants is critical to prevent nosocomial infections.

Abstract citation ID: ckac131.203

This abstract has been withdrawn

Abstract citation ID: ckac131.204
The impact of the COVID-19 pandemic on the incidence of herpes zoster

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Background:
There have been several case reports of herpes zoster (HZ) following COVID-19 disease and vaccination. We conducted a non-systematic literature search to elucidate the global effects of the COVID-19 pandemic on the incidence of HZ.
Methods:
The literature search was performed in October 2021 using PubMed and Embase. The search string was herpes zoster AND COVID-19. Publications were manually reviewed; case reports were removed.
Results:
Three retrospective studies reported the risk of HZ following COVID-19 disease. One study (Bhavsar, 2021) used two US databases and found higher risk of HZ following COVID-19 disease (relative risk [RR] = 1.15) and COVID-19 hospitalisation (RR = 1.21), respectively. A strong association between HZ and COVID-19 disease (RR = 5.27) was also reported in a study of the University of Florida patient registry (Katz, 2021). The third study (Barda, 2021) reported no association between COVID-19 disease and risk of HZ (RR = 0.82). In two of the three observational studies in Israel (Furer, 2021 and Barda, 2021), the incidence of HZ was increased following COVID-19 vaccination. The third study (Shasha, 2021) found no association (RR = 1.07). Other studies included a report in Brazil (Maia, 2021) that demonstrated a 35% increase in HZ diagnoses during the pandemic versus pre-pandemic and a published model (La, 2021) that estimated the declining uptake of recombinant zoster vaccine in the US may result in 63,117 avoidable HZ cases in those who remain unvaccinated in 2021.
Conclusions:
Emerging data suggest that the COVID-19 pandemic may have increased the risk of HZ and negatively impacted HZ vaccine uptake. Therefore, there is an important need to increase awareness of HZ and HZ vaccination during the pandemic.
Key messages:
- There is a need to increase awareness of HZ and HZ vaccination during the COVID-19 era.
- Further studies are needed to fully understand the impact of COVID-19 on the risk of HZ.

Abstract citation ID: ckac131.205
Quality of life assessment in breast cancer patients during palliative treatment in Indonesia

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Background:
This study aimed to prospectively assess quality of life (QOL), QOL domains, and pain severity in advanced stage breast cancer patients during palliative oncology treatment in Indonesia.
Methods:
Advanced stage breast cancer patients > 18 years (n = 160) who began palliative oncology treatment were enrolled in the study using convenience sampling. They completed the EORTC QLQ-C15-PAL questionnaire and pain severity (Visual Analogue Scale, VAS) score at three-time points (baseline (T0), three-(T1) and six-months (T2) follow-up). The repeated measures analysis of variance (ANOVA) model was used to assess the QOL, QOL domains, and pain severity changes over time adjusted for age, place of residence, marital status, and Karnofsky Performance Status score at baseline. We classified the change over time in three qualitative groups (deterioration, improvement, or trivial/no difference). We considered it clinically relevant if patients had a 10-point difference.
Results:
The mean age of included patients (n = 159) was 50 years. Most lived in an urban area (72.3%), had low education (71.7%), and were married (81.8%). The repeated measures ANOVA showed that the QOL score, emotional functioning, fatigue, dyspnea, appetite loss, constipation, and VAS pain score remained stable over the 6-months period. In contrast: physical functioning declined (medium to large deterioration (-19.8 (95% CI -27.2 to -12.5)) between T0 to T2), however there was an improvement in the insomnia domain (medium improvement (-13.4 (95% CI -19.9 to -6.9)) between T0 to T2).
Conclusions:
Our findings indicated that advanced stage breast cancer patients adapted well to palliative oncology treatment over six months of observation. There was deterioration in physical functioning, but improvement in insomnia. However, more attention is needed from clinicians to achieve improvement in the overall QOL score and specific QOL domains.
Key messages:
- Focusing on improvement overall QOL score and specific QOL domains will lead to better advanced stage breast cancer patients' satisfaction and care.
- Information is limited on palliative treatment satisfaction in low and lower middle-income countries, therefore this study has important impact on further policy considerations in Indonesia.

Abstract citation ID: ckac131.206
Hospital admissions and mortality for STEMI and NSTEMI during COVID-19 outbreak: a meta-analysis

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Background:
During SARS-CoV-2 pandemic, various studies have shown a significant reduction of Emergency Department (ED) presentations for acute cardiac diseases requiring in-hospital management. The aim of our study was to quantify hospital admission and mortality, comparing pandemic period and pre-pandemic period in different countries.
Methods:
We performed an updated meta-analysis of observational studies to quantify on a large basis the impact of the SARS-CoV-2 outbreak on patients admitted to the ED for STEMI and NSTEMI. The literature research was conducted on PubMed, EMBASE, Scopus, Science Direct, Web of Science and Cochrane database registry on 6 January 2022. We performed a random-effect model meta-analysis.
Results:
A total of 61 studies were included: came from Italy, China, Germany, Israel, Turkey, France, Helvetic Confederation, India, Poland, Spain, US, UK, Albania, Austria, Egypt, Greece, Iran, Ireland, Japan, Pakistan, Portugal, Saudi Arabia and Canada. Hospital admissions for STEMI decreased in most country. The countries with the high levels of reduction were Italy (IRR = 0.68) and Germany (IRR = 0.69). Mortality rates for STEMI increased differently among countries analyzed: p = 0.003. The

highest mortality rate was in Serbia (OR = 2.15), followed by Italy (OR = 1.97), Pakistan (OR = 1.69) and France (OR = 1.55). Among the High-Income countries, the highest mortality rate was in Italy (OR = 3.71), the highest among the Upper-Middle-Income was in Serbia (OR = 2.15) and the highest among Low- Middle-Income was in Pakistan (OR = 1.69). Regarding NSTEMI, hospital admissions showed that Italy had the lowest value for with IRR = 0.59. Among countries, the meta-regression subgroups analysis, showed statistical difference ($p < 0.001$).

Conclusions:

Our meta-analysis may represent a robust snapshot that might help healthcare systems manage and assist an expected higher number of people coming to the hospitals for severe, post-acute cardiological issues in the future.

Key messages:

- The study shows hospital admission and mortality, comparing pandemic period and pre-pandemic period in different countries.
- Epidemiological data suggests that one-fourth to one-third of MI patients, in large areas of the globe, during the COVID-19 pandemic in 2020, remained at home and did not have access to ED.

Abstract citation ID: ckac131.207
Seroprevalence of SARS-CoV-2 before/after case zero

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Introduction:

Italy was one of the first EU countries hit by the COVID-19 pandemic. Currently, Italy has reported 15.5 million cases of COVID-19 and 161000 deaths. Meanwhile, the vaccination campaign against COVID-19 began in Italy at the end of 2020, using mRNA and viral vector vaccines (immunizing people against Spike protein of SARS-CoV-2. The purpose of this study was to estimate, in a representative sample of the Italian population, the prevalence of antibodies against SARS-CoV2 in 2019 (before case zero, identified in Italy in February 2020) and in 2021, after 3 pandemic waves and a vaccination campaign.

Methods:

During October / November 2019: 365 participants were selected in the Piedmontese population among those who went to a hospital for routine blood tests. The population was selected on the basis of age and gender to be representative of the Italian population. The same number of patients was selected in the first quarter of 2021, the inclusion and exclusion criteria remained the same. Sera were searched for spike protein of SARS-CoV-2 and, if positive, tested for anti-nucleocapsid antibodies.

Results:

Our preliminary data show that half of the sample for both years is female. In the 2019 sample, i.e. before case zero was identified in Italy (Lombardy), five of the sera (4 males and one female) tested positive for anti-Spike,indicating a previous infection (vaccine didn't exist). In the 2021 sample, 152 males and 139 females tested positive for IgG anti-spike, for a total of 291. The prevalence therefore passed from 1.37% to 79.73%. As regards the search for ANti-Nantibodies, one male and one female tested positive in 2019; in 2021 9 males and 13 females.

Conclusions:

The results of our study show that in 2019, before the first official case in Italy was highlighted, coronavirus was already circulating. The prevalence has risen exponentially, going from less than 2% to around 80%.

Key messages:

- Covid-19 was circulating in Italy in 2019.
- Seroprevalence of anti-S in 2021 was about 20%.

Abstract citation ID: ckac131.208
Oral Contraceptive Use and Breast Cancer Risk According to Molecular Subtypes Status: A Meta-Analysis

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Background:

Breast cancer is a heterogeneous disease with distinct molecular signatures of disease etiology, evidenced by the joint expression of molecular tumor markers. Differential effects of oral contraceptive use on breast cancer risk by molecular subtypes have been reported. This is the first meta-analysis to investigate associations between oral contraceptive use and subsequent breast cancer risk stratified by combined estrogen receptor (ER) and progesterone receptor (PR) status alongside the Luminal A and B subtypes, which additionally consider the human epidermal growth factor receptor 2 (HER2) status.

Methods:

A systematic review and meta-analysis of case-control and cohort studies was conducted in PubMed and Web of Science. The odds ratios (ORs) were summarized using a random-effects model.

Results:

Eleven studies met the inclusion criteria for qualitative and quantitative analysis. Random effects meta-analyses revealed significant risk increasing effects for ever-users of oral contraception on ER-PR- breast cancer compared to never-users (OR = 1.30, 95% CI; 1.07 to 1.56, $p < 0.01$). Ever-use of oral contraception was not associated with breast cancer risk when stratified by the ER+PR+ breast cancer subtype (OR = 1.00, 95% CI; 0.86 to 1.16, p = 0.99). Data on Luminal A and B subtypes was limited and not suggestive for associations with breast cancer risk in ever-users of OCs compared to never-users. Furthermore, a significant increased risk of ER-PR- breast cancer was observed for OC use duration of > 4 years compared to never-users (OR = 1.74, 95% CI: 1.15 to 2.63, $p < 0.01$).

Conclusions:

The current state of the evidence suggests that OC use longer than 4 years is associated with an increased breast cancer risk, pertaining to the estrogen and progesterone double negative breast cancer subtype. Large-scale prospective observational studies including more comprehensive molecular signature of breast cancer aetiology, including HER2 status, are needed.

Key messages:

- The use of oral contraception was associated with estrogen and progesterone receptor double negative breast cancer, but not hormone receptive positive cancer.
- This is the first meta-analysis to investigate oral contraceptive use and associations with breast cancer risk by combined estrogen and progesterone receptor status.

Abstract citation ID: ckac131.209
Future trends of overweight and obesity in Belgium using Bayesian age-period-cohort models

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Background:

Considering the current overweight and obesity epidemic and its associated increase in non-communicable diseases and healthcare costs, the current study aimed to project the trends in prevalence of overweight and obesity in Belgium using a Bayesian age-period-cohort (APC) model to support policy planning.

Methods:

Height and weight of 58,369 adults aged 18+ years, collected in six consecutive cross-sectional health interview surveys between 1997 and 2018, were evaluated. Criteria used for overweight and obesity were defined as body mass index (BMI) $\geq$ 25, and BMI $\geq$ 30. A Bayesian APC model was applied to evaluate past trends and associated socio-demographic risk factors, and to forecast trends to 2019-2029. All analyses were performed based on integrated nested Laplace approximation (INLA) and took the complex survey design into account.

Results:

The prevalence of overweight and obesity has increased between 1997 and 2018. If current trends continue, it is likely to that a further increase in the prevalence of overweight and obesity in the population will be seen by 2029 with a probability of growth of 51.2% and 73.3%, respectively. Forecasts indicated a potential prevalence of 50.1% [16.2%; 84.4%] in 2029 for overweight, and 21.4% [9.0%; 43.4%] for obesity. Among survey participants, middle-aged men with no higher education and a middle income showed the highest risk of overweight and obesity.

Conclusions:

We projected an alarming increase in the prevalence of overweight and obesity. A decrease in cases seems very unlikely. There is an urgent need to target younger age groups for prevention and implementation of public educational programs to limit the increasing trend in overweight and obesity.

Key messages:

- The occurence of obesity is likely to increase in the following 10 years.
- Projection of trends can serve as a useful tool for policy planning on the mid- and longer term.

Abstract citation ID: ckac131.210
The contribution of health behaviours to waist circumference change following employment transitions

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Background:

Mechanisms through which retirement and later-life job loss lead to subsequent weight change are poorly understood, and include changes to one's health behaviours (HBs) after employment changes. Our study assessed the potential role of HBs in the impact of employment transitions (ET) on waist circumference (WC), by gender.

Methods:

We used two waves of survey data from a Canadian sample of 45- to 85-year-olds with objectively measured WC. For 10,117 participants who were working at baseline, we categorized them into three ET statuses: stayed working, entered retirement, and stopped working. Changes in HBs [sleep, smoking, drinking, and physical activity (PA)] were coded by comparing baseline and follow-up responses. Change in WC was analyzed using multivariable linear regression and multinomial logistic regression models ($\geq$5% gain or loss, no change).

Results:

Multivariable models showed that the addition of change in HBs did not alter the effect sizes of ETs on WC change. Regardless of ET status, women who quit smoking had an increased WC compared to persistent non-smokers (1.43cm, 95% Confidence Interval 0.07 - 2.79). Women who became habitual drinkers showed more increases in WC compared to non-habitual drinkers (1.43cm, 0.16 - 2.69). Changes to sleep duration were not associated with WC change; however, women who became satisfied with their sleep had greater WC increases compared to already satisfied sleepers (0.79cm, 0.12 - 1.46). Men who increased their PA by > 1hr to 2hrs were less likely to gain $\geq$5% weight compared to men with no PA change (OR = 0.75, 0.57 - 0.99). Women who increased their PA by > 1hr to 2hrs were less likely to lose $\geq$5% weight (OR = 0.74, 0.56 - 0.99).

Conclusions:

Our study of this Canadian cohort of middle-aged and older adults suggests some HBs are independent risk factors for weight change rather than mechanisms in the employment-anthropometry relationship.

Key messages:

- Health behaviour changes in middle-aged and older adults have anthropometric effects that differ by sex/gender, independent of employment transitions.
- Promotion of persistently good sleep quality to women may help maintain waist size.

Abstract citation ID: ckac131.211
Work outcomes of breast cancer survivors who returned to work after treatment: CANTO cohort

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Background:

As survival rates among breast cancer patients improve there is an increasing need to address breast cancer survivors' (BCS) issues, professional life being a key aspect. Return to work (RTW) of BCS has been largely studied, but studies on job maintenance and its determinants are scarce. We aim to study job maintenance after RTW and the associated factors among BCS.

Methods:

We used data from the CANTO cohort, a French prospective cohort of BCS. We included 1643 BCS aged <57 at diagnosis (dx) who returned to work two years after dx. We excluded self-employed BCS. Using multinomial logistic models, we assessed the association between activity status one year after they return to work. (i.e. active, sick leave, or unemployed, retired or invalidity) and sociodemographic, clinical, health status and work-related factors.

Results:

Overall, 87% of BCS were active, 10% were on sick leave and 3% were on unemployment, retirement or invalidity one year after they return to work. In the fully adjusted model being on sick leave was associated with stage III at dx (OR: 1.89, 95% CI: 1.11-3.22), being severely fatigued at the moment of returning to work (OR: 1.53, 1.04-2.27), and having workplace accommodations (OR: 1.79, 1.14-2.81). The unemployed, retired, invalidity status was negatively associated with professional life being more than or as important as one's personal life (OR: 0.51, 0.26-0.98) and being <50 years old (OR: 0.51, 0.27-0.96), and positively associated with having a fixed-term contract (OR: 2.69, 1.39-5.18) and working for a small company (OR: 2.73, 1.24-6.02).

Conclusions:

A non-negligible proportion of BCS are non-active one year after they return to work. While clinical factors are associated with sick leave, work related factors are associated with the unemployed, retired, and invalidity status. RTW should not be regarded as the ultimate goal and future policies should focus on ensuring people are ready to return to work and maintain their jobs.

Key messages:

- A non-negligible proportion of breast cancer survivors are non-active one year after they return to work.
- Future policies should ensure job maintenance along with return to work.

Abstract citation ID: ckac131.212
Contextual effects on health: systematic review of studies using natural experiments among migrants

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Background:

Many studies on contextual health effects suffer from compositional bias and selective migration into neighbourhoods. Longitudinal natural experiments have the potential to overcome these limitations, and there are several opportunities for this research design in the migration context. We aimed to synthesize evidence from natural experiments among migrants studying the effect of contextual factors on health and healthcare.

Methods:

Peer-reviewed literature in English or German was systematically searched in four major databases in December 2021. Following systematic abstract- and fulltext-screening, 32 studies were included for analysis. Evidence on contextual impacts on physical and mental health, mortality, and healthcare was narratively synthesized and quality appraisal conducted.

Results:

We found four types of contextual health effects: factors of the place of residence in receiving countries (n = 6), migration-context interactions (n = 10), policy environments (n = 15) and cultural factors (n = 1). Results show the negative impacts of post-migratory contexts on physical health and mortality and the favourable impacts on child health. Impacts on mental health are mixed. Analyses of policy contexts indicate the negative impacts of restrictive migration and social policies on healthcare utilization, mental health and mortality as well as the positive effects when restrictions are lifted.

Conclusions:

Natural experiments can serve as powerful tools in disentangling the effect of context on health and reducing bias through self-selection. Results demonstrate the negative impacts for health which lie at the nexus of migration and neighbourhood disadvantage. At the same time, studies uncover the potential of health, welfare and visa programs to counteract such disadvantages and create healthy post-migratory contexts. With careful consideration of causal pathways, results from migration contexts can serve as a magnifying glass for effects of context in other population groups.

Key messages:

- Natural experiments can serve as powerful tools in disentangling the effect of context on health and reduce bias through self-selection.
- Results show the negative impacts for health that lie at the nexus of migration and neighborhood disadvantage, as well as the potential of inclusionary policies to counteract them.

Abstract citation ID: ckac131.213
Impact of BMI on breast screening participation: a data linkage study

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Background:

Regular mammographic screening can reduce breast cancer morbidity and mortality. Participation rates are suboptimal in Australia's fully funded biennial breastscreening program (BreastScreen) for women aged 50-74. Despite obesity being a well-established risk factor for post-menopausal breast cancer, cross sectional data suggests obesity may be a risk factor for non-participation in recommended screening, due to adverse screening experiences. This research aimed to ascertain the link obesity and non-participation by using data linkage of routinely collected data.

Methods:

Data for women age eligible for breast screening were linked between the NSW Cancer Registry and the Australian Longitudinal Study of Women's Health (ALSWH) to create a cohort of women who either participated in screening as recommended or not. Women from the 1946-1951 ALSWH birth cohort were included in the study. These women reported BMI via 8 survey waves. The primary outcome was adherence to breast screening measured by frequency of screening over the follow-up period (1998-2016). Unadjusted risk ratios were calculated using mixed-effects logistic regression for the association between BMI and screening participation.

Results:

The study included 2804 linked records of age eligible women (mean age of 52.37[SD 5.47]). 22.8% of the cohort were obese (BMI>30kg/m2). Obesity was significantly associated with non-recommended screening participation (screening within 3 years of last breast screen); odds ratio 1.63 (95% confidence interval 1.32 to 2.00, $p < 0.0001$).

Conclusions:

Obesity has a significantly impact on recommended participation in a nationally provided breast screening program, despite obesity being a risk factor for post- menopausal breast cancer. Optimising participation among higher risk and under-screened women in under utilised breast cancer screening programs is warranted. Development of targeted interventions to increase screening participation among these higher risk women is needed.

Key messages:

- Women living with obesity and less likely to participate in recommended breast screening.
- Targeted interventions are needed to optimise participation in breast screening to ensure these higher risk women are not at higher risk of adverse outcomes due to breast cancer.

Abstract citation ID: ckac131.214
Challenges faced by parents of screen-detected children with Cystic Fibrosis: The ICOS study

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Background:

Informal care is an essential component of overall care for patients, particularly those with chronic illnesses such as Cystic Fibrosis (CF). This study aims to assess the level of caregiving burden faced by parents/caregivers of children with CF (CwCF) recruited to the Irish Comparative Outcomes Study of CF (ICOS), a historical cohort study of CwCF. In July 2011, a new-born screening programme began in Ireland.

Methods:

The study population includes the parents of screen-detected CwCF born between July 2011-2021. The Challenge of Living with CF-Short Form is a new, validated 15-item tool that evaluates the caregiving burden faced by parents from the child's diagnosis until early adolescence. Comparisons based on the age of screen-detected CwCF were conducted. SPSS was used for analysis.

Results:

69 parents of screen-detected CwCF responded. Fifty percent of parents of older children (aged 4-12+ years) and 35% of the parents of toddlers (0-3 years) faced moderate-high level difficulties in managing the extra expenses required for the care of their CwCF, despite all children receiving free clinical care, prescriptions and medications. A significantly greater proportion of the parents of older children than younger children experienced constant problems in managing daily oral medication routines (37% vs 13%; $P = 0.039$), nebulised medication routines (67.5% vs 21.4%; $P = 0.003$), and physiotherapy routines (57.8% vs 31.8%; $P = 0.046$)

Conclusions:

Using the novel Challenge of living with Cystic Fibrosis-Short Form questionnaire, our findings suggest that the caregiving burden is higher for parents of older CwCF. Expenses incurred by parents of a child with a serious chronic medical condition go beyond medical care and treatment expenses.

Key messages:

- The challenge of living with Cystic Fibrosis-Short Form is being used for the first time in a population setting.
- The caregiving burden was more pronounced in the parents of older CwCF.

Abstract citation ID: ckac131.215
New proposed measures to evaluate contact tracing effectiveness

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Issue/problem:

Contact tracing is an important and widely used method to control transmission of communicable diseases. The COVID-19 pandemic presented a new and big challenge with a high number of confirmed cases and contacts and subsequent high burden on contact tracing activities. Naturally, the effectiveness of such interventions needs to be assessed, and appropriate measures are still rather underdeveloped.

Description of the problem:

We propose two new measures for assessing contact tracing effectiveness: "number needed to quarantine" (NNQ), which is the number of quarantined person-days needed to prevent one infectious person-day, and the proportion of infectious days prevented by the quarantined (PPID). We have applied these measures to assess COVID-19 contact tracing effectiveness in COVID-19 confirmed cases diagnosed between July and mid-September 2020 in a local Public Health Unity in the Northern region of Portugal (Espinho/Gaia). For robustness checks and accounting for the uncertainty of the infectiousness period, we used three different scenarios.

Results:

Depending on the infectiousness period considered, we have found a NNQ between 19.8 and 41.8 and a PPID between 19.7% and 38.2%. Contact tracing effectiveness was higher for some specific groups such as cohabitants and symptomatic contacts. Effectiveness also decreased with the increasing time from diagnosis or symptom onset to contact isolation

Lessons:

NNQ and PPID are straightforward and easy to use measures to evaluate contact tracing effectiveness in communicable diseases. Although this example focuses in the COVID-19 pandemic at a local setting, these measures can also be used for different communicable diseases and at different levels. This assessment step can be important for priority setting of transmission control activities but also on a health management perspective.

Key messages:

- New measures to evaluate contact tracing effectiveness are proposed: "number needed to quarantine" and "proportion of prevented infectious days".
- These measures allow the identification of priority groups that must be quarantined, as well as time periods of intervention, for better transmission control.

Abstract citation ID: ckac131.216
Alarming trends in Tobacco use in high school Tunisian adolescents: MedSPAD2013-2021

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Background:

Tobacco use is a global health concern, with smoking initiation often beginning in adolescence. In Tunisia, published data assessing trends of tobacco consumption at the national level only concerns middle school students aged 13 to 15 years. No data related to high school students are however published yet. We aimed to determine tobacco smoking prevalence in Tunisian adolescents and assess trends from 2013 to 2021.

Methods:

Pooled data from three Mediterranean school surveyson alcohol and other drugs (MedSPAD surveys: 2013, 2017, and 2021) were used. Based on three-stage stratification sampling method, teenagers aged between 15 and 17 years, were enrolled. Were not included students enrolled in vocational training centers and out-of-school adolescents. Data collection was performed using a self-administered standardized questionnaire assessing socio-demographic characteristics and risky behaviours. We studied weighted prevalence estimates of cigarettes and water pipe (WP) smoking. All statistical analysis, including trend analysis, were performed with STATA software.

Results:

A total of 14.723 students were enrolled with sex ratio (M/F) equal to 0.6 and mean age of 16.2±0.8 years. The prevalence of cigarette smoking increased from 17.8%, to 20.2% then to 24.7% for 2013, 2017 and 2021, respectively. As for WP smoking, its prevalence increased from 14.8%, to 16.7% then to 19.9% for 2013, 2017 and 2021, respectively. Trends analysis concluded to significant increase over study period for cigarettes and WP smoking ($p < 10\text{-}3$). The increase was most alarming for girls regarding WP smoking (consistent increase over the study period).

Conclusions:

Our findings underscore the alarming increasing trend for different forms of tobacco smoking among Tunisian youth. It is therefore crucial to strengthen tobacco control measures among young adolescents in order to counteract the tobacco industry's expanding marketing of new products primarily targeting this population.

Key messages:

- The prevalence of cigarette and water pipe smoking increased significantly among high school Tunisian adolescents from 2013 to 2021.
- A better commitment to the implementation of MPOWER measures for tobacco control is therefore urgent.

Abstract citation ID: ckac131.217
Nonmedical use of anxiolytics among Tunisian students: Connecting the dots from 2013 to 2021

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Background:

Nonmedical use of prescription drugs such as sedatives and anxiolytics is a fast growing public health threat in several countries. In Tunisia, although several studies have investigated the prevalence of nonmedical use of anxiolytics among school-age students, there is a gap in knowledge regarding trends in anxiolytics misuse. We aimed to determine the prevalence of nonmedical use of anxiolytics and examine trends between 2013 and 2021.

Methods:

Pooled data from three Mediterranean school surveys on alcohol and other drugs (MedSPAD I-2013, MedSPAD II-2017, MedSPAD III-2021) were used. Based on three-stage stratification sampling method, teenagers in first and second grades of secondary education, were enrolled. Were not included students enrolled in vocational training centers and out-of-school adolescents. Data collection was performed using a self-administered standardized questionnaire. We studied weighted lifetime nonmedical use of prescription anxiolytics and performed global and by gender trend analysis. Epi data software was used for data entry and all statistical analysis, were performed with STATA software.

Results:

A total of 14.723 students were enrolled with sex ratio (Male/Female) equal to 0.61 and mean age of 16.2±0.8 years. The prevalence of nonmedical anxiolytics' use increased from 2.1% to 3% then to 8.4% for 2013, 2017 and 2021, respectively. Global and by gender trends analysis concluded to significant increase from 2017 to 2021 ($p < 10\text{-}3$). However, a non-significant increase was revealed from 2013 to 2017.

Conclusions:

Our study is the first to confirm a significant increasing trend in non-medical use of anxiolytics among Tunisian adolescents. These findings emphasize the urgent need for early detection of psychological vulnerability among adolescents in order to prevent their engagement in such risky behaviors.

Key messages:

- Decision makers should be sensitized regarding the alarming increasing trend in non-medical use of anxiolytics, among Tunisian adolescents.
- The state control of these substances accessibility and early detection of psychological vulnerability, are highly required.

Abstract citation ID: ckac131.218
Leading causes of death in Tunisia, 2020

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Background:

Mortality data represent a primary source of information for monitoring a population health status over years. In Tunisia, the national Information System on Causes of Death (ISCD) lacks completeness (average coverage rate of 40%); however, in order to examine covid-19's effect on mortality data, the ISCD was reinforced. We aimed to give an overview of leading causes of death in Tunisia for 2020.

Methods:

Data were obtained from Medical Certificates of Cause Of Death (MCCOD) sent by municipalities to the National Institute of Health in accordance with the legislative framework. Causes of Death (CoD) coding process was performed based on the International Classification of Diseases, Tenth Revision (ICD-10). The underlying cause of death was identified based on IRIS software, and mortality statistics were presented based on the world health organization cause-of-death lists for tabulating mortality statistics. Data analysis was performed using SPSS software.

Results:

A total of 46.420 MCCOD among 75.365 deaths officially declared by the National Institute of Statistics, were analyzed (coverage rate of 61.2%). The 10 leading causes of death for both sexes, in rank order were: diabetes mellitus, cerebrovascular diseases, covid-19, ischemic heart diseases, external causes of death, digestive and pulmonary malignant neoplasms, conditions of neonatal period, hypertensive diseases, and influenza and pneumonia. Leading causes of infant deaths were: certain conditions originating in perinatal period, congenital malformations, deformations and chromosomal abnormalities, diseases of respiratory system, certain infectious and parasitic diseases, and diseases of nervous system.

Conclusions:

The COVID-19 pandemic was an opportunity to improve the Tunisian ISCD's coverage rate. However, efforts should be maintained to optimize system completeness, and decision makers should be more sensitized regarding the urgent need for system digitalization.

Key messages:

- Mortality statistics have shown that covid-19 ranks third among leading causes of death in Tunisia for 2020; and non communicable disease accounted for 6 out of 10 leading causes of deaths.
- The ISCD coverage rate was improved in 2020 reaching 61.2%; however the system digitalization is an essential and sustainable solution to optimize completeness.

Abstract citation ID: ckac131.219
Temporal trends of suicidality among adolescents in the last decade in Piedmont, Northwestern Italy

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Background:

Over the last decade, trends of suicidality among adolescents remain unclear. We conducted a cross-sectional study using surveillance data collected over the past 10 years in the Piedmont region, Italy, to explore temporal trends in suicidality among hospitalized adolescents.

Methods:

This was a retrospective study over an 11-year period of time. The target cohort was adolescents aged 13-19 discharged from inpatient/day-hospital care with at least one suicidality-related ICD9-CM code (i.e., suicidal ideation-SI, suicidal risk-SR and suspected suicide-SS) between 2011 and 2021 in Piedmont (Northwestern Italy). Social-economic related data is available from Census 2011. Yearly incidence rates (IR) were calculated based on the overall hospitals' catchment population and by sex. Poisson regression model was estimated to evaluate the trend over time and the association with sex, and a potential effect of the COVID-19 pandemic. A non-linear trend was allowed by modelling natural splines.

Results:

We included 490 adolescents (median age: 15 years, IQR: 13-16), 380 girls and 110 boys, with ICD9-CM codes for SI (264; 53.9%), SR (142; 29%), SS (90; 18.4%) at first discharge. Girls showed a higher risk of repeated inpatient care than boys (19.2% vs 7.3%, $p < 0.01$). Since 2013, yearly suicidality IRs started increasing linearly in boys (+1.7/100,000 per year, 95%CI: 0.7-2.8). Apparently, suicidality IRs increasing in girls were observed since 2011 (+5.8/100,000 per year, 95%CI 2.8-8.9) and were significantly higher than in boys ($p < 0.001$).

Conclusions:

Suicidality among young inpatients increased in Piedmont during the last decade. Females seemed to be more affected than males. Further research is needed to better understand gender-related risk factors for suicidality.

Key messages:

- There has been an increase in the number of adolescents reporting suicidal ideation in the last decade, especially in girls.
- Intervention strategies are urgently needed to reverse a potentially alarming trend in suicidality among young people.

Abstract citation ID: ckac131.220
Social inequality in health behaviours in cohabitating individuals with CVD

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Background:

Despite a decrease in mortality rates CVD remains the leading cause of morbidity and mortality in Europe. Health behavioural risk factors, low socioeconomic status and cohabitation status are all associated with CVD. However, little is known about social inequality in health behaviour among cohabitating individuals with CVD. Thus, the aim of this study was to examine social inequality in health behaviour among cohabitating individuals with CVD.

Methods:

Register data on CVD were linked with self-reported health behaviour from the Danish 2017 population-based health survey 'How are you?'. In total, 2,443 survey participants aged 45 years and above were registered with CVD. Daily smoking was assessed using a single question about smoking habits. Physical inactivity was categorised as less than 30 minutes of physical activity at least six days per week. Respondents with a BMI ≥ 30 were considered obese. Unhealthy diet was assessed using the Diet Quality Score. Moderate risk alcohol consumption was categorised as exceeding the Danish Health Authority's recommendations. Self-reported educational attainment was used as a marker of social position and was categorised as low (0-10 years), medium (11-15 years) or high ($\geq$ 15 years). Sociodemographic differences in health behaviour were compared using adjusted logistic regression models with health behaviours as dependent variables and adjusted for sex, age, ethnic background, time since initial CVD diagnosis and multimorbidity.

Results:

Cohabitating individuals with CVD and low educational attainment had higher adjusted odds for daily smoking (3.31), physical inactivity (2.10), unhealthy diet (6.37) and obesity (2.55) than cohabitating individuals with CVD and high educational attainment. However, they also had lower adjusted odds for moderate risk alcohol intake (0.35).

Conclusions:

Social inequality in daily smoking, physical inactivity, unhealthy diet and obesity was found among cohabitating individuals with CVD.

Key messages:

- Social inequality in health behaviour was found among cohabitating individuals with CVD. Thus, low educational attainment affects CVD risk profile regardless of cohabitation status.
- Social inequality in health behaviour among cohabitating individuals with CVD should be addressed in public health strategies, targeted secondary prevention, treatment and rehabilitation.

Abstract citation ID: ckac131.221
Cannabis use in Tunisian adolescents: Alarming trends from 2013 to 2021

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Background:

Cannabis is the most widely used illicit psychoactive substance worldwide. In Tunisia, the prevalence of cannabis use and its association with other risky behaviours were reported in several publications interesting mainly early adolescence. However, no publications exploring trends based on national epidemiological data are available yet. Our purpose was to determine cannabis prevalence in Tunisian high school adolescents and assess significant trends from 2013 to 2021.

Methods:

Pooled data from Mediterranean school surveys on alcohol and other drugs conducted in 2013, 2017, and 2021, were used. Based on three-stage stratification sampling method, first and second grade secondary education students were enrolled. Were not included students enrolled in vocational training centers and out-of-school adolescents. Self-administered standardized questionnaire was used in data collection. We studied weighted lifetime prevalence of cannabis use and chi square test for trend was used for global, by gender and by sector (private/public) trends assessement. STATA software was used for statistical analysis.

Results:

A total of 14.723 students were enrolled with sex ratio (M/F) equal to 0.61 and mean age of 16.2±0.8 years. The prevalence of cannabis use increased from 1.4%, to 3.8% then to 7.9% for 2013, 2017 and 2021 respectively. Trend assessement concludes to significant increase in overall cannabis use ($p < 10\text{-}3$). Besides, there was a significant increase in both public and private schools, and among both boys and girls. However, the greatest increase was among male students (3.5% in 2013, 9.2% in 2017 and 16.1% in 2021) ($p < 10\text{-}3$).

Conclusions:

Despite the reinforcement of restrictive legislative measures, the prevalence of cannabis use among Tunisian high school adolescents is significantly increasing. Moreover, it's important to further investigate problematic cannabis use and its effects on adolescents' physical and mental health.

Key messages:

- Trend assessement confirmed the significant increase in lifetime cannabis use in high school adolescents in Tunisia, for both sexes and for both private and public sector.
- This alarming public health issue requires urgent legislation review and close multisectoral collaboration to control supply and demand.

DJ Ethics and Law

Abstract citation ID: ckac131.222
Ethical perspectives of the involvement of vulnerable populations in health research

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Background:

Public involvement in research has potential to transform public health research processes and outcomes, as well as contribute to sustainable collaborations between academia and the civil society. However, this all relies on public involvement being conducted in an ethical and inclusive way, especially when involving representatives from vulnerable populations.

Methods:

In this empirically informed theoretical reflection, ethical perspectives on involvement of vulnerable populations in health research were explored using data collected within a public involvement evaluation project. By analysing observational and longitudinal qualitative data from research projects involving public representatives from vulnerable groups, ethical aspects were identified.

Results:

Responsibility and decision-making appeared as important ethical aspects, where laws and regulations conflicted with involvement ideals. Similarly, reimbursement and recognition for public contributors became an ethical issue when facing legislation and bureaucracy, especially when involving children or refugees. Another ethical aspect concerned researchers' concerns in balancing involvement and protection of vulnerable groups, especially when involving contributors living under unstable circumstances. Finally, effectively communicating around research and involvement in an accessible way, for contributors to be involved but not burdened, was a challenge for researchers.

Conclusions:

Public involvement of vulnerable populations led to ethical challenges related to conflicting ideals and practical realities, including balancing involvement and protection of contributors. This highlighted a need for ethical guidance to support ethical decision-making and practice. The findings are used to guide the development of an ethical framework for decision-making in public involvement.

Key messages:

- Researchers involving public contributors from vulnerable groups face ethical challenges which causes barriers to involvement.
- There is need for guidance on ethical decision-making for researchers involving representatives from vulnerable groups in research.

Abstract citation ID: ckac131.223
Letters from Mars. Soft law under scrutiny of ethics during crisis. Responsibility and accountability

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Like most of western countries France has been severely hit by the first wave of covid during Spring 2020. France managed to get through it thanks to a confinement, full dedication of health and << first line >> workers and of course the excellency of its bureaucracy. France is now famous for its digitalized self-made one-hour-walk certificate. It is however less-known for its MARSes, acronym for << message d'alerte rapide sanitaire >> or quick sanitary warning messages that got usually sent to hospitals and nursing homes... on Friday nights or weekends. Some lawyers saluted the method as an innovative and modern process that adapted quickly the response to the evolution of the situation shifting from hard rules written in the due process of law to an era of properly crafted regulations. Professionnals were less enthusiastic regarding this matter. It was less an issue of professional curtesy expected form a central state towards civil servants than one related to the content of the messages. Quality varied depending on the news. Some messages imposed very clear and strict rules such as: << no visit under any circumstances in nursing homes >> or later when tests were available, << should any cluster appear, all residents must be tested. >> However, all messages ended the same and ritual way: << Provisions included in this message must be performed and adapted under direction supervision and adapted to the context of the institution >>. Interestingly enough the way the text was written rose questions: If the rule is clear, why should it be adapted? The rule enters in conflict with other preexisting rules. Which one should apply? Classical legal and political theory are of great help sorting formal issues. Hume's non ethical cognitivism and Kant's categorical imperative were used redesigning the working frame. Since accountability was for direction to bear, so was it for it to draw fair and acceptable solutions in due respect of democratic principles.

Key messages:

- Limit cases prove that rules are unsufficient in decision making.

- Balanced decisions require collegiality to overstep limited rationality.

Abstract citation ID: ckac131.224
Who is following me? Public attitude towards government tracing apps in the covid Era in Israel

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Background:

In the battle to decrease coronavirus infection and mortality, Israel has employed emergency tools, e.g., tracking civilians' locations via their cellphones or activating the HaMagen app that identifies when a person is near someone who has been diagnosed with the virus. While the aim of these tools is to ensure the public's health, they could harm human rights.

Objective:

To examine the Israeli public's attitudes towards enhancing public health during the pandemic while preserving privacy, by examining the relationship between trust in the healthcare system, threat perceptions, cellphone tracking, and HaMagen App.

Methods:

Surveys (distributed by iPanel) was completed by 741 adults, aged $\geq$18.

Results:

About half the respondents (47.1%) perceived cellphone tracking as harmful to privacy, yet one-quarter (24.4%) reported that this increases their sense of security. About half (48.4%) agreed/greatly agreed with the item whereby the government uses the gathered data for non-coronavirus purposes. Jewish respondents had more positive attitudes towards government tracking than Arab ones, yet the latter reported higher downloading of HaMagen. The findings indicate that threat perceptions and positive attitudes towards cellphone tracking were related to greater chances of downloading the app. Moreover, attitudes towards such tracking were mediated by the relationship between trust levels/threat perceptions and downloading the app, whereby the former was association with more positive attitudes towards cellphone tracking, which in turn was related to greater app downloading.

Conclusions and Recommendations:

Trust plays a central role in people's willingness to forgo their privacy for the good of public health. To enhance trust, messages must be suited to a range of communities, presented in a suitable language by local professionals.

Key messages:

- Trust plays a central role in people's willingness to forgo their privacy for the good of public health.
- Concern for public health must include ethical considerations.

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This abstract has been withdrawn

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A review of European and international phthalates regulation: focus on daily use products

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Background:

Phthalates are known endocrine disruptors used in a wide range of industrial and household products. With globalization and interdependency of the supply chain, the control of toxic substances in daily use products has become more challenging. Many countries have implemented laws and policies to limit their use, although these regulations are neither unified nor seem adequate, as studies suggest that more vulnerable populations (children, pregnant women) are exposed to phthalates that should be restricted.

Methods:

For seven of the most used phthalates - bis(2-Ethylhexyl) phthalate (DEHP), Butylbenzyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP), diisononyl phthalate (DINP), diisodecyl phthalate (DIDP), Di-n-octyl phthalate (DNOP) - we performed an online research on institutional sites and dedicated Agencies of the three largest world economies (European Union (EU), United States of America (USA), China) to analyze their uses and bans, focusing on Food Contacts Materials (FCM), cosmetics, toys and childcare articles.

Results:

In the EU area DEHP, BBP, DBP and DIBP are not allowed in toys and childcare articles above 0,1% by weight. All the seven phthalates are also severely restricted in FCM, and mostly banned as cosmetic components. In the USA, there is no formal prohibition to their use in cosmetics but phthalates are mostly limited in FCM. In China, the limit for DBP, BBP, DEHP, DNOP, DINP, DIDP in plastic toys is 0,1% of the material composition; regarding cosmetics DEHP, BBP and DBP are prohibited.

Conclusions:

We found substantial differences in the international legislation. Though there is essential agreement on toys and childcare articles legislation, there are many discrepancies about FCM and cosmetics. Further research is needed to compare the regulation with data about concentrations of these ubiquitous elements, to underline the real exposure and risk in different populations and to improve knowledge and safety on this matter.

Key messages:

- Phthalates, known endocrine disruptors, in daily use products are a matter of concern.
- Coordinated international laws to prevent exposure, especially in vulnerable populations, are needed.

DK Food, nutrition and diet

Abstract citation ID: ckac131.227

Guidelines for outsourcing collective catering services in the Friuli Venezia Giulia region

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Issue:

Many stakeholders involved in collective catering services (CCS) of schools, hospitals, elderly care homes, and workplaces of the autonomous region of Friuli Venezia Giulia (ARFVG) have reported some non-compliance with the nutritional, environmental or social standards required by public administrations (PA) procurement contracts (PC), which included the recommendations of the WHO, EU, Ministry of Health, and Ministry of the Environment (MHE).

Description of the problem:

The ARFVG prevention plans have set the goal to overcome the critical issues of the regional CCS which serve over 10% of the population (130,000 meals a day). Between 2019 and 2021, a multidisciplinary group of experts from health services and from the association of 215 regional municipalities developed the guidelines (GL) for outsourcing of CCS. The aim was to support PA in the drafting of PC, evaluation of offers and verification of contractual performance. Reference was made to Dir. 2014/24/EU, EU green public procurement criteria for food, catering services and vending machines, the national lines for CCS of MHE. The GL are characterized by the integration between the tender document models and the 8 qualification areas detailed in: restructuring; supplies; environmental impact and sustainability; production processes; personnel qualification and training; nutritional standards; customer satisfaction; and verification and research of quality.

Results:

Two regional central purchasing bodies have already used the GL to draft the PC for school CCS of 26 municipalities and for the whole hospital CCS of RAFVG. The application of guidelines in PC has introduced homogeneous high level qualification and verification standards for the CCS of the RAFVG.

Lessons:

To ensure the application of food, nutritional, environmental and social policies in CCS, it is essential to activate networks between professionals from different sectors in order to share tools to achieve the common sustainable development goals.

Key messages:

- To integrate food, nutritional, environmental and social regional policies into collective catering services, it is essential to apply systemic tools shared by all Public Administrations.
- Central purchasing bodies have the potential to introduce homogeneous and shared high level qualification and verification standards for collective catering services.

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The effect of Kefir consumption on blood pressure some blood parameters in hypertensive individuals

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Aim:

In this study is to examine the effect of kefir consumption on blood pressure, some blood parameters and anthropometric measurements in hypertensive individuals.

Methods:

The study is a randomized controlled clinical trial. The mean systolic blood pressure in hypertensive individuals was taken as 145.2±19.2. The minimum sample size was determined as 30 for each group with a 95% CI and 80% power. The study was conducted by face-to-face interviews with a total of 100 volunteers, 35 male, 65 female, aged 18 and over, who were hypertensive and volunteered to participate in the study and applied to the internal medicine outpatient clinics of Akçadag Public Hospital between September 2020 and May 2021. The experimental (n = 42) and control (n = 58) groups that the patients are randomly assigned into, the experimental group was ensured to consume 250 ml/day kefir for 28 days. During the study, The study was completed with 56 volunteers. At the beginning of the study and the end of 4 weeks, blood samples, blood pressure, pulse and anthropometric measurements of the individuals were taken.

Results:

When the anthropometric measurements were compared, the body weight, body mass index, waist circumference, and hip circumference of the individuals in the experimental group decreased significantly at the end of the study. There was no significant difference between the experimental and control groups in terms of glycemic parameters. While no significant change was observed in the lipid profile in the experimental group, total and LDL cholesterol levels decreased in the control group. There was no statistically significant difference in kidney function parameters in both groups. In addition, at the end of the study, there was no significant change in diastolic blood pressure and pulse in the experimental group, but systolic blood pressure decreased significantly.

Conclusions:

Regularly kefir consumption has positive effects on systolic hypertension and weight control.

Key messages:

- Regular daily consumption of kefir reduces systolic blood pressure and provides weight control.
- Regular daily consumption of kefir did not lead to an effective result on blood and kidney parameters.

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Prevalence and factors associated with food insecurity in southern Mozambique

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Background:

Food insecurity (FI) is one of the major causes of malnutrition in low- and middle-income countries. In Mozambique, the burden of FI and how it's related to negative health outcomes is unknown. This study aimed to investigate the prevalence of FI as well as the factors associated with FI in southern Mozambique.

Methods:

Preliminary data from 301 household heads residing in suburb and peri-urban districts of Maputo were analysed in a cross-sectional design. Accordingly, FI was assessed using the 8-items of the United States Department of Agriculture Household Food Security Survey Module, and its association with various factors was determined through multiple regression models.

Results:

The prevalence of FI was 62.8% (23.6% of households had mild FI, 16.6% had moderate FI, 22.6% had severe FI). Based on multiple regression models, 10 variables (out of 11) were relevant drivers of FI and reached statistical significance (p-value<0.05) with focus on food diversity, climate change, illnesses, household income, number of meals, type of work, household size.

Conclusions:

These preliminary findings suggest the need for decent work and job creation. In addition, food diversity, climate change and some relevant diseases should be taken into account in the development of public health policies designed to alleviate household food insecurity in Mozambique.

Key messages:

- Food insecurity in Mozambique calls for joint efforts from government, private sector, international institutions and communities.
- The basic food basket for the most vulnerable groups is encouraged as a short-term solution.

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Dietary supplements intake among youth: preliminary results of a multicentric survey

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Background:

In the last decades, a wide spread of dietary supplements (DSs) has been observed worldwide. However, DS use is not always motivated by real nutritional needs. In this context, commercial strategies and peers' suggestions seem to play an important role in determining this habit, with harmful effects on consumers' health. This cross-sectional study was aimed to evaluate the DS consumption patterns among a sample of undergraduate students attending 14 Italian universities.

Methods:

An anonymous web questionnaire was used to collect information about DS use and consumption habits, related motivations and possible adverse effects. The survey is still ongoing and its conclusion is expected to be on May 2022.

Results:

On a total of 2019 participants enrolled so far (69.7% female, mean age 22.8±4.7), 72.6% reported the use of at least a DS in the last six months. Multivitamin and multimineral products were the most used, being reported by 35.8% of the participants, while caffeinated energy supplements were the less reported (2.0%). The main reason for DS use was to deal with a specific deficiency following a physician or nutritionist indication (47.8%). The 3.4% of participants reported the occurrence of negative outcomes, mainly gastrointestinal disorders (74%).

Conclusions:

These preliminary results evidenced a wide use of DSs in the studied population. Although the main motivation was a nutritional need with a medical recommendation, a notable proportion of the sample assumed DSs without any specific prescription. Thus, it is essential to increase the knowledge about DSs and related threats deriving from their inappropriate use in the population, especially among youths. Further analysis will allow to identify possible correlations with socio-demographic and behavioural variables.

Key messages:

- It is essential to increase the knowledge about dietary supplements to avoid an inappropriate use in the population.
- Youths are the most exposed to this consumption.

Abstract citation ID: ckac131.231
Risk analysis of biological hazards in food industry in terms of Public Health

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Numerous pathogens are transmitted via food and according to recent surveys, there are millions of incidents recorded in Europe in the last decade. More specific, foodborne pathogens such as bacteria, fungi, parasites, and viruses can be detected in different stages of production or distribution of a food product. Examples of predominant symptoms caused by these foodborne pathogens are nausea, vomiting, diarrhea, cramps, fever, headache, cough etc. Therefore, it is essential need to detect, manage, and prevent of foodborne pathogens ''from farm to fork'' regarding consumers health risks. Europe has established and suggested management systems in food industry that control hazards in food products. However, outbreak incidents by foodborne pathogens existing until now. By using PRISMA guideline, we searched for the most recent publications referring microbiological risk assessments from online databases Scopus, PubMed and Science Direct. From 505 articles initially captured, data was extracted from 84 studies regarding microbiological risk factors in terms of food quality and safety, that are evidenced in European studies. Moreover, information about country of origin, food type, production phase and technology used for detection of pathogens, are also presented. Our results indicated that quality systems should be further developed to control all possible routes of contamination in the supply chain. This work provided information to managers in food industry and scientists for further research regarding microbiological risk assessments. Implementation of effective risk management systems in food industry could contribute to identify and eliminate potential risks and thus, consumer's health and food quality could be reassured. Therefore, our findings could provide managers in food industry either to build up more effective management systems or even help scientists to better understand ecology of pathogens regarding food matrix and environmental conditions.

Key messages:

- Risk analysis of biological hazards in food industry could prevent foodborne diseases.
- Risk analysis of foodborne pathogens is important for public health.

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Is parental socioeconomic status associated with irregularity of energy intake among children?

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Background:

The timing of eating, chrono-nutrition, is a relatively new research area, where the focus is not on only what we eat but also when we eat and of irregularity between days. Chrono-nutrition have been associated with cardiovascular risk factors among adults. Societal factors influence the chrono-nutrition, but there is limited research on how different socioeconomic factors are associated with chrono-nutrition, especially among children. The aim of this study is to examine the association between parental socioeconomic status and irregularity of children's energy intake.

Methods:

We used data from the DAGIS (Increased Health and Wellbeing in Preschools) study in years 2015-2016, in which 864 preschool children participated (age 3-6 years old). Childreńs dietary intake was measured by a 3-day food record. We included only children that had complete data from all three days and the child was at day care on two of those days and one day was a weekend day (n = 568). To calculate the irregularity score, the absolute difference between the daily energy intake and 3-day mean intake for each three days was divided by the 3-day mean energy intake, multiplied by 100 and then averaged over the 3 days; this served as a measure of irregularity of energy intake, with a low score indicating a more regular energy intake and a higher more irregular energy intake. The parents reported highest parental educational level and household income on a questionnaire. The associations were tested by general linear models on SPSS.

Results:

No association was found between parental educational level or household income with irregularity of children's energy intake.

Conclusions:

There was no association between parental socioeconomic status and children's irregularity of energy intake. Other aspects of children's chrono-nutrition should also be tested to be able to conclude that children's chrono-nutrition is not influenced by parental socioeconomic status.

Key messages:

- We found no association between parental socioeconomic status and irregularity in children's energy intake.
- Chrono-nutrition among children is under-examined.

Abstract citation ID: ckac131.233
The characteristics of caffeine intake in Croatian university students

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Background:

Excessive caffeine intake combined with increasing numbers and availability of caffeine-containing products in modern societies are causes for concern. University students may be at increased risk of excessive caffeine consumption due to seeking caffeinated products with well-known wakefulness effects and cognitive benefits. This study aimed to highlight the characteristics of caffeine consumption among Croatian university students.

Methods:

This cross-sectional questionnaire study was conducted from May 2020 to April 2021 period. A validated, anonymous questionnaire that contained questions regarding demographic data, data about caffeine consumption habits, and its sources was self-administered via an online link to a cross-faculty representative student sample of the University of Osijek in Eastern Croatia.

Results:

The study sample included 1197 subjects with, median age of 22 years (interquartile range 21-24), 24.1% males, and 75.9% females. The median caffeine intake was 512.0 mg/day (interquartile range 228.0-972.0). The higher caffeine intake was observed in part-time students ($p = 0.026$), students who were preparing for exams during the participation in this study ($p = 0.010$), and students who smoked cigarettes ($p < 0.001$). There was a poor positive correlation between the amount of caffeine intake and academic success connected with caffeine consumption ($rs = 0.225$; $p < 0.001$). There were fair positive correlations between the amount of caffeine intake and caffeine consumption because of the avoidance of the withdrawal symptoms ($rs = 0.490$; $p < 0.001$) and between the amount of caffeine intake and knowledge of the impact of caffeine consumption on the occurrence of social conflicts ($rs = 0.349$; $p < 0.001$).

Conclusions:

The study revealed high caffeine intake among Croatian university students. The implementation of specific preventive measures directed toward the protection of students' health from adverse health effects related to caffeine is needed.

Key messages:

- Croatian university students have displayed high caffeine intake in their everyday life.
- There is a need for the implementation of specific preventive measures directed toward the protection of students' health from adverse health effects related to caffeine consumption.

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How healthy is it to consume soft and energy drinks? – primary school pupils' opinions from Hungary

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Background:

The consumption of soft drinks and energy drinks (SaED) in EU27 has hardly changed over the past decade. In contrast, it grows massively in Hungary, mainly among youths. In 2021, our research group studied the causes of the growing SaED consumption of primary school pupils. Now, we deliver our key findings on how pupils consider the health impacts of SaED consumption.

Methods:

The study took place in a primary school in Komló, Hungary, in a mixed methods design: 157 pupils aged 10 to 15 filled out a survey, which we analyzed using descriptive statistical methods and independency tests. Besides, focus groups were conducted involving three stakeholder groups: a) school pupils; b) pupils' parents; c) school teachers (39 respondents in total).

Results:

Every fifth pupil consumes soft drinks daily and every third more than once a week. 28.1% of pupils consume energy drinks with some regularity, the majority more than once a week. Of those who think that soft drinks are rather unhealthy, 37.2% consume them daily or several times a week. Of those who believe that energy drinks are rather unhealthy, 24.6% consume them with some regularity. The focus groups confirmed that pupils perceive SaED consumption as accepted and "normal" behavior, and for the majority, the health consequences of the consumption are not a point.

Conclusions:

Although many pupils are aware of the health risk of SaED, they still drink them regularly. The general social acceptance of SaED consumption and the influential marketing of these products both support this attitude. To affect consumers' behavior, messages on how "unhealthy" SaED are does not seem adequate: a change in community acceptance is needed.

Key messages:

- The knowledge of adverse health effects of soft and energy drinks itself won't reduce consumption as long as its social acceptance is high.
- Preventive interventions should apply similar tools that have made soft and energy drink consumption popular and accepted to reverse recent trends.

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Ginger Constituents and its Effects on Gastrointestinal malignancies: A Review of clinical trials

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The gastrointestinal tract (GI tract) is the tract of the digestive system that contains all the major organs of the digestive system. Disorder in any part of the GI tract results in various disease forms such as malignancies. The occurrence of GI cancer is very high in developed countries including Europe. A wide variety of natural products containing anticancer properties showed significant effects. Ginger, the rhizome of Zingiber officinale, is among one of the natural herbal remedies widely used for its spice and medicinal properties. It is fair sources of vitamins like, β-carotene, vitamin C and minerals. Recently ginger has shown significant attention in clinical studies due to its anti-cancer effects that possesses promising potential for inhibiting the proliferation of multiple cancer cells. The aim of this review is to provide a summarized report of clinical trials on ginger constituents and its effects on gastrointestinal malignancies. A systematic search was conducted by two independent authors on the databases of Scopus, Clinical Trials, PubMed and Science with the search term of the key words. This review article supported that ginger is an important plant with several constituents and gastrointestinal medicinal effects. Ginger constituents suppress the growth and induce apoptosis of variety of cancer types including colon, gastric, pancreatic and other GI cancers. It is mainly the 6-gingerol and 6-shogaol, of the major compounds in ginger rhizomes, among hundreds of molecules. It is reported that antioxidant and anti-inflammatory properties of ginger support its preventive role against the gastrointestinal malignancies.

Key messages:

- This review article provided evidences supporting the effects of ginger on gastrointestinal malignancies and demonstrates the importance of future studies.
- Therefore, more extensive and well-controlled clinical trial studies of ginger are required to demonstrate its effect on gastrointestinal malignancies.

Abstract citation ID: ckac131.236
Nutritional composition of substitutes for meats and sausages on the German market

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Background:

Substitutes for meats and sausages are growing both in demand and supply in Germany. Monitoring their nutritional composition helps characterise this novel product group in terms of its dietary contribution.

Methods:

Data on substitutes for meats and sausages were collected in a baseline survey in 2016 and an in-depth follow-up survey in 2021. In both surveys, mandatory nutrition declaration ("Big 7") and other packaging information were collected via online research and supermarket visits. Products were categorised according to the substituted animal products and their contents of energy, fat, saturated fatty acids, and salt investigated. Changes in energy and nutrient contents between baseline and follow-up survey were assessed statistically using Welch's t-test.

Results:

The follow-up survey included 421 meat substitutes and 292 sausage substitutes, split into 27 subgroups. Substitutes for meat products like meat strips and schnitzel show widely varying energy contents. Sausage substitutes show higher medians for fat, saturated fatty acids and salt than meat substitutes; spans of salt content (0,1-4,0 g per 100 g product) and saturated fatty acids (0,1 g - 23,0 g per 100 g product) are particularly wide. Relative to the baseline survey, which included 69 meat substitutes and 61 sausage substitutes, the follow-up revealed significantly higher contents of energy and saturated fatty acids overall and in some subgroups (e.g. nuggets and burger patties). The sole significant reduction was seen for energy in substitutes of precooked sausages.

Conclusions:

The observed wide spans of energy and nutrient content imply 1) the potential to reformulate substitutes for meats and sausages at the top end of the spectrum 2) the availability of healthier choices within the various subgroups. The increases shown in energy and saturated fatty acids content warrant further monitoring.

Key messages:

- Wide spans of energy and nutrient contents reveal the potential for the development of more nutritionally favourable substitutes for meats and sausages.
- As substitutes for meats and sausages are perceived to have nutritional advantages the observed increases in energy and saturated fatty acids contents over time should be further monitored.

Abstract citation ID: ckac131.237
Gluten quantification in gluten-free food for celiac people in Lombardy and Emilia Romagna - Italy

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Background:

In recent decades, the celiac disease showed a gradual increase in prevalence. Therefore, there was a raised demand of gluten-free products. EU Reg. 1169/2011 states that 20 mg.kg-1 (ppm) is the maximum gluten content in food for celiac people, and that “gluten-free” labelling must be put on compliant food packages. This work is a study on different food categories, aiming at verifying the safety of analyzed samples.

Methods:

Totally, 4615 gluten-free-labelled specimens were collected from January 2019 to April 2022 (pasta, 2944; cured meat, 566; flours/bakery, 489; sweets, 125 and other matrices, 491). A commercially available E.L.I.S.A. kit, according to the AOAC 2012.01-2016 method, was used to quantify gluten.

Results:

In 97% of samples (4475) the gluten content was <5 ppm (lower LOD), and in 2.4% (112) it was between 5 ppm and <20 ppm. In the remaining 0.6% (28), the gluten concentration was ≥20 ppm. Of these, 0.32% (15) were between 20 and <80 ppm (upper LOD), and 0.28% (13) ≥80 ppm.

Conclusions:

The increased prevalence of celiac disease and the consumers’ perception that a gluten-free diet gives benefits, lead to a greater demand of gluten-free products. In this study, 99.4% of samples were compliant with the gluten-free labelling and safe for celiac consumers. The 0.32% had a gluten content between 20 and 80 ppm, still considered “compliant”, according to the EU Reg. 828/2014 that defines as very low gluten containing (thus edible for some celiac groups), those products with a gluten content <100 ppm. Only 0.28% of samples was non-compliant (≥80 ppm). However, the authors accounted irregular those foods with ≥20 ppm. Considering the importance of these products in the daily diet, and the increasing probability to get sick by individuals, the study of their compliance to the law limits results to be important.

Key messages:

- A continuous surveillance of gluten-free-labelled food products is very important to prevent risks for celiac consumers.
- The foodstuffs distributed in the two considered regions are mainly safe for celiac patients.

Abstract citation ID: ckac131.238
Self-assessed achievement of eating balanced meals – is it reliable for tailoring interventions?

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Background:

Recording the self-assessed achievement of eating balanced meals offers the possibility to tailor nutritional interventions to the stage of behaviour change. Beforehand of an intervention, the self-assessed achievement of eating balanced meals was recorded and verified against the actual consumption.

Methods:

Self-assessed achievement of eating balanced meals was operationalised using the behavioral stages of the Health Action Process Approach (HAPA). The actual consumption was assessed by a validated 3-day dietary record and the Healthy Eating Index of the National Nutrition Survey (HEI-NVS) was calculated. A score of 100 points represents one hundred percent compliance with the recommendations of the German Nutrition Society. Ten additional points could be scored if vegetables and fruit were consumed above the recommendation. An HEI-NVS score of ≥ 80.0 points was considered a cut-off for ‘eating balanced meals’.

Results:

In a sample of 130 participants (86.9 % female, 29.0 ± 11.3 years), 9.2 % rated themselves as Non-Intenders, 17.7 % as Intenders, and 73,1 % as Actors. Their HEI-NVS was 69.6 ± 10.6 points, 79.2 ± 9.5 points, and 79.7 ± 9,0 points, respectively (ANOVA, $p < 0.01$). In the post-hoc-Test (Scheffé) Non-Inteders differed from the other groups ($p < 0.05$), Intenders and Actors were not different (n.s.). The proportion of participants with an HEI-NVS score ≥ 80.0 points was 16.7% for Non-Intenders, 60.9% for Intenders, and 51.6% for Actors (Chi^2-Test, $p < 0.05$).

Conclusions:

Self-assessed achievement of eating balanced meals is characterised by self-underestimation (predominatly Intenders) and self-overestimation (predominatly Actors). Tailored interventions should take this into account.

Key messages:

- Self-assessed achievement of eating balanced meals is characterised by self-overestimation.
- Self-assessed achievement of eating balanced meals is also characterised by self-underestimation.

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How can policies to reduce obesity be more effective and equitable following the COVID-19 pandemic?

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Despite being a public health priority in the UK for decades, rates of childhood obesity are continuing to rise along a highly unequal socioeconomic gradient. COVID-19 has radically changed daily life, altering the economy, work, social lives and engagement with the food environment. This research aimed to investigate families’ lived experiences of food in the COVID-19 pandemic to understand how policies to reduce obesity can be more effective and equitable. We conducted a remote longitudinal qualitative study, engaging 62 parents of school or nursery age children in England. Participant demographics were diverse in terms of socioeconomic status and ethnicity. Participants took part in semi-structured interviews and photo-elicitation three times at six-month intervals between October 2020 and December 2021. The role of food in day-to-day life shifted in the context of changes brought about by the pandemic. Whether this led to healthy or unhealthy food practices was shaped by socioeconomic resources. Food became a key source of pleasure in daily life as social and leisure activities were restricted in lockdowns. As schools and childcare closed, when this work fell on one parent food became a source of relentless work and parents sought more convenient options. Those with financial resources were able to access healthier convenient options (e.g. meal boxes), while low incomes restricted parents to low-cost options (e.g. ready meals and fast food). For those experiencing financial insecurity, food became a financial management strategy and parents sought discounts and promotions to save money to cover other non-food essentials. These contexts have the capacity to occur again both on a large scale (e.g. disruptions to the food system) and in the context of an individual’s lifetime (e.g. ill health or job loss). Policy now has a window of opportunity to implement learnings from this period and shape obesity prevention policy to be more effective and equitable.

Key messages:

- COVID-19 has revealed the multiple resources and systems of support that underpin families' ability to eat well and, when disrupted, can limit capacity to procure and prepare nutritious foods.
- Policies designed to improve diets must consider the multiple roles food plays in everyday life, beyond just a source of nutrition, to ensure actions are effective and equitable.

Abstract citation ID: ckac131.240
A dietary intervention study to reduce Metabolic Syndrome risks in heart-transplanted patients

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Background:

Since heart transplantation (HTx) has become the gold standard therapy in end-staged heart failure, many factors, including metabolic syndrome (MS), represent a burden in HTx patients. Considering key role of immunosuppressive therapy and its side effects on the appearance of MS, we focused on modifiable factors including adherence to Mediterranean Diet (MD) and improvement of dietary habits.

Methods:

21 heart-transplanted patients were enrolled and randomized in a control group (CG; N 10) and an intervention group (IG; N 11). During two meetings (baseline, 6-month follow-up) were administered a validated Food Frequency Questionnaire (FFQ), to assess adherence to MD, and collected clinical and anthropometric parameters, IG were additionally requested to fill a food diary. IG received personalized advices, CG received standard recommendations. Comparison between IG and CG were analyzed, differences into the IG were also assessed.

Results:

The prevalence of MS at baseline was 46% in IG and 20% in CG. During 6-month follow-up, significant lower blood pressure values were observed (median, 25th-75th: systolic 130, 120-130 IG vs 145, 130-147 CG; p = 0.004). Seven patients of IG underwent a 12-month meeting. In this group MD scores increased significantly (7 + 1.3 vs 4 + 1.5, p = 0.001). Furthermore, significant decrease of fat mass percentage (%) (23.3 + 6.3 vs 14.8 + 10.1, p = 0.014), increase of fat free mass % (76 + 6.3 vs 85.2 + 10.1, p = 0.014) and increase of body cell mass % (50.9 + 3.8 vs 53.4 + 3.4, p = 0.031) were observed. Dietary data in IG showed significant decrease of energy from saturated fatty acids % (13.0±2.1 vs 9.6±1.5, p = 0.001), sodium (mg) (2138±359 vs 1822±417, p = 0.045), and decreasing trend for cholesterol (mg) (219±82 vs 171±59, p = 0.082).

Conclusions:

Dietary intervention based on MD perhaps can improve MS risks in heart-transplanted patients. Further investigations may be needed to assess the fundamental role of a structured nutritional follow-up in these patients.

Key messages:

- Personalized nutritional advices based on the MD, compared to general recommendation, can significantly improve health and quality of life in heart-transplanted patients.
- A structured nutritional follow-up for heart-transplanted patients may be desirable to prevent risks of Metabolic Syndrome as a public health instrument in selected categories as these patients.

DL Health assessments: impact, technology

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Cost-effectiveness of hospice-based palliative care in Kazakhstan

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Background:

According to the Quality of Death Index, Kazakhstan ranks 50th out of 80 countries assessed. Currently, some form of inpatient end-of life care in Kazakhstan is provided by only 9 hospices, palliative care units and mobile teams. In 2020, the total number of palliative care beds did not exceed 980 across the country, while around 135,000 patients need palliative care at any given time.

Objective: To assess the effectiveness and cost-effectiveness of hospice-based palliative care for cancer patients compared to usual hospital care in cancer centers across Kazakhstan from societal perspective.

Methods:

A total of 182 family caregivers were recruited, 104 in a hospice group and 78 in a control (palliative units). Patients' state of health and family caregivers' burden been measured using Palliative Outcome Scale (POS) and Zarit Burden Inventory (ZBI) on 14th day of the inpatient palliative care. Direct and indirect medical costs as well as family caregivers' out-of-pocket expenses associated with the care has been collected. The cost-effectiveness analysis was conducted by calculating the difference between mean cost of treatment, including OOPs, over 14 days of treatment. Uncertainty around the cost-effectiveness estimates was explored by generating 10,000 resamples using bootstrapping.

Results:

At 14 days, patients' mean quality of life was 2,4 points better (95% CI: 0,06 - 4,9) in the hospice group compared to the control. Family caregiver burden was 4,6 points better in the hospice group (95% CI: -0,26 - 9.3). Mean treatment costs, including direct medical costs and out-of-pocket expenditures over 14 days were $31 lower for the hospice group (95% CI: $29 - $32). There was a significant correlation between the total cost of treatment and patients' quality of life (rxy = 0,58; $p < 0{,}01$). The cost-effectiveness plane graphically represents 10,000 replications, 85% of them showed that hospice care has better outcomes and lower costs than the control group.

Key messages:

- Hospice-based palliative care is cost-effective compared to the care provided in palliative units of cancer centers.
- There is a significant correlation between patients' quality of life and family caregivers' burden.

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The Effect of Smartphone Use and Nomophobia on Sleep Quality and Daytime Sleepiness in Turkey

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Background:

Smartphones used unconsciously and in an uncontrolled manner make young people experience sleep problems. This study aimed to investigate the effects of university students' smartphone addiction and nomophobia levels on sleep quality and excessive daytime sleepiness.

Methods:

This study, which had a cross-sectional design, was conducted with 390 people who were first-year and senior students at Inonu University between November and December 2019. The Pittsburgh Sleep Quality Index, Epworth Sleepiness Scale, Nomophobia Scale, and Smartphone Addiction Scale were used in the present study used. For statistical analysis, the chi-squared test, the Student's t-test, one-way ANOVA, Spearman's rank correlation coefficient and binomial logistic regression analysis were used. The research has ethics committee approval.The error level was chosen as $p = 0.05$.

Results:

The smartphone use time of the students was finded to be 5.4±2.6 years, daily online time was 4.3±2.6 hours, and daily sleep time was 7.4±1.5 hours. The students received 78.3±25.8 points from the Nomophobia Scale, 90.3±29.7 from the Smartphone Addiction Scale, 7.2±2.8 from the Pittsburgh Sleep Quality Index, and 5.9±4.1 points from the Epworth Sleepiness Scale. A total of 54.4% of students had moderate, and 22.8% had severe nomophobic symptoms; 83.6% of the group had poor sleep quality, and 14.6% had excessive daytime sleepiness. A positive, moderate and significant relation was detected between the mean Nomophobia score and the mean Smartphone Addiction Scale score. It was also determined that those with less than 30 minutes of smartphone use before sleeping had low nomophobia, smartphone addiction and daytime sleepiness scores, and better sleep quality.

Conclusions:

Nomophobic symptoms and smartphone addiction were observed to be high in university students. Most students had poor sleep quality. The awareness of students on healthy sleep, and conscious and controlled smartphone use should be increased.

Key messages:

- Smartphone addiction increases the level of nomophobia moderately in university students.
- Those who use a smartphone less than 30 minutes before going to sleep have better sleep quality and lower daytime sleepiness.

Abstract citation ID: ckac131.243
Development of a refugee health assessment toolkit for specific populations to support primary care

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Issue/problem:

The United Kingdom (UK) hosts c.136,000 refugees and last year received the most asylum applications in two decades. Despite this, expertise in migrant health is not widespread in general practice, with few comprehensive toolkits available to support crucial initial health assessments of new arrivals.

Description of the problem:

A large influx of Afghan refugees entered the UK in autumn 2021. In London, primary care practitioners quickly identified a lack of readily accessible, comprehensive guidance to support them in conducting health assessments for arrivals with a complex range of needs. This was compounded by many in primary care having little or no experience of migrant health.

Results:

To address this gap in advice on conducting initial health assessments, a bespoke toolkit was created. The toolkit consolidated advice from a range of partners and resources: the UK Afghan migrant health guide, clinicians with humanitarian experience, front-line practitioners, Doctors of the World, and those leading on the health and public health response. The toolkit ensured greater consistency in the nature and content of assessments, considered not only primary needs but also broader wellbeing, and was responsive to both anticipated and known health priorities.

Lessons:

The initial health assessment toolkit for Afghan migrants was well received by frontline staff and has implications for international practice in other areas providing similar health support. The toolkit and associated supporting information has formed a template that can be rapidly adapted to suit emerging needs, as has been done for new arrivals from Ukraine. This work has fed into best practice by the UK National Asylum Steering Group and is to be a case study for a WHO project on country-specific health assessments.

Key messages:

- The toolkit is a proof of concept for partnership working towards holistic initial health assessments of new migrants in primary care, bringing together best evidence and pragmatic practice.
- This work has implications for other countries experiencing similar trends in migration and providing health support to an increasing number of new refugees.

Abstract citation ID: ckac131.244
An integrated hospital-district evaluation for communicable diseases in low/middle-income countries

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Background:

The last two decades saw an extensive effort to design and implement integrated and multidimensional healthcare evaluation systems in high-income countries. However, in low/middle-income countries, few experiences of such systems implementation have been reported in the scientific literature. We developed and piloted an innovative tool to assess the performance of health services provision for communicable diseases in three African countries.

Methods:

A total of 42 indicators, 14 per each communicable disease care pathway (Tuberculosis, Gastroenteritis, and HIV/AIDS), were developed. A sub-set of 23 indicators was included in the evaluation process. The indicators assessed four care phases: prevention, diagnosis, treatment, and outcome. All indicators were calculated for the period 2017-2019, while performance evaluation was performed for 2019. The analysis involved four health districts and their relative hospitals in Ethiopia, Tanzania, and Uganda.

Results:

Substantial variability was observed over time and across the four different districts. In the TB pathway, the majority of indicators scored below the standards and below-average performance was mainly reported for prevention and diagnosis phases. Along the Gastroenteritis pathway, excellent performance was instead evaluated for most indicators and the highest scores were reported in prevention and treatment phases. The HIV/AIDS pathway indicators related to screening and outcome phases were below the average score, while good or excellent performance was registered within the treatment phase.

Conclusions:

The bottom-up approach and stakeholders' engagement increased local ownership of the process and the likelihood that findings will inform health services performance and quality of care. Despite the intrinsic limitations of data sources, this framework may contribute to promoting good governance, performance evaluation and accountability in settings characterised by multiple healthcare service providers.

Key messages:

- A successful experience in developing and implementing a communicable diseases performance evaluation systems in three sub-Saharan African countries using a bottom-up approach.
- The communicable diseases performance evaluation tool helped the data sharing between local healthcare providers and the development of competencies in data collection, analysis and interpretation.

Abstract citation ID: ckac131.245
GIS analysis of the relationship between PM2.5 and acute CVD and respiratory hospitalizations

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Background and aims:

The PM air pollution is a serious concern in northern Moravia in the Czech Republic. The aim is to evaluate the risk of acute hospital admissions for cardiovascular and respiratory causes with the use of the Geographic information system (GIS).

Methods:

The data on acute hospital admissions for cardiovascular (I00-99 according to ICD-10) and respiratory (J00-99) causes was assigned based on the information on residence to 77 geographical units (601,299 inhabitants). The annual concentrations of PM2.5 in the period 2013-2019 were assigned to this units according to the respective concentration iso-shapes (step 2 µg.m-3, concentrations ≤29 to ≥ 38 µg.m-3). The Incidence Rate Ratio (IRR) and 95% confidence interval (CI) was calculated for each concentration category. The incidence in the first category with the lowest PM2.5 concentrations (≤29 µg.m-3) was chosen the reference category. The statistical analyses were performed using the SW STATA v.15.

Results:

About a half of population (56%) in the year 2013 belonged into the PM2.5 category 34-35 µg.m-3, 26 thousand of inhabitants (4%) live in the PM2.5 concentrations ≥38 µg.m-3. During the analysed period the average concentration values decreased from 30.8 to 21.4 µg.m-3. A statistically significant risk of the acute hospitalization for cardiovascular causes was identified in the categories ≤36 µg.m-3, in the highest interval of PM2.5 the IRR values were 2-3-fold higher comparing with the reference category. As for respiratory causes, the trend is similar, but the statistically significant risk was found already from the interval 34-35 µg.m-3.

Conclusions:

With increasing concentrations, the risk of both acute cardiovascular, and respiratory hospitalizations increased.

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Key messages:

- A statistically significant increase of the IRR for acute cardiovascular and respiratory hospitalizations was found at PM2.5 concentrations ≤34 µg.m-3 compared to the reference category ≤29 µg.m-3.
- Average annual PM2.5 concentration decreased from 30.8 to 21.4 µg.m-3 during the followed period and also the risk of acute hospitalization from cardiovascular and respiratory causes decreased.

Abstract citation ID: ckac131.246
The computer-assisted interview In My Shoes – a successful method to capture children's perspectives

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Background:

Child mental health problems are considered the second highest cause of burden of disease in Europe and the Americas. Children's own opinions and experiences are pivotal in addressing these problems. However, including young children as active informants in health research and practice not only requires a well-trained and highly qualified workforce, but also valid methods that enhance and support children's self-expression. The aim was to investigate preschool aged children's experiences in two health and welfare contexts using the interactive computer-assisted interview In My Shoes (IMS).

Methods:

Interviews were conducted using IMS in three studies encompassing 43 children aged 3-6 years old. The setting for the first and second study was Child Health Centres and the third setting was families entering the Triple P group parenting programme. Qualitative content analysis was performed.

Results:

The IMS interview aided preschool aged children to report on the factual, emotional and physical aspects of their experiences within a health care context. In addition, IMS helped young children verbalise unique information on negative interplay within their families, especially experiences of negative parenting including verbal and physical child abuse. The successes with IMS are likely related to the structured and systematic approach, that it is pictorial-based and emotion-focused, as well as the interactive, collaborative and triadic conversation between the child, the interviewer and the computer.

Conclusions:

The interactive computer-assisted interview IMS, is a suitable and valid method for aiding young children to provide unique and extensive information about different aspects of their experiences and lives. We urge professionals and researchers to systematically include the young children's own perspectives to better tailor and evaluate interventions on all levels to improve children's health and wellbeing.

Key messages:

- Young children's own perspectives on their health and wellbeing are pivotal to better tailor and evaluate interventions.
- The interactive computer-assisted interview In My Shoes is a suitable and valid method to capture children's voices.

Abstract citation ID: ckac131.247
Evaluation of a universal early intervention for parents and children from birth to age five

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Background:

This study aimed to investigate the health and economic outcomes of a universal early intervention for parents and children, the Salut Programme, from birth to when the child completed five years of age.

Methods:

This study adopted a retrospective observational design using routinely collected register data with respect to both exposures and outcomes from a county in northern Sweden. Areas that received care-as-usual (non-Salut area) were compared to areas where the Programme was implemented after 2006 (Salut area) in terms of: i) health outcomes, healthcare resource use and related costs around pregnancy, delivery and birth, and ii) healthcare resource use and related costs, as well as costs related to care of sick child. Costs were estimated for inpatient care and specialised outpatient care for mothers and children. Two analyses were conducted: a matched difference-in difference analysis using the total sample and an analysis including a longitudinal subsample.

Results:

The longitudinal analysis on mothers who had given birth in both the pre- and post-measure periods showed that those that had been exposed to the Salut Programme, had on average 6% (95% CI 3-9%) more full-term pregnancies and 2% (95% CI 0.03-3%) more babies born within normal weight range, compared to mothers who had only care-as-usual. Savings were incurred in terms of outpatient care related costs for children of mothers in the Salut area ($826). The difference-in-difference analysis using the total sample did not result in any significant differences in health outcomes or cumulative resource use over time.

Conclusions:

The Salut Programme achieved health gains at a reasonable cost for children and parents, and may lead to lower usage of outpatient care. Other indicators point towards positive effects but the small sample size may have led to underestimation of true differences. The current findings support the continuous investment in this early childhood programme.

Key messages:

- The Salut Programme improves the health of children and parents at a low cost.
- The Salut Programme as a health promotion early intervention is value for money and should be included in the local policy investment agenda.

Abstract citation ID: ckac131.248
Mina Svar: A tool for measuring social impact

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Background:

Each year, numerous initiatives are carried out to improve the outcomes for youth living in vulnerable areas. However, the impact of these initiatives is rarely measured, partly because there is no reliable, valid, relevant and easy-to-use tool available to measure the impact of social investments from the youth perspective. Mina Svar is an app co-created with youth that aims to address this gap.

Methods and results:

Save the Children led the collaboration in defining a measurement framework. Experts from Save the Children, researchers from Linköping University, and representatives from Accenture, Skandia and Apoteket as well as youth themselves were involved in an iterative process. Five interconnected areas were identified as central: democracy and influence, education, work, housing and neighbourhood, and health. The first version of Mina Svar included 34 items. Researchers from Uppsala University were involved to help with testing the psychometric properties of Mina Svar in a sample of 237 youths. We examined the tool's internal consistency, content validity and structure validity. Analyses showed that all the subscales except democracy and influence had good internal consistency (0.70 and higher). However, inspection of individual items revealed that several items lacked clarity and many items did not comprehensively reflect the related constructs as intended. Confirmatory factor analysis suggested a poor fit for the proposed model (CFI = 0.52 TLI = 0.56, and RMSEA = 0.103). Currently, we are going through a second iterative process to increase the reliability and validity of Mina Svar. The work involves refining the framework, rewriting ambiguous items, generating new items, and re-examining the psychometric properties of the revised version.

Conclusions:

Mina Svar is a promising short multidimensional survey tool which offers a potential solution to tackle the problem with measuring the impact of social investments from the youth perspective.

Key messages:

- Mina Svar is an app-based assessment tool co-created with youths living in vulnerable areas.
- Mina Svar is a promising short multidimensional tool which offers a potential solution to tackle the problem with measuring the impact of social investments.

Abstract citation ID: ckac131.249
Air purifiers, comparison between real and declared surface for use: fake it or make it?

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Introduction:

Air pollution has been recognized as one of the major risk factors for the global burden of disease. In modern society, most exposure occurs indoors, and air quality may be improved with air purifiers utilizing various cleaning techniques. This analysis aims to evaluate whether recommended room surface in which to use these devices as declared by producers is actually in line with their real effective area of activity.

Methods:

A review of devices for the purification of the air was carried out between January-April 2022. Four different types of air purifiers were considered based on the adopted technologies: I) HEPA filters and UV lamps; II) only with HEPA filters; III) only UV lamps and IV) those using other technologies. For each group, based on the CADR (Clean Air Delivery Rate) provided by the producers, the optimal real surface area of the room to use the device was calculated, referring to the standard EN779:2012. This value was compared with the recommended area of the room declared by the producers. Descriptive statistics and Wilcoxon matched pair test used for comparisons. The significance level was set at $p < 0.05$.

Results:

The analysis was carried out on 252 devices; I) 52 had HEPA filters + UV lamps, with a recommended mean room area of 40 m2 (IQR 49.75), II) 142 devices had only HEPA filters with 52.5 m2 (IQR 46.75), III) 27 devices only UV lamps, 40 m2 (IQR 105), IV) 31 devices with other technologies, 54 m2 (IQR 84.2). As required by EN779:2012, the effective area of activity was calculated using CADR x 0.075: the medians of the 4 groups were I) 12 m2 (IQR 16.5), II) 15.83 m2 (IQR 26.4), III) 4.5 m2 (IQR 22.5), IV) 7.5 m2 (IQR 21.53), respectively. Comparing declared and calculated CADR values, all the groups showed significant differences ($p < 0.05$).

Conclusions:

Results show that recommended surfaces derived from CADR declared by producers largely overestimate the real volume of the room that devices can purify, whatever the technology used.

Key messages:

- There's no correspondence between recommended area of room to be sanitized indicated by producers of air purifiers and area that they are actually able to sanitize, which is significantly lower.
- It is necessary to be aware of the difference between data indicated by producers and real data, in order to purchase a device that actually corresponds to dimensional needs of the environment itself.

Abstract citation ID: ckac131.250
Which one to choose? A cost-effectiveness analysis between different technologies of air purifiers

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Introduction:

CoViD19 pandemic highlighted the importance of air purifiers and, in commercialization, their performance and price influence the choice. Since primary focus concerns only performance in terms of CADR (Clean Air Delivery Rate), this study aims to compare: I) levels of declared air purifications according to different types of air purification technologies; II) price of them to evaluate if, with similar group-mean CADR (within +/- 1 SD), there are significant differences in selling prices.

Methods:

A review of several devices was carried out, collecting data in January-April 2022. Four different types of air purifiers were considered, divided into as many groups: those equipped with HEPA filters + UV lamps, only with HEPA filters, only with UV lamps and those using other technologies. We applied Kruskal-Wallis test to evaluate statistical differences among prices normalized by CADR, at significant level of 0.05.

Results:

Analysis was carried out on 186 devices: I) 37 had HEPA filters + UV lamps, II) 117 only HEPA filters, III) 11 only UV lamps and IV) 21 other technologies. Eight system had HEPA H11 (95% reduction of particle matter 0.5 µm), 8 had HEPA H12 (99.5%), 70 had HEPA H13 (99.95%), 11 had HEPA H14 (99.995%). The mean normalized costs of each group devices, in Euros/CADR were I) 1.22 (SD 2), II) 1.49 (SD 1.4), III) 7.63 (SD 7.38), IV) 1.22 (SD 0.99), respectively. Statistical comparison of four-group selling prices show significant differences ($p < 0.05$) due to the devices equipped with only UV lamps.

Conclusions:

Comparison between technologies analyzed by mean price normalized to CADR showed significant differences between those that used only UV lamps compared to all the others. This is reasonably due to the fact that the use of only UV lamps requires radiant powers considerably greater than all the others, therefore also higher costs (about 5-6 times). In all cases, the level of disinfection reached, as declared, was always > 95%.

Key messages:

- With the same mean price normalized to CADR, the selling price is significanly different only for devices equipped with UV lamps compared to all the others.
- Choice of devices with a certain level of declared air purifications can be directed towards those with HEPA+UV/HEPA/other without the mean price normalized to CADR undergoing significant differences.

Abstract citation ID: ckac131.251
A novel technology for disinfecting surfaces infested with Candida auris: the UVC chip

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Background:

The fungal pathogen Candida Auris is increasingly associated with multidrug-resistant infections that are highly expensive for the Health Care System. The spreading of this pathogen can occur, among others, through contact with infected surfaces or medical instruments. This study evaluated the efficacy of a novel UVC chip, novel alternative to UVC LEDs and lamps, in inactivating Candida auris strain.

Methods:

This experimental study was carried out between July and September 2020 at the University of Siena. Candida auris (ATCC 12372) at two known concentrations (1.5X107 and 1.5x106 CFU/ml) at a fixed distance (7,5 cm) from the chip (5.1mW radiant power) was tested, in triplicates, with three exposure times (5, 10 and 15 minutes). Potato Dextrose Agar (PDA) plates without the plate lid and containing Candida auris were exposed to UVC light. Subsequently, the plates were incubated at 36 °C for 48 h. Log reduction between treated and positive control (not exposed to UVC light) samples was calculated.

Results:

At 15 minutes, we had the highest inactivation result, mean 4.43 log10, starting from a 1.5x106 CFU/mL concentration. At a higher concentration, 1.5X107 CFU/mL, the reduction had a mean of 3.51 log10.

Conclusions:

The results of the experiments showed a significant microbial reduction in relation to the exposure time. The highest level of reduction was reached after 15 minutes of exposure. UVC chip had a relevant biocidal effect on Candida auris and may represent a valuable tool in the prevention of infections caused by this pathogen, which is becoming increasingly prevalent and persistent globally.

Key messages:

- The use of UVC Chip decreases surface contamination.
- New technology against healthcare-associated infections.

Abstract citation ID: ckac131.252
Does Portuguese pharmaceutical market follow an innovative trend? The INFOMED database analysis

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Background:

Product innovation in the pharmaceutical market is, although not exclusively, a new product with the capacity to generate value. Thus, it must represent an invention through investment in research and development, and not a commercial monopoly. The aim is to identify innovation trends by Marketing Authorization (MA) granted in Portugal.

Methods:

Quantitative descriptive study based on data (years 2017 to 2021) from Human Medicinal Products Database (INFOMED), managed by the National Authority of Medicines and Health Products, I.P. The parameters identified and used were MA and medical product subject to medical prescription. List was filtered by Product Group - New Active Substance. To identify innovation, findings were compared with the Anatomical Therapeutic Chemical (ATC) database and scientific literature to find other therapeutic options available.

Results:

A total of 2695 records were identified. 1804 (67%) were generic drugs. Regarding new substances, 46 registrations (1.7%) were obtained, with the highest number recorded in 2017 (n = 13 - 2.03%) and the lowest in 2019 (n = 3 - 0.76%). After exclusion of different concentrations with the same therapeutic indication, a total of 26 medicines were observed: 54% had a listed ATC code and those, 64% had more than two linked ATC codes; 12 medicines had no related ATC code and 5 were classified as vaccine and therefore were not considered, thus 7 medicines were classified as major innovation.

Conclusions:

Most of the innovation seen in the pharmaceutical market is not major innovation, but rather due to structural changes to chemical compositions. The Portuguese scenario is no different. Generic drugs, although not innovative, are important in the pharmaceutical market from a public health perspective. The identified innovations, although not major innovations, are important from a clinical and market availability perspective, however they should not represent a large portion of the pharmaceutical market.

Key messages:

- In Portugal, the innovation trend in the pharmaceutical industry is based essentially on modifications in chemical composition and related therapeutic class.
- The development of major innovation in medicines should be stimulated and new models of financing and sustainability should be improved.

Abstract citation ID: ckac131.253
HTA supporting clinical practice: the case of surgical repair of thoracoabdominal aortic aneurysms

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Background:

Thoracoabdominal aortic aneurysms (TAAAs) are defined as those aortic aneurysms involving renovisceral arteries. They account for around 10% of aortic aneurysms, and their treatment is burdened by considerable mortality and morbidity. Open surgical repair has been practised as the standard of care since the 1950s. In 2001 endovascular repair was introduced to reduce treatment invasiveness, and the technology is still evolving. The potential benefits of endovascular repair over open surgery should be carefully weighed in a multidimensional framework.

Methods:

We applied the Health Technology Assessment (HTA) framework (EUnetHTA core model with 9 dimensions) to conduct a report comparing the two technologies. A multidisciplinary working group was established. We derived and pooled: i) secondary data derived from systematic literature reviews, and ii) original data from IRCCS San Raffaele Hospital, Milan, a national referral centre for TAAA (qualitative and economic data).

Results:

Endovascular repair resulted superior to the traditional open surgery in terms of efficacy and safety, as justified by the meta-analysis we performed. Despite the higher costs, a significant impact on budget and slightly lower cost-effectiveness, the endovascular protheses' adoption could provide conspicuous benefits in terms of social and ethical dimensions without affecting long-term organisational and legal aspects.

Conclusions:

The multi-criteria decision analysis carried out from a hospital point of view shows that there is no significant difference (final score endovascular repair 0.68 vs open surgery 0.63) between the two procedures considering all the dimensions. Still, the endovascular repair is slightly superior to the open surgery in terms of safety, effectiveness, social, ethical, legal, and organisational impact. From the policy maker's point of view, technologies with a score superior to 0.6 are equally valuable, and the final decision should be left to the clinicians.

Key messages:

- Further research is needed to compare endovascular prostheses and open surgery's long-term population benefits, balancing clinical, economic, organisational and patient-related outcomes.
- HTA methodology offers substantial support to compare in-use technologies, informing clinicians' and decision-makers' choices to strengthen healthcare provision equity and preparedness.

Abstract citation ID: ckac131.254
Federated learning for describing COVID-19 patients and hospital outcomes: An unCoVer analysis

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Background:

Since the onset of the pandemic, the unCoVer network has been identifying real-world data from EMR of hospitalised patients with COVID-19 across countries. These heterogeneous data are integrated into a multi-user data repository operated through Opal/DataSHIELD, an interoperable open-source server application, providing privacy-preserving access to individual-level information for federated data analyses.

Methods:

unCoVer's federated data platform provided access to EMR collected between 02/2020 - 04/2022 from 6 hospitals in Bosnia and Herzegovina (1), Romania (2), Spain (2), and Turkey (1) for a total of 14,236 patients. Demographics, and co-morbidities at admission, length of hospital stay and intensive care (ICU) needs, are presented according to the patients' status at discharge.

Results:

A total of 11,248 (79.0%) of all patients reviewed recovered from COVID-19 after an average 11.5 (SD 10.8) days hospitalised, with only 4.09% of patients needing ICU. A smaller proportion of patients were transferred (5.93%), and 2143 (15.1%) were considered in-hospital deaths after an average 11.6 (SD 10.5) days in the hospital where most (81.2%) needed ICU. Recovered patients had a mean age of 57.7 (SD 16.3) years old, and gender neutral (51.2% men), in contrast to deceased patients that were 74.2 (SD 12.4) years old (59.7% men). Current smoking was infrequent for both recovered or deceased patients (3.27%, and 2.83%, respectively). Cardiometabolic conditions were less commonly reported among later recovered patients in comparison with deceased patients: obesity (10.7% vs 12.1%), diabetes (15.9% vs 27.4%), hypertension (23.2% vs 42.7%), and CVD (9.33% vs 44.9%). Chronic pulmonary disease was also more frequent among deceased patients (10.3% vs 18.1%).

Conclusions:

Characteristics of hospitalised COVID-19 patients differ according to outcomes at discharge with more in-hospital death reported among older, chronic patients across 6 hospitals in 4 countries.

Key messages:

- Federated analyses provide unique opportunities for robust results by privacy-preserving accessing individual-level data from heterogeneous data sources.
- The unCoVer network aims to demonstrate the usability of the infrastructure to address research questions related to the COVID-19 while extending the concept to other clinical areas.

Abstract citation ID: ckac131.255

Self-esteem associated with the use of social networks in university students

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Introduction:

Currently, the consequences of social networks on the self-esteem of users have been demonstrated in dissemination sources, and can generate problems in their mental and physical health.

Objective:

To determine the association between self-esteem and addiction to social networks in university students.

Methods:

A cross-sectional, prospective study was carried out between January and April 2022, including male and female university students, aged between 18 and 26 years, excluding participants with already diagnosed psychological disorder, such as depression, anxiety and body dysmorphia. A survey was applied through Google Forms, including the Rosenberg self-esteem scale and the social network addiction test (Cronbach's alpha 0.91). SPSS v22 software was used for data analysis, X2 test with Odds Ratio (OR) and 95% confidence interval (95%CI), assigning statistical significance with $p < 0.05$.

Results:

A total of 407 students were included, with moderate social network addiction in 57.4% and severe in 8.1%, with low self-esteem in 22.1% and moderate in 50.6%. Values of $p < 0.05$ were obtained for low self-esteem (OR/95%CI) when the most used social network is WhatsApp (0.5/0.2-0.8) and Instagram (1.8/108-3.2), as well as when having a number of followers between 1501-2000 (0.2/0.1-0.7) and 2501-3000 (10.8/1.1-106). Regarding network addiction, studying a humanities degree showed OR of 12(1.6-88.1). The rest of social networks such as Facebook, tik-tok, twitter, youtube, among others, showed values of $p > 0.05$ for both addiction to social networks and low self-esteem.

Conclusions:

Instagram is identified as a social network that facilitates the presence of low self-esteem in its users, while addiction to social networks is not associated with self-esteem. The number of followers is an associated factor for low self-esteem, and may be preventive or risky according to their total.

Key messages:

- We must propose the legislation of social networks, requesting the guarantee of studies for the algorithms that compose them in order to avoid harm to users from them.
- Work with students to have mental health and emotional intelligence should be one of the aspects to be covered by universities, as part of the comprehensive care for students.

DM Health at work, Social security and social welfare

Abstract citation ID: ckac131.256

Atypical working hours are associated with tobacco, cannabis and alcohol use

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Background:

We examined prospective associations between atypical working hours, substance use and sugar and fat consumption.

Methods:

In the French population-based CONSTANCES cohort, 47,288 men and 53,324 women currently employed included between 2012 and 2017 were annually followed for tobacco and cannabis use; among them, 35,647 men and 39,767 women included between 2012 and 2016 were also followed for alcohol and sugar and fat consumption. Three indicators of atypical working hours were self-reported at baseline: working at night, weekend work and non-fixed working hours. Generalized linear models computed odds of substance use and sugar and fat consumption at follow-up according to atypical working hours at baseline while adjusting for sociodemographic factors, depression and baseline substance use if appropriate.

Results:

Working at night was associated with increased tobacco use in women [odds ratios ranging from 1.45 to 1.48], with increased cannabis use in men [from 1.40 to 1.54] and with increased alcohol use in both men and women [from 1.12 to 1.14]. Weekend work and non-fixed working hours were associated with increased tobacco and alcohol use in both men and women [from 1.15 to 1.54 and 1.12 to 1.14, respectively]. Dose-dependent relationships were found regarding the association between working at night and tobacco use in women as well as regarding non-fixed working hours and tobacco use in both men and women (P for trends <0.001).

Conclusions:

The potential role of atypical working hours on substance use should be considered by public health policy makers and clinicians in information and prevention strategies.

Key messages:

- Night shifts were associated with increased smoking in women with dose-dependent relationships, cannabis use in men and alcohol use in both.
- Weekend work and non-fixed working hours were associated with increased alcohol and tobacco use with dose-dependent relationships in men and women.

Abstract citation ID: ckac131.257
Impact of occupational SARS-CoV-2 risk on the mental distress of non-healthcare employees in Germany

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Background:

The SARS-CoV-2 pandemic posed major challenges to employees and companies. Differences between industries and professions in occupational SARS-CoV-2 infection risk (OSIR) became apparent early on. This study examines the mental distress in terms of depression and anxiety symptoms of non-healthcare workers during the first and second Corona waves in Germany.

Methods:

We conducted an online survey from December 2020 to June 2021 among employees from industrial enterprises, local public transport, the public and the financial sector. High and potential OSIR was defined based on job information. Depression and anxiety symptoms were rated with the 4-item Patient Health Questionnaire (PHQ-4). Categorized PHQ-4 scores were modeled with ordinal random-intercept logistic multinomial regression models and presented with odds ratios (OR) and 95% confidence intervals (95% CI).

Results:

Overall, 516 of 1,545 participants (33.4%) were determined to be at increased OSIR. Anxiety and depression symptoms worsened during the pandemic in all OSIR groups. Risks for more severe depressive and anxiety symptoms were higher among employees with high (OR 2.35; 95% CI 1.33-4.16) and potential OSIR (OR 1.70; 95% CI 1.19-2.43) compared to employees without OSIR. Severity of mental distress differed also by the extent of perceived job protection, interactions with colleagues, work-privacy conflicts, and overcommitment.

Conclusions:

OSIR had a negative impact on employee's depressive symptoms and anxiety. Reducing SARS-CoV-2 exposure through workplace protective measures, strengthening interactions among colleagues, and supporting employees with work-privacy conflicts could help better protect employees' mental health.

Key messages:

- The risk for more severe depressive and anxiety symptoms increases with higher occupational SARS-CoV-2 infection risk.
- Improvements in SARS-CoV-2 exposure at work, colleague interactions, and work-privacy conflicts could help better protect mental health.

Abstract citation ID: ckac131.258
Health absenteeism due to dementia in Slovenia and its costs in the period from 2015-2018

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Background:

The number of employed people with certain mental or chronic illnesses is increasing. Given the fact that these are mainly diseases of the elderly and the fact that working life is increasing and populations are aging, we are already facing a public health problem that can increase without appropriate measures. Dementia mainly affects the elderly, but may occur in employed persons as well. This impairs their ability to work and is associated with costs. For the first time in Slovenia we performed a study to assess health absenteeism due to the diagnosis of dementia in the period from 2015 to 2018, to show its economic consequences and to plan the measures.

Methods:

The method of direct and indirect costs was used. We showed the indirect costs, which represent a loss, ie goods and services not produced on the market, namely, absenteeism due to dementia, and its economic impact. The costs of temporary absence from work were calculated on the basis of data obtained from the national health databases. The estimated cost of compensation for absence from work is based on the average gross salary. International Classification of Diseases-10 edition was used for the diagnoses of dementia; the Health Insurance Institute of Slovenia was the source of financial data.

Results:

Temporary absence from work due to the diagnosis of dementia in the period 2015-2018 in Slovenia amounted to around 0.6% of all calculated direct and indirect costs for this period, amounting to 11,037,275.00 EUR. The cost has been rising over the years.

Conclusions:

The results are underestimated, as rare cases of dementia are diagnosed before the age of 65 and due to data limitations. The employers should keep affected persons as long as possible active by adjusting the labour environment, working hours, providing an ergonomically designed workplace or by implementing preventive measures. These will reflect in positive financial effects on the economy, companies and the individuals.

Key messages:

- It is fundamental to encourage employers of persons with dementia to keep them in the initial phase of dementia active for as long as possible by adopting proper measures.
- Awareness of dementia is extremely important, as rapid recognition of signs of dementia and subsequent diagnosis, allow early and appropriate treatment.

Abstract citation ID: ckac131.259
Health and morbidity among those in paid work after age 64: a systematic review

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Background:

Despite the increase of labour market participation at older ages, very little is known about health and morbidity among those who remain in a paid work after age 64. The aim was to systematically review the scientific knowledge on health and morbidity among people aged above 64 years who are in paid work.

Methods:

A systematic literature review of studies published in English in scientific journals in 2014-2020. We identified 18,972 unique publications, of which 66 were deemed relevant by at least two independent researchers. Quality judgements and data extraction were done by at least two independent researchers according to pre-specified templates.

Results:

There was a great heterogeneity in the included studies regarding study design, included populations (both size and type), exposures, outcomes, covariates, measures, and analytical methods. Few were assessed as having high quality. Most studies (95%) were from OECD countries and results were about men to a greater extent than women. 42 of the 66 studies had results indicating that being in paid work after age 64 was associated with good health and less morbidity. Six studies presented at least one result showing the opposite; those in paid work had worse health than those not, while 21 studies presented at least one result showing that there were no health/morbidity differences between those in paid work and who were not. Only one study presented results regarding mortality. Many aspects had not been studied at all, or only in one or two studies.

Conclusions:

Many studies had results indicating that those who were in paid work >64 had better health/less morbidity than those who were not, however, there was a great variety in the results. There are surprisingly few studies about health/morbidity among people in paid work after age 64, and those published are heterogeneous: it is thus not possible to draw conclusions regarding scientific evidence based on the currently existing studies.

Key messages:

- Both study designs and results were very heterogenous in the 66 studies that presented results on health or morbidity among people in paid work after age 64.
- More and better studies are needed as well as greater clarity regarding study designs, populations, measures, analytical methods and definitions of central concepts such as work, health and morbidity.

Abstract citation ID: ckac131.260
Methodologies for determining staffing needs in healthcare: systematic literature review

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The determination of staffing needs in healthcare is not just calculating the optimal number of professionals but is defining how the professional contingent accompanies the development of the healthcare organisation and of the population's care needs. This research investigates the existence of a gold standard for determining health personnel requirements. We perform a systematic literature review to explore several approaches worldwide, examining a wide range of contextual variables, useful for the definition of an omni-comprehensive approach. A total of 557 articles was initially detected, then reduced to 57 after excluding everything not related to healthcare context and staff planning models. Results do not reveal a recognized standard for determining staffing needs. Approaches to the definition of staffing standards are mainly ex-ante (31%), based on the characteristics of specific models and organisational needs, or ex-post (62%), based on production analysis and historical trends. Most of these refer to the medical and nursing category (68.4%), while the minority proposes a multi-professional approach (17.5%). This review highlights innovative approaches based on algorithms which, starting from historical data, are adjusted by moderating key variables such as contextual factors, healthcare organisation models and professional attributes.

The review suggests:

1. Develop and share a unique tool for defining standards based on several variables that identify the characteristics of the context
2. Use up-to-date information flows and quality data
3. Consider a multi-professional approach
4. Adopt a long-term vision and continuous dialogue with the training process

It is clear the need to develop a tool for the definition of personnel requirements in line with internal and external changes in the health system. Therefore, such models need to account for an adequate number of variables, useful to identify the characteristics of the overall context.

Key messages:

- The development of staffing needs estimates must necessarily rely on a certain level of standardisation, but at the same time must take into account the variability characterising different contexts.
- In order to respond to recent demographic and epidemiological trends, it is crucial to include in the model skill mix and task shifting strategies involving health professionals as a whole.

Abstract citation ID: ckac131.261
Managers' prevention and self-confidence in supporting employees with common mental disorders

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Background:

Despite managers' responsibility for work environment and employee health few studies have investigated managers' actions to prevent common mental disorders (CMD). Concerning prevention of CMD, qualitative studies report managers feeling unconfident. We investigated managers' self-confidence in supporting employees with CMD and two managerial preventive actions (MPA): 'reviewing assignments and the work situation' (MPA-review) and 'taking initiative to talk about depression and anxiety at the workplace' (MPA-talk). We hypothesized that managers' self-confidence in supporting employees with CMD would be positively associated with both MPAs.

Methods:

An on-line survey was sent in 2017 to 4737 managers, answer rate 71% (n = 3358), of which 2 899 were included in this study. Both independent and dependent variables were measured through single questions. Self-confidence in supporting employees with CMD was analyzed in relation to MPA-review and MPA-talk using binary logistic regression analysis adjusted for sex, education, managerial experience and training, lived experiences of CMD, work organizational context and general preventive actions in the organization towards CMD.

Results:

The proportion of managers with higher self-confidence in supporting employees with CMD was 48.9%, performing MPA-review and MPA-talk was 50% and 57% respectively. Adjusted for all co-variates, managers with higher self-confidence in supporting employees with CMDs were more likely to do both MPA-review (OR 1.57; 95% CI, 1.31-1.87) and MPA-talk (OR 2.06; 95% CI, 1.71-2.25).

Conclusions:

The study hypotheses were confirmed. Managers with more self-confidence in supporting employees with CMD were more likely to take actions to prevent CMD, particularly regarding initiating talks about CMD with subordinates. The study suggests it is important to strengthen managers self-confidence in supporting employees with CMD to increase their preventive actions towards CMD.

Key messages:

- Managers' self-confidence in supporting employees with CMD is vital for workplace prevention.
- To strengthen managers' self-confidence in supporting employees with CMD is essential.

Abstract citation ID: ckac131.262
Managerial preventions of common mental disorders and the association with stigmatizing attitudes

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Background:

Common mental disorders (CMDs) are an extensive problem in the society and attributed to stigma. Prevention of CMD at work is advocated but few studies have investigated what kind of preventive actions managers take. We investigated managers' attitudes to depression and two managerial preventive actions (MPA): 'reviewing assignments and the work situation' (MPA-review) and 'taking initiative to talk about depression and anxiety at the workplace' (MPA-talk). We hypothesized that managers' negative attitudes towards depression would be negatively associated with both MPAs.

Methods:

An on-line survey was sent in 2017 to 4737 managers, answer rate 71% (n = 3358), of which 2 899 were included in this study. Negative attitudes were measured through the 12-item instrument "Managerial stigma towards employee depression" (scores 12-72), a cut-off at the 3rd quartile was used as an indicator for having negative attitudes. MPAs were measured with two single questions. Negative attitudes to depression were analyzed in relation to MPA-review and MPA-talk using binary logistic regression analysis with adjustments for sex, education, managerial experience and training, lived experiences of CMD, work organizational context and general preventive actions in the organization towards CMD.

Results:

The proportion of managers with negative attitudes to depression was 20%, performing MPA-review and MPA-talk was 50% and 57% respectively. Adjusted for all co-variates, managers with negative attitudes towards employees with depression were less likely to do both MPA-review (OR 0.71; 95% CI, 0.57-0.89) and MPA-talk (OR 0.53; 95% CI, 0.42-0.66).

Conclusions:

Managers with negative attitudes to depression were less likely to take actions to prevent CMD among their employees which confirmed the study hypotheses. The study suggests that initiatives to reduce stigma among managers could be a way forward to prevent CMD at work.

Key messages:

- Stigma to depression hampers managers' prevention of CMD and needs to be addressed.
- To increase managers prevention of CMD, managerial training to reduce stigma towards depression is essential.

Abstract citation ID: ckac131.263
The effect of employment services on employment and health among unemployed persons: an IV approach

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Background:

In a large city in the Netherlands, professionals of one department of the municipality focus on rapid return to work, even if that work is not directly in line with education, experience or preference of the client. The first aim was to investigate the effects of this work-first strategy of the municipality on entering paid employment and on health among unemployed persons. The second aim was to determine whether these effects differed between persons, depending on age, sex, education, health, and employment history.

Methods:

To identify the effectiveness of employment services of the municipality, a judge leniency instrumental variable (IV) design was used, based on referral behaviour of case workers. In total, 3272 persons who applied for welfare in a large city in the Netherlands in the year 2015, were included in the study. Information on employment services was derived from the municipality. Information on individual characteristics and employment status was derived from register data from Statistics Netherlands. Information on diseases was derived from a medication register. IV regression models and ordinary least squares (OLS) regression models were performed.

Results:

The work-first strategy increased the likelihood of entering paid employment by 27% points (b = 0.26, se = 0.07) and had a positive influence on health by 4% points (b = 0.06, se 0.03) of welfare recipients compared to other employment services. Although standard errors were larger for subgroups, the positive effect of the work-first strategy on employment was driven by relatively young (18-30 yrs) and old (45-65 yrs) welfare recipients, with low and intermediate education level.

Conclusions:

The instrumental variable approach is a valuable approach to investigate the effect of employment services on entering paid employment and health. To improve health of unemployed persons, it is important to promote entering paid employment.

Key messages:

- Active labour market policies, such as the work-first approach, are beneficial for individuals, by increasing employment participation and health, and society, by increasing the employment rate.
- The IV approach is a promising approach to study causal relations in a quasi-experimental study. By using large datasets, differential effects across different groups of participants can be studied.

Abstract citation ID: ckac131.264
Night work and sustainable working life - a prospective trajectory analysis of Swedish Twins

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Objectives:

Night work has been widely studied for the associations with diseases, sickness absence (SA) and disability pension (DP), but less for sustainable working life. We aimed to investigate the longitudinal changes in sustainable working life among those with or without baseline night work.

Methods:

Using data from Swedish national registers, sustainable working life was defined as employment during follow-up without interruptions due to SA/DP, unemployment, and old-age pension. Survey data for two cohorts (i.e., born before or after 1959) were utilized to assess night work at baseline (yes/no) in 1998-2003 and 2004-2006, respectively. The final samples for the two cohorts were 34680 and 19637, respectively. Group-based trajectory models were applied.

Results:

Among those born before 1959 (mean age 59 years, 13 years follow-up), a five-trajectory solution was best for those with and without night work. The trajectory groups were stable sustainable working life (38-42%), stable unsustainable working life (24-25%), early (13%) or later (13%) decreasing sustainable working life, and between sustainable and unsustainable working life (7%). Among those born after 1958 (mean age 37 years, follow-up 10 years), four trajectories were detected for those with night work: stable sustainable working life (81%), stable unsustainable working life (6%) and increasing (7%) and decreasing (5%) sustainable working life. For those without nightwork, a three-trajectory solution was best: stable sustainable working life (83%), stable unsustainable working life (6%) and between sustainable and unsustainable working life (11%).

Conclusions:

Sustainable working life was similar across baseline night work statuses of older cohort but differed in younger cohort. The findings suggest that at least night work at one time point does not affect sustainable working life. However, night work at early stages of working life could be accompanied with lifestyle counselling for sleep and recovery.

Key messages:

- Trajectories of sustainable working life seem similar for those with or without night work adding to the understanding of effects of such work to health.
- From public health perspective, counselling employees with night work already at early stages of working life for health behaviours including sleep and recovery could support sustainable working life.

Abstract citation ID: ckac131.265
Work-related stress predicted future sick leave in primary health care patients

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Background:

Studying the relationship between work-related stress and sick leave is valuable in taking actions for workers' health. This study aimed to analyse the association between work-related stress, measured with the Work Stress Questionnaire (WSQ), and registered sick leave among primary health care patients in Sweden.

Methods:

The prospective longitudinal study included 232 patients who were non-sick-listed, employed, aged 18-64 years and sought care for mental and/or physical health complaints. Logistic regression analysis was performed with questionnaire data on work-related stress from baseline together with sick leave data from a national register for the following 12 months.

Results:

High stress due to indistinct organization and conflicts was reported by 21% (n = 49), while 45% (n = 105) reported high stress due to individual demands and commitment. During 12 months 36% (n = 83) were on sick leave for 15 days or more. The odds of being on sick leave was twice as high for patients perceiving high stress due to indistinct organization and conflicts, high stress due to individual demands and commitment, low influence at work, or high interference between work and leisure time. Perceiving high stress due to both indistinct organization and conflicts as well as individual demands and commitment quadrupled the odds of sick leave, OR 4.15 (95% CI 1.84; 9.38).

Conclusions:

Work-related stress and sick leave were prevalent among the patients. Primary health care can therefore be a suitable arena for addressing these issues. Perceiving work-related stressors and stress within one or multiple areas increased the odds of registered sick leave by two to four times. Hence, a wide spectrum of factors needs to be considered, to capture the dynamic interaction between the individual and the work environment.

Key messages:

- Work-related stress is associated with future sick leave for primary health care patients.
- Early identification of patients with work-related stress is important for the primary health care.

Abstract citation ID: ckac131.266
Violence against healthcare workers during COVID-19 vaccination campaign

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Background:

Violence against healthcare workers (HCWs) has gained increasing attention in recent years, both because it is on the rise and because there is growing concern about these incidents, which are classified as sentinel events by the Italian Ministry of Health. Since little is known about the actual burden of this phenomenon, especially during the stressful COVID-19 vaccination campaign, we decided to explore the problem in our region.

Methods:

Between January and March 2022, in the 1.2 million-inhabitant Friuli Venezia Giulia region (Italy), we conducted an anonymous online survey to collected data on episodes of violence and their consequences for HCWs. Data from validated tools assessing characteristics of violent episodes and post-trauma impact were analyzed in conjunction with socio-demographic data of respondents.

Results:

200 HCWs participated in the survey, most of whom were women (72%), worked as nurses (107) or doctors (71), and had a mean age of 47 years. More than half of them (59%) reported at least one episode of violence, mainly in the form of a verbal assault (64%); there were no differences between victims. In 72 cases, these incidents affected the HCW's private life, mainly disturbing sleep or concentration (68%). Most HCWs stated that inadequate communication was a trigger for the violence (97%). Although 80% of HCWs would readily report any violent incident, to improve the situation they called for certainty of action against the perpetrator (87%), more organizational support (85%), standard procedures (75%) and self-defense courses (75%).

Conclusions:
Violence in COVID-19 vaccination campaign appears to be common and to affect both the personal and professional lives of HCWs. Improvements at the institutional and personal level could help to address this problem that affects the health workforce.

Key messages:
- Given the growing public debate, violence in healthcare settings is an important issue that needs to be addressed in the coming years.
- Assessing workplace violence and its associated risk factors will help focus on the strategies that can be usefully employed to prevent it in the future.

Abstract citation ID: ckac131.267
Does sickness absence history affect work participation after vocational labour market training?

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Background:
Active labour market programmes, such as vocational training, have become widely adopted measures to increase job seekers' employment opportunities, but evidence of their effectiveness in later employment is mixed. Individuals who enter training differ greatly in their socioeconomic background, health, and labour market history, which can affect the effectiveness of these programmes. There is still uncertainty, for example, on how vocational labour market training works for individuals with prior health problems.

Methods:
We use nationally representative Finnish register data on 88,283 individuals aged 25-59 who participated in vocational labour market training in 2008-2013, 23,715 of whom had sickness absence lasting at least 10 weekdays (including Saturday) three years prior to the training and 64,568 of whom did not. To adjust for the differences in socio-demographic and work-related factors between these groups, we will conduct propensity score matching. We will analyze work participation three years before and after the training among those with sickness absence and those without using a difference-in-difference analysis.

Results:
Our preliminary results show that before training the work participation rate was similar in those with sickness absence history (58.5 %) and those without (58.1 %). After training, those with a sickness absence history had slightly lower work participation than those without (54.6% versus 59.6 %). The differences in work participation between these groups increased slightly over time after training.

Conclusions:
Vocational labour market training does not necessarily work equally well for everyone in terms of enhancing employment, and job seekers with work disability history should be offered either extra support or another type of unemployment service. However, these are our pre-matching results, and they cannot be causally interpreted. Next, we will conduct the propensity score matching and difference-in-difference analysis.

Key messages:
- Having a sickness absence history prior to vocational labour market training is associated with lower work participation after training compared to participants without a sickness absence history.
- The main advantage of the study is the use of a quasi-experimental study design to test the effectiveness of vocational training, using rich nationally representative register data with long follow-up.

Abstract citation ID: ckac131.268
Non-standard employment and mental health during the COVID-19 pandemic in Spain: a qualitative study

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Background:
The COVID-19 pandemic entailed a deep economic crisis that affected working populations globally. However, non-standard workers (NSW, understood as workers with temporary contracts, not working full-time, self-employed or not paying taxes/making active pension contributions) were more severely hit than workers with more stable and protected jobs. The aim of this study thus was to explore the experiences of NSW during the pandemic and how these affected their mental health in Spain, one of the countries in Europe with the highest shares of temporary and self-employment and the one that applied the most restrictive containment measures during the first waves of the pandemic.

Methods:
As part of a larger multi-country study, 41 semi-structured interviews with NSW aged 25-55 were conducted between March-July 2021 and analyzed thematically.

Results:
Analyses revealed that job loss or insecurity and subsequent reductions in income were central to the experience of NSW during the pandemic in Spain, which affected their mental health negatively. Both the existing social protection framework and the policies deployed during the pandemic to outweigh these consequences were perceived by NSW as insufficient or could not access them due to their condition of NSW. This was particularly the case for self-employed and temporary agency workers. Moreover, NSW expressed that containment measures and reductions in income prevented them from engaging in activities to cope with such adversities, aggravating their mental health.

Conclusions:
These findings suggest that, in Spain, the pandemic intensified but also made more visible the defenselessness of NSW (especially self-employed and temporary agency workers) in terms of social protection in the event of sudden unemployment or reductions in income. This situation had harmful consequences for their mental health. Yet, new policies and measures fall short in fitting the necessities of an increasing share of the workforce.

Key messages:
- In Spain, non-standard workers are more vulnerable to and defenseless against sudden unemployment or reductions in income.
- The pandemic intensified this problem and put them at higher risk of suffering from poor mental health.

Abstract citation ID: ckac131.269
Organizational cultures in the Swedish restaurant business and the risk for sexual harassment

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Background:
The hospitality sector has the highest level of sexual harassment incidents compared to any other sector. The negative consequences of sexual harassment at the restaurant

workplace are not limited to the health of the victim alone as it also affects the organization as well as the health of a society. The organizational context is a fundamental determinant of sexual harassment and we need to increase our understanding of organizational cultures that affect such behaviors in order to develop and implement effective interventions in the restaurant business. The aim of this study was to give a comprehensive picture of organizational cultures that increase the risk for sexual harassment in the restaurant business.

Methods:

Individual interviews with twenty-nine employees in the restaurant business (e.g. waiting staff, chefs, bartenders, managers) were conducted during 2019-2021. Thematic analysis was used to analyze organizational cultures that increase the risk for sexual harassment in the restaurant business. Preliminary results show a complex web of intersecting cultures such as a toxic macho culture, a weak leadership culture and a close relational culture that cooperate at different hierarchical levels and increase the risk for sexual harassment. The results also show how organizational factors such as workforce demography, unsocial working hours, staff turnover and understaffing are interacting with the organizational cultures in the creation of a hostile environment that increases the risk for sexual harassment.

Conclusions:

The results elucidate why traditional interventions such as training or bystander interventions are inefficient in the restaurant business. The results can be used to develop interventions that focus on macho-cultures in restaurants, the leadership culture and the specific relationship culture that develop due to the specific organizational structures in the restaurant business.

Key messages:

- There is a need to focus on organizational factors in order to work against sexual harassment in the restaurant business and is a prerequisite for developing efficient interventions.
- Sexual harassment affects many people in working life and is a serious public health problem. Also, sexual harassment at work maintains gender-based inequalities that exist at a structural level.

Abstract citation ID: ckac131.270
Sexual harassment, other types of harassment and derogatory treatment in the academy

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Background:

Sexual harassment (SH) continues to be a significant public health problem, especially among women. SH and other types of harassment and derogatory treatment/bullying exist at many academic workplaces. The aim of this study is to explore how SH relates to other forms of harassment among staff at a large Swedish university, separated by gender.

Methods:

Using data from a web-based survey sent out to all staff in November 2019 (response rate 33%), a multiple logistic regression analysis was performed. Exposure to SH was defined as having experienced at least one of ten defined SH behaviours related to work. Exposure to harassment (other than sexual) was defined as having experienced violation of onés dignity associated with one of the Swedish seven legal grounds for discrimination: sex, transgender identity or expression, ethnicity, religion or other belief, disability, sexual orientation or age. Exposure to derogatory treatment was defined as having experienced undesirable negative behaviours, such as withholding information, derogatory comments or exclusion. All SH, harassment and derogatory treatment took place during the last 12 months.

Results:

Preliminary results show a sixfold increased risk among women subjected to SH to also experience harassment, a three times higher risk to experience derogatory treatment and a seven times higher risk to experience multiple forms of harassment (two or more forms of harassment or derogatory treatment) compared to women unexposed to SH. The elevated risk remained after adjusting for relevant background variables. The pattern was similar among men but with lower prevalence of SH, harassment and derogatory treatment.

Conclusions:

The results indicate that individuals subjected to SH at work have an increased risk of experiencing other types of harassment or derogatory treatment. This new information is relevant to consider in prevention of SH and harassment in academia.

Key messages:

- The results indicate that individuals subjected to sexual harassment at work have an increased risk of experiencing other types of harassment or derogatory treatment.
- Findings indicating a relationship between sexual harassment and other types of harassment or derogatory treatment may be valuable for counteracting the problem.

Abstract citation ID: ckac131.271
A Sick Benefit Scheme Reduces Unmet Healthcare Needs: An Natural Experiment in Seoul

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South Korea experiences four times more unmet healthcare needs than OECD countries (11.6% and 2.6% respectively). Unmet healthcare needs are caused by the double burden of direct and indirect costs including income loss, and OECD countries operate a sickness benefit scheme to resolve sudden loss of pay. Seoul introduced the first sickness benefit system, Seoul-Type Paid Sick Leave Support (hereinafter Seoul Sick Leave), for self-employed national healthcare insurance subscribers to reduce the rate of unmet healthcare needs. By comparing the amount of increasing medical expenses between the beneficiary and non-beneficiary before (2018) and after (2019-2020) the introduction of the system, the study was intended to confirm the reduced unmet healthcare needs. This study used data from the National Health Information Database (NHID) and the difference in differences (DID) analytic framework. 96 and 121 patients were included in benefit and non-benefit cohorts, respectively. As a result, the beneficiary group's expenses were smaller than those of the non-beneficiary group (coef. = -1.24, p = 0.026). However, the beneficiary group had a greater amount of increase in hospitalization expenses before and after the introduction than the non-beneficiary group did (coef. = 1.66, p = 0.005). Our finding showed that the Seoul Sick Leave helped the precarious workers as they were able to use inpatient services when they needed. If it is to be scaled up to the national level, it should be applied all people to enhance universal health insurance in Korea.

Key messages:

- Identified the effectiveness of the first sickness benefit system as it helped the precarious workers as they were able to use inpatient services when they needed.

- By financially supporting them, the Seoul Sick Leave support can achieve health promotion through early detection and treatment.

Abstract citation ID: ckac131.272
Predictors of job satisfaction among German teachers during the SARS-CoV-2 pandemic

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Background:

To contribute the containment of the infections during the SARS-COV-2 pandemic, changes in working conditions occurred worldwide. In the school context, teaching was changed several times to distance learning and teachers were forced to work from home. This increasing spatial separation between work and private life increased the potential for conflicts. Based on the theoretical assumption that stressors worsen job satisfaction and resources increase satisfaction, the aim of our study was to identify the predictors of teachers' job satisfaction during the pandemic. The focus on job satisfaction is interesting because the concept is often related to health-related aspects from a public health perspective.

Methods:

A nationwide cross-sectional survey was conducted among German teachers in March 2021. After data cleaning, 31,089 participants were included in the analyses. The survey consisted of established instruments (e.g., COPSOQ) and self-developed items if necessary. A multiple linear regression was performed to predict teachers' job satisfaction by stepwise inclusion of sociodemographic, work-related and covid-specific variables.

Results:

Overall, the regression revealed that especially work-related variables were strong predictors of job satisfaction. The analyses showed that higher levels of meaning of work, autonomy and predictability of work increased job satisfaction. In contrast, increased emotional stress, feelings of unfair treatment, and work-privacy conflicts deteriorated job satisfaction.

Conclusions:

The present study identified important predictors of job satisfaction which may be used to derive specific recommendations for improving teachers' job satisfaction during the SARS-CoV-2 pandemic. The relevance of job satisfaction for the scientific and public discourse becomes apparent because it was closely related to teachers' somatic and mental health.

Key messages:

- Teachers' job satisfaction during the pandemic can be further improved by making appropriate adjustments, particularly in work-specific requirements.
- Improving job satisfaction significantly contributes to promoting teachers' health.

Abstract citation ID: ckac131.273
Working re-organisation due to the pandemic may negatively affect workers' quality of life

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Background:

From the beginning of 2020, the COVID-19 pandemic imposed many changes in the organization of our personal and professional life, allowing a shift to teleworking and hybrid working arrangements worldwide. The persistence of this condition determined the integration of these changes in the daily routine, and our aim was to investigate how these changes could affect workers' Quality of Life (QOL) in the long run.

Methods:

An online questionnaire was administered to 650 workers employed in an Italian company in July 2021. The domains considered were socio-demographic characteristics, QOL (WHOQOL-bref and Healthy Days), lifestyle, health status, physical activity, and work-related factors. Comparisons were performed with non-parametric tests.

Results:

Among the 332 respondents (response rate = 51.1%), 79.2% were white-collar workers. The concern for the pandemic affected workers' QOL, especially in the physical health and the environmental domains ($p < 0.001$ and $p = 0.001$, respectively), with lower values in subjects reporting the highest values of concern. A similar effect was found also for healthy days concerning physical and psychological health, and the ability to perform usual activities ($p = 0.003$, $p = 0.003$, and $p = 0.029$, respectively). As well, changes in working arrangements significantly affected the environmental and physical domains ($p = 0.023$ and $p = 0.015$, respectively) and the ability to do usual activities ($p = 0.011$), with lower values in those who interrupted the working activity. Workers whose activity required a shift to teleworking reported higher scores in the physical health domain ($p = 0.041$) and a higher number of days with good physical health ($p = 0.002$), while a lower number of days with good psychological health ($p = 0.006$).

Conclusions:

These preliminary data revealed that organizational strategies adopted in working scenarios to contain the spread of COVID-19 may have an impact on workers' QOL, as well as the concern for the pandemic.

Key messages:

- Changes in the working arrangements due to pandemic may negatively affect the workers' Quality of Life, especially for those who had to interrupt their working activity.
- The shift to telework, even if appearing to be beneficial for physical health perception, seems to negatively affect workers' psychological health.

Abstract citation ID: ckac131.274
Association between job exposures and employment status 2 years after medical rehabilitation

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Background:

Research shows an important association between job exposures and various health- and employment-related outcomes. On contrast, little is known about the impact of job exposures on the employment status after medical rehabilitation. Thus, the aim of this study is to investigate the association between job exposures and employment, unemployment, and disability pension entry 2 years after rehabilitation.

Methods:

A retrospective cohort study was performed based on the scientific use file "SUFRSDLV15B" of the German Pension Insurance containing rehabilitation and occupational data at a monthly level. We included n = 597,021 insured persons aged

18 to 63 years completing a medical rehabilitation between 2008 and 2013 in Germany and traced their employment status over a 24-month follow-up period. Job exposures were operationalised with the Overall Job Exposure Index (Kroll, 2015) by applying job-exposure-matrices.

Results:

Persons with high job exposures in comparison to those with low job exposures were less likely to be employed (87.6% vs. 92.6%) and more likely to be unemployed (13.9% vs. 7.7%) and to draw disability pension (4.8% vs. 4.4%) for at least one month in the 2-year-period after rehabilitation. One minus survival curves showed that the differences were already evident in the first month after rehabilitation and further increased during the following 24 months. Cox regressions revealed that these associations remained stable when adjusting for gender, age, and employment status before rehabilitation.

Conclusions:

The results underline the importance of addressing job exposures during rehabilitation to enhance return-to-work and stay-at-work after rehabilitation. These findings could help to identify particularly vulnerable groups of insured persons based on routine data at an earlier stage than has been the case so far and to give them access to structured workplace-oriented medical rehabilitation programmes that have been established in recent years.

Key messages:

- High job exposures are associated with less work participation after medical rehabilitation.
- To increase return-to-work, it may be useful to address job exposures in rehabilitation more than before.

Abstract citation ID: ckac131.275
Effort-reward imbalance and the mental health of middle managers in Europe

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Background:

According to the Neo-Marxist Class Theory, supervisors' health is at risk due to their position of authority without strategic power. We investigate how the interaction between the class location and an Effort-Reward Imbalance (ERI) is related to mental health risk, including gender differences and mediation by work-life balance.

Methods:

From the 6th wave of the European Working Conditions Survey, we selected workers aged 15 to 64 of the 28 European Member States (pre-Brexit). ERI was measured with 18 proxies for the ERI Questionnaire items. For mental health, the WHO-5 well-being index was used. Relationships were analyzed using linear regression models.

Results:

We found evidence for the relationship between ERI and mental health of European employees (ß = -0.641, $p < .001$), partially mediated by work-life balance. Contrary to previous NMSC studies, we did not find worse mental health for supervisors. The vulnerability for ERI increases with class position (supervisors ß = -0.703; topmanagers ß = -1.099), with supervisors showing a higher mean ERI (subordinates M = 0.445; supervisors M = 0.459; topmanagers M = 0.437, $p < .001$). The mental health of female supervisors appears more vulnerable to ERI than men's.

Conclusions:

Our findings show that mental health risks of supervisors become apparent especially in situations where esteem, job security and promotion opportunities do not match the status expectations of the position. A labor market policy that encourages organizations to have those tasks performed by their own permanent employees (as opposed to outsourcing them), with a focus on a healthy work-life balance and fair remuneration, can benefit the mental health of this group of employees.

Key messages:

- The mental health of employees in higher positions of authority is more vulnerable to situations of effort-reward imbalance.
- European labor market policies focused on security for employees, rather than flexibility for employers, can reduce mental illness among the European middle managers and subordinates.

Abstract citation ID: ckac131.276
Discrimination and sexual harassment – Results from the largest German medical university

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Background:

Discrimination and sexual harassment in the workplace and in higher education institutions are important public health issues. Here we aim at analyzing the prevalence of discrimination and sexual harassment of lecturers and students at one of the largest teaching hospitals in Europe. We assess whether there are differences between lecturers and students, women and men, and different study programs.

Methods:

An online questionnaire was sent to N = 7095 students of all study programs and N = 2528 lecturers at Charité - Universitätsmedizin Berlin. The survey was conducted from November 2018 to February 2019. We investigated experienced or observed discrimination or sexual harassment at the medical faculty. Furthermore, we analyzed frequency, perpetrators, situational factors, attributed reasons and forms of harassment encountered.

Results:

A total of 964 (14%) students (S) and 275 (11%) of lecturers (L) participated in the survey. Discriminatory behavior was witnessed and/or experienced by 49,6% of students (L: 31%), sexual harassment by 23,6% of students (L: 19,2%). Students state lecturers (85,9%) as main source of discriminatory behavior (L: directors/supervisors: 47,4%; students 41,0%). Sex/Gender (S: 71%; L: 60,3%) is cited most frequently as reason for discriminatory experiences. Female students and faculty experience more discrimination and sexual harassment.

Conclusions:

Discrimination and sexual harassment are prevalent in academic medicine. There are differences in the reasons and sources of discrimination and sexual harassment between students and lecturers. Specific programs for lecturers and students are necessary to educate the faculty on how to prevent and respond to it and whom to address.

Key messages:

- National preventive strategies should be implemented to tackle issues of discrimination and harassment in higher education institutions.
- Special attention should be paid to female students and lecturers.

Abstract citation ID: ckac131.277
Sickness absence among 299484 blue-collar workers in the trade industry during the Covid-19 pandemic

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Background:

Many blue-collar workers in the trade and retail industries have jobs that make it hard to avoid contacts with other people, which may have increased their risk for sickness absence (SA) during the Covid-19 pandemic. The aim was to investigate rates of SA and sociodemographic and occupational differences in risk of SA during the Covid-19 pandemic.

Methods:

A prospective cohort study of all blue-collar workers in Sweden in the trade and retail industry aged 18-67 in 2018 (n = 299 484), followed 5 years (2016-2020) using linked microdata from nationwide registers. Descriptive statistics of rate of workers having had at least one SA-spell >14 days were calculated, and logistic regression was used to calculate odds ratios (OR) and 95% confidence intervals (CI) of having SA due to Covid-19 or related diagnoses (some infectious, respiratory, and symptom-based diagnoses).

Results:

Their SA rates increased from fluctuating between 7.6%-8.2% in 2016-2019 to 10.0% in 2020. 0.05% had SA due to Covid-19 and 2.2% had SA due to Covid-19 or related diagnoses. Factors associated with having SA due to Covid-19 or related diagnoses were older age (OR age 55-64: 3.41, CI 3.04-3.82 compared to 18-25) and only elementary education (OR 1.50, CI 1.37-1.64 compared to university/college). Warehouse and terminal staff (reference category) was the occupational group with the highest risk of SA/DP due to Covid-19 or related diagnoses. Cashiers had the second highest risk, with CIs that overlapped 1 (OR 0.91, CI 0.77-1.06). All other occupational groups had significantly lower ORs (0.48-0.78).

Conclusions:

The SA rates increased slightly during the Covid-19 pandemic. Within the trade and retail industry, the warehouse and terminal staff was the occupational group with the highest risk of SA due to Covid-19 or related diagnoses.

Key messages:

- The rates of SA among blue-collar workers in the trade and retail industry increased slightly during the first year of the Covid-19 pandemic.
- Warehouse and terminal staff and cashiers were the occupational groups with the highest risk of SA due to Covid-19 or related diagnoses among blue-collar workers in the trade and retail industry.

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Factors associated with gender-based violence in couples during confinement by COVID-19 in Veracruz

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Background:

In the world, about a third of women who have had a relationship have suffered some type of violence and Veracruz city in Mexico presented 83 femicides, 519 assaults and 686 disappearances, occupying the 2nd place national in this field.

Objetives:

To determinate the factors associated with gender violence during confinement by covid-19

Methods:

A cross-sectional, prospective, analytical and observational study was conducted between August - December 2021. Women residents of Veracruz who have or have had a relationship in the last year were included. Violence was quantified by applying to through Google Forms® assessment inventory of mistreatment of women by their couple (APCM) with cronbach's alpha of 0.94; this instrument takes into account physical and psychological violence. SPSS v22 software was used for data analysis, X2 test with Odds Ratio (OR) and 95% confidence interval (95%CI) and MannWhitney U test.

Results:

A total of 740 women participated, with a mean age of 28.1±12.07, 87.8% heterosexual. Gender, sexual preference, educational level, witnessing violence in the family or in relationships with friends obtained values of $p > 0.05$ to suffer violence, while age was higher for those who suffered gender-based violence (28.8 vs 24.2) and the associated factors (OR/CI95%) were being a housewife (3.1/1.4-6.9), being a student (0.5/0.3-0.8), being married (1.8/1.05-3.3), having a boyfriend (0.3/0.2-0.5), having suffered violence in a previous relationship (1.6/1.06-2.5), identifying gender-based violence correctly or perceived (0.2/0.1-0.4), having suffered gender-based violence at some time by their partner in their last relationship (15.9/5.0-50.9) ($p < 0.05$)

Conclusions:

Being a housewife, being married, having suffered violence in previous relationships and in the last relationship increase the risk of gender violence, while being a student, having a boyfriend and knowing the concept of gender violence decrease the probability of suffering it.

Key messages:

- We must work on a deconstruction of ideas that allows women with risk factors for violence with their couples to identify it without fear of not meeting the socio-cultural expectations assigned to it.
- Including a woman's partner within the structure of prevention of violence against women must be fundamental to promote an environment free of violence.

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Health services gaps experienced by non-standard workers in Ontario, Canada: Policy implications

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Background:

While the Canadian universal health system provides access to basic services, key health benefits are employer dependent. Given that non-standard workers (NSWs) only rarely have access to such benefits they have increased vulnerability to the many insecurities derived from their precarious employment, as clearly seen during the pandemic. The growing problem of non-standard work and workers' heightened risk for health status deterioration, followed by a possible accentuation of health inequities, is a population health concern. This study summarizes several health services gaps experienced by NSWs and discusses policy implications and possible solutions.

Methods:

From January to July 2021, we conducted semi-structured interviews with a purposive sample of 40 NSWs in Ontario, Canada, part of a larger mixed-methods six-country study, including three European countries. The target population consisted of workers aged 25 to 55 who, at the time of the survey, were in non-standard employment or lost their job due to the COVID-19 pandemic.

Results:

Our findings highlight complex physical and mental health problems and an overall high burden of disease facing NSWs during the pandemic as linked to a combination of constant stress and worry arising from their employment insecurity, the limited and inconsistent income available to cover their basic needs, and the inadequate and unsafe working conditions they are afraid to challenge. Despite their increased health needs, given that specialized health services are not available to them for free they face financial barriers in accessing much needed health services that could help improve their health status and as a result, delay seeking care or avoid it altogether.

Conclusions:

Sustainable multi sectorial policy solutions are needed including the adoption of relevant labour market legislation and increases in social and health expenditures along with re-adjustments in the ways in which health services are delivered.

Key messages:

- During the pandemic non-standard workers in Ontario, Canada experienced complex health problems and, despite increased health needs, encountered barriers in accessing specialized health services.
- The growing problem of non-standard work and workers' heightened risk for health status deterioration, followed by a possible accentuation of health inequities, is a population health concern.

Abstract citation ID: ckac131.280
Health protection among own account and platform workers during COVID19 in Chile. The PWR project

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Background:

In the last decades, non-standard employment has grown globally. Especially for own account workers (OAW), this implies the self-management of economic, health and other work-related risks. In the context of COVID19, this management was stressed by lockdowns and the novel health risks imposed by an unknown and highly contagious virus, demanding the incorporation of new knowledge and preventive actions. As part of a six-country multiple case qualitative study on non-standard workers (NSW), we explore their experiences and strategies deployed to protect their health while continuing to work.

Methods:

We performed 40 in-depth interviews to NSWs between October 2020 and February 2021, identified through the PWR online-survey and selected through an intentional sampling strategy according to levels of precarity (high-low), gender (male/female) and age (18-39/40-55). Interviews were analysed through abductive thematic analysis.

Results:

We observed a significant transfer to platform, Uber-like jobs in the delivery of goods during lockdown (n = 7). In the absence of institutional prevention programs and provision of protective equipment, OAWs (n = 13) refer the self-provision of COVID19 prevention to protect themselves and their families while continuing to work, deploying a series of strategies amidst limited understanding of both mode of transmission of the virus and actual effective preventive measures. This had serious consequences for them and their families, expressed in anguish, sense of lack of control, fear, and fragility in the face of a major health risk given their constant potential exposure to the virus, leading to both physical and mental health problems, as well as COVID19 infection.

Conclusions:

The substantial growth worldwide of gig delivery work during lockdowns magnified a pressing public health problem, critically requiring social security for gig and OAWs and the development of more equitable and accessible occupational health for all.

Key messages:

- Substantial growth worldwide of gig delivery work during lockdowns magnified a pressing public health problem.
- Social security for gig and OAWs are critically required as well as the development of more equitable and accessible occupational health for all.

DN Health care services and systems

Abstract citation ID: ckac131.281
Evaluation of the prescription amount of narcotic analgesics based on cancer pain relief management

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Background:

A basic plan for promoting pain relief management for cancer patients was formulated in Japan, and proper use of narcotic analgesics is being promoted to relieve cancer pain. We aimed to explore the relationship between age and opioid narcotic dose in cancer patients and examine the effects of healthcare systems and social policies to prevent opioid abuse and addiction in a national cohort in Japan.

Methods:

Data were collected from April 2014 to March 2019 from the nationwide health insurance claims open database in Japan. Prescription data were collected for opium alkaloids and synthetic narcotics. A multivariate logistic regression analysis was performed based on the age groups and in- or out-of-hospital prescription quantities (mg), taking into account equivalences in quantities of opioids prescribed yearly on the hypothesized relationships between variables.

Results:

The average annual quantities of opium alkaloid prescribed gradually decreased by 2.8% (mg = 10,249,115) over six years, especially in in-hospital prescriptions. On the other hand, in-hospital annual prescriptions of synthetic narcotics increased by 24.1% (mg = 2,135,568), out-of-hospital opium alkaloid by 1.3% (mg = 37,565,229), and synthetic narcotics by 25.9% (mg = 1,404,641). Among the demographic variables, cancer patients aged 65 years or older were significantly associated with the types of opioid variables ($p < .001$) and annual reductions in prescribed amounts ($p < .001$).

Conclusions:

Treatment with opium alkaloids and synthetic narcotics increased among outpatients in the years examined; however, the trend varied across age groups. Our findings suggest that improvements in early detection and treatment have resulted in a rise in the number of cancer patient survivors, thereby leading to an increase in narcotic analgesic dose. The palliative care for cancer patients will contribute as an epidemiological indicator to review the evidence-based health-related impact on public health.

Key messages:

- Treatments other than medical intervention should also be considered, taking into account the increase in the number of outpatient opioid prescription recipients due to increased cancer survival.
- Social interventions to prevent opioid abuse during cancer pain relief will contribute to preventing substance abuse by promoting collaboration between clinicians and local communities.

Abstract citation ID: ckac131.282
Patient experiences of hospital care during the COVID-19 pandemic in Ireland

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Introduction:

The COVID-19 pandemic has greatly impacted healthcare service delivery. This study explored patient experiences of hospital care during the COVID-19 pandemic in Ireland, using National Inpatient Experience Survey (NIES) 2021 data.

Methods:

NIES is a repeat cross-sectional survey of inpatient experiences in all public acute hospitals in Ireland. Patients who spent 24+ hours in hospital and were discharged in September 2021 were eligible to participate. 7 questions addressed experiences specific to the pandemic. Comparisons between 2019 and 2021 were conducted using t-tests. Effect sizes (d) are reported. Qualitative data were thematically analysed.

Results:

10,743 patients participated (42% response rate). While 68% did not feel at risk of catching COVID-19, 9% felt at risk. 35% reported that staff always helped them to keep in touch with family. There were small, statistically significant differences between 2019 and 2021 ratings, with questions on opportunity for family to talk to a doctor ($d = -.328$), provision of information to family ($d = -.136$), and being able to find staff to talk to about worries and fears ($d = -.167$) recording the biggest decreases. Scores for cleanliness of wards ($d = 0.063$) and bathrooms ($d = .075$), and privacy during examination or treatment in the ED ($d = 0.085$) improved significantly. Patients commented on their appreciation of staff, but missed having visitors, with restrictions posing challenges for those with sensory or physical impairments.

Conclusions:

Given the unique challenges experienced by acute healthcare services during the COVID-19 pandemic, comparisons with pre-pandemic patient experiences should be interpreted with caution. Continuing to gather patient feedback during a pandemic presents a unique opportunity to understand the resilience of healthcare systems as they continue to operate under unprecedented pressure, with the potential to inform responses and delivery of care during future pandemics or other emergencies.

Key messages:

- Visiting restrictions posed many challenges for patients and affected communication both between patients and their family members, as well as between healthcare staff and patients' family.
- Gathering patient feedback during a pandemic presents a unique opportunity to inform responses and delivery of care during future pandemics or other emergencies.

Abstract citation ID: ckac131.283
Health workers labor market before and during the Covid-19 pandemic: Health sector capacity of Serbia

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Background:

During the COVID-19 pandemic surges, healthcare stakeholders were concerned with the sufficiency of available health workforce capacity. In this study we examined the changes in the supply and demand of physicians, nurses and care workers in Serbia over the period 2011-2021.

Methods:

The National Employment Service (NES) data on total number of unemployed physicians, nurses and care workers, and vacancy data in health sector were described using the annualized % change for the period 2011-2021. The long-term duration of unemployed female physicians and nurses was further analyzed.

Results:

In 2021, NES has registered total of 13,332 unemployed physicians, nurses and care workers, out of which the majority were females (79%), and nurses and care workers (88%). 2021 data on vacancies showed that only 16% of unemployed workers were needed. The peak of health workers unemployment was in 2016, highlighting the period of unemployment rise (2011-2016) at an annualized rate of 3.7% for medical doctors' specialists, 6.4% for medical doctors without specialization, and 3.2% for nurses and care workers, and the period of unemployment decline (2017-2021) at an annualized rate of -7.9% for medical doctors' specialists, -10.9% for medical doctors without specialization, and -5.9% for nurses and care workers. The annualized rate of decline was the lowest for female nurses and care workers. On average 53% of all long term unemployed medical doctors, nurses and care workers were women. In comparison to 2019, during the COVID-19 epidemic in 2020 and 2021 the number of vacancies for specialists and nurses and care workers has increased by one-third.

Conclusions:

The study indicated a continuous mismatch between the supply and demand of physicians and nurses in Serbia (a surplus of some categories of nurse-specialists versus a shortage of some doctor specialists). The Serbian stakeholders need to urgently intervene regarding the long-term unemployment of female health workers.

Key messages:

- NES data imply a low capacity of the Serbian health sector to absorb the huge numbers of (long-term) unemployed health workers.
- It is necessary to thoroughly examine and counteract the causes of the dramatic number of unemployed health workers on the NES records in Serbia.

Abstract citation ID: ckac131.284
Linking health system inputs, processes and outputs to identify medical deserts in Serbia

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Background:

Medical deserts (regions where the population does not have adequate access to health care) indicate the failure of the health system to achieve the goals of improving the health of the population. Identifying medical deserts (MD) is far from simple. The aim of this study is to describe the approach to identification of medical deserts in Serbia using indicators for the health system inputs, processes and outputs.

Methods:

We investigated the basic healthcare-related medical deserts using the indicators of primary health care centers' inputs (accessibility: annual number of patients per physician), processes (performance: annual workload of patient visits per physician) and outputs (unmet needs: percentage of patients unable to access health services) in all 25 Serbian districts in 2020, using data of the Health Statistical Yearbook of the Republic of Serbia and the National Patient Satisfaction Survey of the Institute of Public Health. We developed a Multiple Criteria Scoring System (MCSS) incorporating the weighting and scoring of accessibility and performance for four types of physicians (general practitioners, pre-school pediatricians, youth pediatricians, and gynecologists) and five dimensions of unmet needs (financial reasons, waiting times, lack of personal time, long-distance and COVID-19). MCSS final scores 0 (none) - 100% (MDs on all indicators) are assessed using the regulatory norms.

Results:

MDs partially overlap by different criteria: accessibility, 4-10 districts; performance, three districts; unmet needs: 2-5 districts. Top five medical deserts identified according to the MCSS are Mačvanski, Šumadijski, Moravički, Srednjebanatski, and Podunavski district.

Conclusions:

Serbia has at least one MD per administrative region according to the objective normative indicators and patients' subjective experiences. The study findings can be used to inform district stakeholders on how to use health workforce policy and planning to address medical deserts.

Key messages:

- MCSS indicates potential medical deserts in 20% of all districts in the Republic of Serbia.
- Evidence on poor health workforce accessibility and performance in light of the patient unmet healthcare needs could be used to inform stakeholders on medical deserts in the country.

Abstract citation ID: ckac131.285
The value of uterine oncological surgery in a University Hospital. Results of a break-even analysis

Maria Lucia Specchia

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Background:

Robotic surgery has many clinical advantages but high costs, raising the issue of healthcare sustainability. This study aims to a comparative analysis of the value, in terms of costs and outcomes, of robotic, laparoscopic, and laparotomy surgery for uterine cancer in a University Hospital.

Methods:

An observational retrospective study was carried out on hospitalizations between 1 Jan 2019 and 31 Oct 2021 for uterine cancer surgery. DRG amount, costs, economic margins and 30-days readmissions percentage (mean values and 95% CIs) were calculated for robotic, laparoscopic and laparotomy surgery. Student's t and Chi-square tests were used to assess differences and the break-even point was calculated.

Results:

1336 hospitalizations were analyzed, 366 with robotic, 591 with laparoscopic, and 379 with laparotomy surgery. Robotic surgery compared to laparoscopic and laparotomy ones showed a significant difference ($p < 0,001$) for economic margin, which was largely negative (-1069.18 €; 95%CI: -1240.44 - -897.92 €) mainly due to devices cost (3549.37 €; 95%CI: 3459.32 € - 3639.43 €), and a lower 30-days readmissions percentage (1.4%; 95%CI: 0.2% - 2.6%) with a significant difference only versus laparotomy ($p = 0.029$). Laparoscopic compared to laparotomy surgery showed a significantly ($p < 0,001$) more profitable economic margin (1692.21 €; 95%CI: 1531.75 € - 1852.66 €) without a significant difference for 30-days readmissions. The break-even analysis showed that, on average, for every uterine cancer laparoscopic elective surgery, 1.58 elective robotic surgeries are sustainable for the hospital (95% CI: 1.23 - 2.06).

Conclusions:

The systematic application of the break-even analysis will allow defining over time the right distribution of robotic, laparoscopic and laparotomy surgeries' volumes to perform in order to ensure both quality and economic-financial balance and therefore value of uterine oncological surgery in the University Hospital.

Key messages:

- The value-based healthcare approach, defined as the measured improvement in a patient's health outcomes in relation to its cost, finds effective application in uterine cancer surgery.
- The use of the break-even approach allows to promote the value-based view by identifying a useful criterion for the planning and governance of interventions for uterine malignancies.

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Determinants of regulatory compliance in health and social care services: a systematic review

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Background:

The delivery of high quality health and social care services is a fundamental goal for health systems worldwide. Quality is variable in services and settings. One response to variation in quality is a regulatory framework that looks to set minimum standards that are enforced by an independent public authority. This systematic review seeks to identify and describe determinants of regulatory compliance in health and social care services.

Methods:

Systematic searches were carried out on five electronic databases and grey literature sources. Titles and abstracts were screened by two reviewers independently. Determinants evaluated in studies were identified, extracted and allocated to constructs in the Consolidated Framework for Implementation Research (CFIR). The included studies were quality appraised by two reviewers independently. The results were synthesised narratively under each CFIR domain.

Results:

The search yielded 6,515 articles for screening, of which 148 were included. Most studies were quantitative designs focused on specific exposures (e.g. staffing levels, size, for-profit status). Qualitative studies were sparse, limiting investigation of the processes underlying regulatory compliance. Most of the determinants identified fit within the inner and outer setting domains of the CFIR, many with mixed findings in terms of an association with compliance. There were fewer determinants identified in the intervention characteristics, characteristics of individuals, and process domains of the CFIR.

Conclusions:

The literature in this field focuses on the broader concept of quality and appears to neglect the more nuanced issues surrounding the successful implementation of regulatory standards i.e. compliance. A number of gaps, particularly in terms of qualitative work focussed on the mechanism involved in implementing regulations, remain in the literature and further research in this area is needed to provide a clearer picture.

Key messages:

- No clear determinants of regulatory compliance were identified, suggesting it is complex and context specific.
- There are gaps in the literature around the underlying processes which contribute to the achievement of compliance that warrant research attention.

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Function, coping and health as predictors of sick leave after rehabilitation

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Background:

Function, coping and health are central factors in rehabilitation after injury or sickness. To investigate how these factors are associated with sick leave during 12 months after rehabilitation is the aim of this study.

Methods:

A sample of 412 rehabilitation patients $\leq$ 67years were included. They were all employed, and referred to inter-professional rehabilitation in western Norway. Rehabilitation consisted of physical activity/exercise, cognitive approaches and pain management. In two surveys patients reported mental (MCS) and physical (PCS) function (SF-36), self-perceived health (EQ-VAS) and coping (SOC-13). Register data on sick leave during 12 months in the calendar year after rehabilitation was retrieved from Statistics Norway and categorised to; non, (n = 168), $\leq$ 364 days (n = 152) and 365 days (n = 92). Ordinal regression was used to analyse association between sick leave and MCS, PCS, EQ-VAS and SOC-13, adjusted for age, sex and diagnoses.

Results:

The levels of MCS and PCS (SF-36) were found to be associated with sick leave; OR 0.96, 95% CI 0.92-0.99, $p = 0.004$ and OR 0.93, 95% CI 0.90-0.97, $p < 0.001$, respectively (Pseudo R2 = 0.1133). EQ-VAS and SOC-13 were significant predictors of sick leave in crude analysis (EQ-VAS: OR 0.97, 95% CI 0.96-0.98, $p < 0.001$. SOC-13: OR 0.98, 95% CI 0.95-0.98, $p < 0.001$), but not in the fully adjusted model (EQ-VAS: OR 0.98, 95% CI 0.96-1.01, $p = 0.178$. SOC-13: OR 0.99, 95% CI 0.99-1.03, $p = 0.479$).

Conclusions:

Patientś self-reported mental and physical function were associated with sick leave 12 months after inter-professional rehabilitation. Higher level of function was associated with no sick leave. In our study, patient's self-reported health and coping were not associated with sick leave. This suggest that interventions for functional improvement are beneficial in health care strategies to help patients return to work after injury or sickness.

Key messages:

- Achieved higher physical and mental function after rehabilitation seems to contribute to reduced sick leave after injury or sickness.
- Improving function should remain a central factor in rehabilitation.

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The humanization of care after the COVID-19 pandemic in Italian historical hospitals

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Globally, the reforms of healthcare systems aim to bring back the patient at the centre of these organisations after the issues related to the COVID-19 outbreak. The patient returns to be fully considered, as an individual whose must be protected physical and psychological health as well as social well-being. Humanization of care is returning to the foreground. For centuries, art has been used throughout Europe in the health context for its power to support patients in their disease. Today, this approach can be rediscovered in historical hospitals, where tradition, art and assistance coexist. This study aims to investigate the interest for the development of projects for the humanization of care exploiting the artistic heritage of the historical hospitals owned by Health Authorities. The cross-case analysis was chosen as study design. The case studies are the historical hospitals in the city centre of Venice, Florence, and Rome. The evaluation of the proposal was carried out through semi-structured interviews with the general managers of the Health Authorities, the medical directors of the selected hospitals and the delegates for the protection and promotion of cultural heritage. The results were analysed using a qualitative model (coding). All respondents welcomed the proposal to launch projects for the humanization of care that foresee the use of the artistic heritage of the historical hospitals to involve patients in the field of health care. Interviewees expressed the desire to invest human and structural resources in the development of these projects. Moreover, directors suggest choosing a specific target with which to start the experimentation and to dispense a specific training to future engaged social and health personnel. The implementation of projects for the humanization of care using the artistic heritage of historical hospitals can be replicated worldwide where healthcare institutions have a cultural wealth to be handed down, shared and valued.

Key messages:

- In the post COVID-19 era, it is strategic to exploit artistic heritage owned by the Health Authority for the positive impact in the patient's experience.
- Artistic heritage claims its role as a health service for supporting patients, caregivers and also health workforce.

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Hospitalist System under the Covid-19 Pandemic: The Perspective of Value Co-creation

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Background:

The core spirit of the Hospitalist system aims to set up dedicated wards, integrate physician manpower, focus on whole-person care, in order to cope with the aging population and Covid-19 pandemic, and to ensure that both parties, the medical personnel and patients, can provide or receive complete medical care. As the Taiwan medical system is facing a paradigm shift, the Taiwan hospitalist system will play an essential role in the transition as moving forward to provide professional care for inpatients.

Methods:

Hospitalists from 12 hospitals across Taiwan completed a cross-sectional survey. The target population was identified through Taiwan Doctors and Nurses. Survey questionnaire was accessed by 342, incomplete response (18) were excluded and 324 completed responses were analysed.

Results:

That the higher the cognition of medical staff on whole-person care, the higher the motivation to participate in cross-team cooperation (F = 35.914, $p < 0.001$); when the motivation to participate in cross-team cooperation was higher, the behavior of participating in whole-person care also increased. Will be higher (F = 36.483, $p < 0.001$); whole-person care behavior participation behavior has a significant impact on value creation (F = 21.068, $p < 0.001$)

Conclusions:

As the Taiwan medical system is facing a paradigm shift, the Taiwan hospitalist system will play an essential role in the transition as moving forward to provide professional care for inpatients. This change will make possible the improvement of patient safety and quality medical care. The research results can be provided for reference in European and American countries.

Key messages:

- A hospitalist support system is essential for establishing an efficient medical environment and reducing administrative work, which can help hospitals introduce a hospitalist system.
- To build a more stable and sustainable system, it is necessary to create a systemic operational foundation for proceeding with this new hospitalist system.

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Associations of dietetic care and pregnancy outcomes in women with gestational diabetes

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Background:

Gestational diabetes mellitus (GDM) is a significant, global public health problem. Subsequent strain on healthcare systems is widespread and multidisciplinary care may be inadequate. We assessed current nutrition management of GDM in a large, metropolitan maternity hospital in Melbourne, Australia and associations between the model of dietetic care and maternal and neonatal health outcomes.

Methods:

Hospital medical record data from The Women's Hospital, Melbourne for women with GDM (n = 1,185) (July 2105-May 2017) was retrospectively analysed. Adjusted linear and logistic regression were used to assess associations between the number of dietitian consultations and maternal and neonatal health outcomes.

Results:

Half of all women received two consultations with a dietitian. Nineteen percent of women received three or more consultations and of these women, almost twice as many were managed by medical nutrition therapy (MNT) and pharmacotherapy (66%) compared with MNT alone (34%). Odds of maternal complications increased with number of consultations ($p = 0.008$). Lower odds of infant admission to the Neonatal Intensive Care Unit were observed among women receiving one (OR = 0.38 [95% CI: 0.18, 0.78], $p = 0.008$), two (OR = 0.37 [95% CI: 15 0.19, 0.71], $p = 0.003$), or three+ dietitian consultations (OR = 0.43 [95% CI: 0.21, 0.88], $p = 0.020$), compared to no consultations.

Conclusions:

The optimal schedule of dietitian consultations for women with GDM in Australia is unclear. Alternative delivery of nutrition education for women with GDM such as telehealth and utilisation of technology may assist in relieving public health and healthcare system pressures and ensure optimal pregnancy outcomes.

Key messages:

- Delivering medical nutrition therapy through individual consultations does not deliver a linear benefit to women with GDM and their offspring.
- Alternative delivery modes are needed to optimise outcomes for healthcare services and their patients.

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Results of the requirement analysis as part of the Austrian research project linked care

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Sufficient information is the foundation for efficient and high-quality health care services. In the field of extramural health care, this challenge is particularly evident: missing or insufficient information can lead to underuse, overuse, or misuse of health care, e.g. due to the necessity of multiple assessments or lack of relevant information. The noticeable shortage of health care professionals further underscores the urgent need for efficient and quality-assured health care services. The aim of the project LICA - linked care - is to provide a platform for better coordination and information exchange between health professionals involved in home care, with a focus on ICT in nursing in Austria. The project is funded by the Austrian Research Promotion agency (FFG) as part of the ''benefit - demografischer Wandel als Chance'' program (April 2020-March 2025). The requirement analysis was conducted from April to December 2021. In light of the user-centered approach a mix of methods was chosen, consisting of: literature analysis, 5 guideline-based focus group interviews, guideline-based expert interviews n = 44 (people in need of care n = 23, health professionals n = 21), documentation-analysis (4 care documentation systems - from participating project partners) and working diaries: n = 5 on 5 consecutive working days (= 25 diaries). Therefore, three main target groups were identified: i) people in need of care, ii) healthcare professionals and iii) healthcare providers. The data were analyzed using a qualitative content analysis based on Kuckartz. The main results regarding the status quo are: i) different documentation systems are utilized, ii) lack of digitized documents, iii) currently no standardized documentation system is in use. Thus, following requirements could be identified: i) interoperability with existing systems, ii) setting comprehensive function, iii) usability, iv) interdisciplinary readability, v) error-management, and vi) proper data protection measures.

Key messages:

- Healthcare systems are under great pressure worldwide. Innovative solutions can help maintain and improve the quality and efficacy of healthcare services.
- Gapless and efficient information provision is a key essential to high quality healthcare. The project offers a user-centric approach to develop a platform for connectivity of existing systems.

Abstract citation ID: ckac131.292
The effect of vocational rehabilitation on the use of health care services in Finland

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Background:

Because vocational rehabilitation is a separate service from other health services, there may be interruptions at their interface. We examined whether the use of health services changes before and after rehabilitation.

Methods:

Longitudinal individual-level register-based data was utilized on all individuals aged 15-60 living in the city of Oulu, Finland and starting vocational rehabilitation in 2014-2015 (N = 792). We compared their use of outpatient health care services in 3-month periods from 1.5 years before to 1.5 after the rehabilitation period to the total population of the same age and to the propensity score matched controls. Several socio-demographic factors and sickness and employment histories were used for matching.

Results:

According to the preliminary results, rehabilitees had on average 1.5 visits to outpatient health care services in the 6th quarter before the start of rehabilitation, twice that of the total population. In the 4th quarter before the start of rehabilitation, the number increased to 1.8. After the rehabilitation period, the quarterly number of visits were at the same level as in the beginning of the follow-up. The biggest changes took place in the use of occupational health services. Changes were modest in public health care services. In other services changes were minimal. Compared to the propensity score matched controls, vocational rehabilitation did not appear to have an effect on the use of health care services.

Conclusions:

The use of health care services is more common before vocational rehabilitation than after it. The effect of rehabilitation on the use of health care needs further analysis.

Key messages:

- The pattern of the use of health care services changes in the course of vocational rehabilitation. The changes are mainly due to visits in occupational health care services.
- The use of health care services is most common before rehabilitation. However, vocational rehabilitation does not appear to have an effect on the use of outpatient and inpatient health care services.

Abstract citation ID: ckac131.293
Patient-Reported Outcome Measures for care quality assessment of a breast cancer Care Pathway

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Background:

Breast Cancer (BC) is the most common type of cancer among women in Europe, accounting for around 28% of newly diagnosed female cancers. A clinical Pathway (CP) is an effective tool able to deliver high quality care especially if linked to a Monitoring System. Still, it is essential to integrate them with the patient's perspective according to Value-Based Care. This paper aims to define and test a tool for care quality assessment in patients with breast cancer, in a value-based perspective.

Methods:

A scoping search of the main databases (PubMed, Scopus, Web of Science) and official websites of institutions and organizations (AIOM, CIPOMO, EORTC, ICHOM, Istat) was carried out. A Delphi survey was conducted to assess the tool, according to four criteria (general relevance, evidence-based, measurability, actionability). We only included indicators that achieved strong agreement. Time-points for data collection were defined and validated in relation to the different steps of the CP.

Results:

The final tool consists of 21 questions coming from the following sources: BREAST-Q and EORT QLQ-BR23 questionnaire. BREAST-Q's questions, have to be administered at T0 (first medical contact) and T12 (follow-up), while the EORT QLQ-BR23's questions have to be administered at T0 (first medical contact) T Surgery, T6 (follow-up) and T12 (follow-up). The survey will be administered to a sample of 152 BC patients (MOE 5%; CL 95%) undergoing surgery in the period June-September 2021.

Conclusions:

The present tool will give a quick view of Value provided by the CP to these patients. In light of the high volume of patients treated at our center (1008 breast cancer surgery hospitalisations in 2020), this study acquires further public health relevance. Additionally, this approach can be extended for further evaluation of other CPs.

Key messages:

- We assess care quality for Breast Cancer patients in a large hospital in Italy through Patient-Reported Outcome Measures, based on an evidence-based, Value-based, Delphi-validated tool.
- Assessing Value brought to patients with Breast Cancer gives a unique perspective on care quality assessment and paves the way for further quality improvements and extension to other health issues.

Abstract citation ID: ckac131.294
Continuity of care in Danish peer-led patient online communities on social media. A survey study

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Background:

Patients in the Danish healthcare system and other Western countries experience a lack of 'continuity of care' due to inadequate communication and sharing of clinical information. 'Continuity of care' is often defined as informational, managerial and relational failures. A lack of continuity is particularly problematic for patients with chronic conditions as they are often highly dependent on longitudinal and complex treatment processes. Some of these patients have formed self-organised groups on social media in order to share their personal experiences with the health care system and discuss health related problem with peers. The aim of this paper is to understand the role peer-led online communities (PLOC) play for patients with chronic conditions experiences of continuity of care.

Methods:

The material consists of survey data from patients with chronic conditions participating in peer-led online communities on the experience of continuity of care in the Danish healthcare system. A link to the survey was posted in the public online community "Chronic Influencers" (Instagram 10,000 followers), and in the closed Facebook group "Chronic pain patients" (Facebook, 2,200 members). The questionnaire was posted three times between 10 and 30 March 2022.

Results:

207 respondents answered all questions in the survey of which 95% were women. Most of them (62 %) were between 36 and 55 years. 37 % live with chronic conditions for more that 20

years. 72 % of the respondent experience lack of continuity with the healthcare system, often with regard to information or communication with health professionals and they look for peers' advices or experiences in the online groups. 68 % felt recognized by the peers in the online community in another way than in the meeting with the healthcare system.

Conclusions:

Patients use PLOC to find and exchange experiences from other patients with chronic conditions about their treatment and especially daily life with chronic conditions.

Key messages:

- Patients participating in peer-led online communities provide online support and recognition to each other than that provided by the healthcare system.
- Patients use peer-led online communities to read about other patients' experiences with chronic conditions and learn about their treatment and daily life.

Abstract citation ID: ckac131.295
Evaluation of fall risk factors for among hospitalized patients: systematic review and meta-analysis

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Background:

Hospitals falls are an important challenge for healthcare systems. An early identification of patients at risk is critical, but no assessing tool has proven to be sufficiently predictive. This review aims at identifying factors associated with an increased risk of falls in hospitalized adults and at mapping them according to main international classification systems.

Methods:

We carried out a systematic literature review and metanalysis to detect risk factors positively associated with the increase of falls in hospitals, searching litterature from January 2015 to March 2022. We included studies investigating falling risk factors in patients older than 16 years. Researchers independently assessed records' eligibility and the methodological quality of included studies was assessed. When possible, data was processed using a random effects model and odds ratio (OR) with 95% confidence interval to quantify the effect. Risk factors were than classified according to ICF, ICD, and ATC classifications.

Results:

We included 40 observational studies, enrolling 3,495,552 patients. Considering ICF-factors, mental and sensory functions-pain have a strong association with falls (OR = 3.311 and 2.149, respectively). ICD-factors associated with falls were mental and behavioural disorders (OR = 2.219), diseases of the nervous system (OR = 2.974), and symptoms, signs, and abnormal clinical and laboratory findings (OR = 2.665). Considering ATC-related factors, medications for alimentary tract and metabolism (OR = 1.978), and nervous system (OR = 1.779), showed a strong association with falls. Other factors were also associated with a moderately increased risk.

Conclusions:

The comprehensive evidence-based assessment achieved with this meta-analysis alongside with the classification according to ICF, ICD and ATC systems provides a new standardized identification of the risk factors associated with an increase of falls in hospital.

Key messages:

- Falls occurring in hospital are an important challenge for health care systems. Therefore the identification of risk factors associated to patients increased risk of fall is fundamental.
- The comprehensive evidence-based assessment achieved with this meta-analysis provides a new standardized identification of the risk factors associated with an increase of falls for hospital.

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Collaboration and health promotion for the health care system – evaluation of the WOL healthcare

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Background:

Health care and social services are industries with special challenges: Constant emotional demands, the shortage of skilled workers is noticeable (in Germany) and special organizational stresses, not only since the Corona pandemic. This study evaluates the Working out Loud (WOL) program for healthcare, which aims to create a learning culture for interdisciplinary collaboration and network-oriented learning and increases growth-oriented thinking at organizational level.

Methods:

The sample consists of 51 participants. From 16 persons data could be analyzed in the pre-post-design of the 10-week intervention accompanied by individual coaching. All respondents work in the health care system in Germany. Dependent variables were collected with validated scales for psychological safety, psychological flexibility, cooperative learning, emotional energy, engagement and voice behavior.

Results:

Effects of moderate strength were shown for all variables: psychological safety (Mt1 = 4.86, Mt2 = 5.45 t(15) = -1.86, p = .083, d = 0.46), psychological flexibility (Mt1 = 3.57, Mt2 = 3.82 t(15) = -2.12, p = .051, d = 0.53), cooperative learning (Mt1 = 4.63, Mt2 = 4.81 t(15) = -2.18, p = . 045, d = 0.54), emotional energy (Mt1 = 2.70, Mt2 = 2.75 t(15) = -0.82, p = .423, d = 0.20), engagement (Mt1 = 2.87, Mt2 = 3.05 t(15) = -1.65, p = .119, d = 0.41)and voice behavior (Mt1 = 3.84, Mt2 = 4.05 t(15) = -1.64, p = .120, d = 0.41). Correlations are shown for psychological safety with emotional energy (r = .426, p = .012) and job satisfaction (r = .612, p = .000).

Conclusions:

The 10-week WOL Healthcare program can strengthen employees in the important area of health promotion and care. The program serves as behavioral prevention and, by empowering individuals, brings about job crafting structural prevention in the workplace. The intervention follows a bottom-up principle, it is an approach for health promotion in the healthcare sector, that can strengthen patient's safety.

Key messages:

- Evidence for the effectiveness of a health promotion intervention for health care workers.
- Organizational learning promotes workers health.

Abstract citation ID: ckac131.297
Age ranges in breast cancer screening: simulated scenarios and analysis of benefits and harms

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Background:

The Valencia Region Breast Cancer Screening Programme (VR-BCSP) (Spain) invites women aged 45-69 for mammography every 2 years (y). The aim is to evaluate benefits and harms of 3 age range scenarios of the VR-BCSP according to different adherence rates.

Methods:

Long-term impact simulation study (2020-2050) of 3 age range screening scenarios (S) for women $\geq$40y of the VR in 2020 (n = 1487000): S1, 45-69y (current VR-BCSP scenario); S2, 50-69y (excluding 45-49y) and S3, 45-74y (including 70-74y). A biennial screening interval was considered. The simulations were performed for 4 participation rates: A = current adherence (72.7%), B = +5%, C = +10% and D = +20%. Benefit indicators were: nº of BC in situ and invasive (screened vs. clinically detected), nº of BC deaths and % of BC mortality reduction. Harms indicators were: nº of false positives (FP) and % of overdiagnosis. Screening scenarios were simulated using the EUTOPIA evaluation tool.

Results:

Considering the current adherence, a reduction of BC mortality was observed in all scenarios (S1A = 30.6%, S2A = 27.9%, S3A = 32.2%). In S2A the harms decreased vs. S1A: nº of FP (236vs423 x1000) and overdiagnosis (4.9%vs5.0%), but also the benefits: BC mortality reduction (27.9%vs30.6%) and nº of invasive BC screen detected (15/28vs18/25). In S3A vs S1A, an increase of benefits was observed: BC mortality reduction (32.2%vs30.6%) and nº of in situ BC screen detected (5/2vs4/3). On the other hand the nº of FP increased (460vs423 x1000), but overdiagnosis decreased (4.8%vs5.0%). All the results with an increased adherence had similar trend as the previous scenarios, showing a gradual increment in BC mortality reduction. Nevertheless overdiagnosis increase significantly in S3 (5.8% in all adherence increments), being higher than S1 (S1B = 5.0%, S1C = 4.9%, S1D = 5.0%) and S2 (S2B = 4.9%, S2C = 4.9%, S2D = 4.9%).

Conclusions:

The wider age range, the greater reduction in BC mortality but also the probability of FP and overdiagnosis.

Key messages:

- The wider age range, the greater reduction in BC mortality but also the probability of FP and overdiagnosis.
- This study provides a balance between benefits and harms of different screening scenarios allowing evidence-based decision making.

Abstract citation ID: ckac131.298

Use of healthcare services and hospitalisation among elderly people in Latvia

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Background:

Demographic changes have occurred worldwide during the recent decades, with an increasing proportion of the elderly in the society, leading to higher average age of the population. Older people are more likely to suffer from different chronic diseases, and higher consumption of healthcare services and, thus, posing additional burden and challenges to the healthcare system.

Methods:

The descriptive analysis relied on the longitudinal study of Health, Ageing and Retirement (SHARE). The target population included people aged 50 years or older, a total of 782 residents living in Latvia. We used the data from wave 8, collected from 2019-2020.

Results:

The mean age in the study population was 69 years, and 62.5 % of the respondents were women. Results show that 14.7 % of all respondents were hospitalised in the last 12 months. The average length of stay at hospital was 10.9 days (range 1 - 71, SD 10.5). In 36.7 % of the cases hospitalisation was planned, but in 42.9 % it was due to an emergency. More than a half had visited hospital only once, but 19.1 % four times or more. The most common diseases among the hospitalised patients were high blood pressure/hypertension (60 %), heart attack (27.8 %), high cholesterol (26.1 %), osteoarthritis (21.7 %), stroke (18.3 %), diabetes (12.2 %) and different fractures (11.3 %).

Conclusions:

We found that the main ailments for hospitalised patients were both chronic diseases like cardiovascular diseases, rheumatism, diabetes and acute conditions like fractures. The average hospital stay was 11 days.

Key messages:

- Understanding how causes of hospitalisation among elderly interact with the use of healthcare services might help to reduce risk factors associated with hospitalisation and improve the health systems.
- Further studies on hospital admissions among older persons with particular characteristics health conditions could help to reduce the burden of disease and improve the well - being of the elderly.

Abstract citation ID: ckac131.299

How to improve the rehabilitation outcome after total knee replacement?

Lorenzo Dionisi

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Background:

Even if total knee replacement has revolutionized the treatment of degenerative knee diseases, the definition of an ideal rehabilitation protocol is still in progress. The aim of this study is to identify the factors that influence the outcomes after early, intensive, hospitalized treatment.

Methods:

A retrospective study was conducted in 2019 on 545 patients admitted to a northern Italy private clinic specialized in post-surgery rehabilitation, which applies a bio-psycho-social-environmental model and individual rehabilitation plans. Data regarding each patient were collected from medical records: age, numeric pain rating scale (NPRS) at admission, days between surgery and the beginning of rehabilitation (DBS). The outcomes were measured as the difference (Δ) between the values at discharge and admission of the Barthel scale (ΔBS), Tinetti scale (ΔTS), passive flexion (ΔPF) and active flexion (ΔAF). We performed a univariate linear regression through STATA, to determine which factors influence the outcomes. A $p < 0.05$ was considered statistically significant.

Results:

Our sample (69.17% female) was 69.8 ± 9.4 years old. ΔBS was significantly influenced by age (Coef. 0.270, CI [0.173 - 0.367]) and NPRS (Coef. 1.434, CI [0.979 - 1.890]). ΔTS was significantly influenced by age (Coef. 0.024, CI [0.011 - 0.037]) and NPRS (Coef. 0.130, CI [0.067 - 0.191]). ΔPF was significantly influenced by age (Coef. - 0.158, CI [- 0.266 - - 0.050]), DBS (Coef. - 1.047, CI [- 1.401 - - 0.687]) and NPRS (Coef. 1.825, CI [1.333 - 2.318]). ΔAF was significantly influenced by age (Coef. - 0.171, CI [- 0.300 - - 0.042]), DBS (Coef. - 1.150, CI [- 1.580 - - 0.721]) and NPRS (Coef. 2.504, CI [1.928 - 3.080]).

Conclusions:

Older patients obtain a higher functional outcome (ΔBS, ΔTS) but lower improvement in range of motion (ΔPF, ΔAF). Patients with higher NPRS at admission obtain an overall better outcome. Higher DBS is associated to lower articular outcomes (ΔPF, ΔAF).

Key messages:

- A better outcome can be achieved if rehabilitation is started immediately after knee replacement.
- Pain and age are not factors that impede effective rehabilitation.

Abstract citation ID: ckac131.300
Categorical principal component analysis to characterize patients at Intensive Care Unit admission

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Background:

Healthcare-associated infections (HAIs) are the most frequent complications in healthcare settings, with a major impact on adverse outcomes. Here, we aimed to identify the relationships between patients' characteristics admitted to Intensive Care Units (ICUs).

Methods:

We used data of patients included in the ''Italian Nosocomial Infections Surveillance in Intensive Care Units'' (SPIN-UTI) project, who stayed in ICU for more than 2 days. Using Categorical principal component analysis (CATPCA) two components of risk were assessed. Values of variance accounted for (VAF) >0.3 were accepted as the significant effect of a variable on each component. A Chronbach's alpha >0.7 was accepted as a measure of the internal consistency of the model.

Results:

A total of 22402 admissions (62% female) were included. The average age was 65.7 years (SD = 16.6). Our model explains 35.3% of the total variability, with a Cronbach's alpha value of 0.847. The visual examination of component loading plot allows to evaluate the correlation between the quantified variables and each of the two components. In particular, the first component is explained by the presence of intubation (VAF = 0.826), central venous catheter (VAF = 0.749), and urinary catheter (VAF = 0.727), patient's origin (VAF = 0.584), antibiotic treatment (VAF = 0.479), non-surgical treatment for acute coronary disease (VAF = 0.375), type of admission (VAF = 0.509), surgical intervention (VAF = 0.419). In the second component, the variables with the greatest contribution were the SAPS II (VAF = 0.660), age (VAF = 0.583), type of admission (VAF = 0.531), surgical intervention (VAF = 0.522). Thus, the first component would represent the exposure to invasive devices and medical procedures, and the second component the severity of patients.

Conclusions:

Our results proposed the usefulness of CATPCA to identify factors involved in the development of adverse outcomes, highlighting the role of exposure to invasive devices and severity of patients.

Key messages:

- There are several relationships between patients clinical and personal characteristics.
- CATPCA represents a useful approach for the analytical exploitation of healthcare data.

Abstract citation ID: ckac131.301
Clinical practice variability: a systematic review of shock wave therapy for spasticity

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Background:

The purpose of this study was to collect and analyse the available scientific evidence on the clinical practice variability and effectiveness of shock wave therapy as a treatment for spasticity.

Methods:

the systematic search was performed in the following databases: PubMed, PEDro, Cochrane, Embase, and the Virtual Health Library. All publications from November 2009 to November 2019 were selected that included a sample of patients with spasticity and prior suspension of botulinum toxin, to whom shock wave therapy was applied. The methodological quality of the articles was evaluated using the Jadad scale and the pyramid of quality of scientific evidence.

Results:

25 studies involving 866 participants with spasticity were selected. The results obtained suggest that shock wave therapy appears to be effective in reducing spasticity levels irrespective of the age of the participants, the type of injury, and the tool used to measure the effect.

Conclusions:

shock wave therapy reports evidence of improvement in motor function, motor impairment, pain, and functional independence, applied independently of botulinum toxin. However, due to the heterogeneity of the protocols, there is no optimum protocol for its application, and it would be appropriate to gain more high-quality scientific evidence through primary studies.

Key messages:

- Shock wave therapy reports evidence of improvement in motor function, motor impairment, pain, and functional independence, applied independently of botulinum toxin.
- Due to the heterogeneity of the protocols, there is no optimum protocol for its application, and it would be appropriate to gain more high-quality scientific evidence through primary studies.

Abstract citation ID: ckac131.302
Emergency Department: Analysis of Patient Flow and Length of Stay Variations

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Background:

Crowding in Emergency Departments(ED)is a severe public health issue.Length of stay(LOS)is not a direct measure of crowding,but it is an essential indicator for monitoring emergency care quality.LOS in ED can be associated with delays in treatment,decreased patient satisfaction and adverse outcomes.The aim of this study is to analyze ED LOS in the Teaching Hospital of Siena for further strategies.

Methods:

A retrospective observational study was conducted between January 1,2019, and December 31,2021.To manage admissions and discharges, all patients' data admitted to ED of the University Hospital of Siena were accessed by Aurora,the IT system.In addition,a descriptive analysis was performed, collecting the following variables:sex,age,arrival mode,ED visit reasons,triage code,discharge mode,hospital admission area and LOS(cut-off>8hours).The analysis was carried out using STATA 17:variables were analyzed with ANOVA test.

Results:

Our sample consisted of 152.393 patients (F49.47% M50.53%),and the average age was 50.51(SD ± 26.07).During the years total ED visits decreased:65.426(2019);40.318(2020); 46.649(2021),and there was a significant increase ($p < 0.001$) of patients with LOS>8 hours:13.96%(2019); 21.51%(2020); 23.10%(2021).In the years 2019,2020 and 2021, admissions of patients with LOS>8 hours were respectively: 25.92%; 43.95% and 37.09%, with the following percentage in medical areas:69.96% in 2019;70.51% in 2020;64.55% in 2021.A progressive increase of admissions in COVID area resulted since 2020(2.23%-2020;6.07%-2021).

Conclusions:

The spread of COVID-19 and the containment measures,such as lockdown,caused a significant decrease in ED access.The increase LOS>8h could be primarily due to the time needed to perform laboratory investigations for the search for SARS-CoV-2 but also to the overflow of SARS-CoV-2-infected patients rapidly saturating the ED boxes and hospital bed capacity,with the need sometimes to dedicate other medical areas to manage COVID patients.

Key messages:

- ED-LOS is a proxy indicator to monitor emergency care quality.
- Further investigations should be performed to analyze the leading causes of ED LOS increase during the pandemic period.

Abstract citation ID: ckac131.303
What kind of patient benefits the most from an intensive physiotherapy after total hip replacement?

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Background:

Hip replacement is a common orthopaedic surgery procedure that produces great improvement in the quality of life. Despite this, a globally standardized post-operative physiotherapy protocol still does not exist. The aim of this study is to identify the factors that influence the motor and functional outcome after early, intensive, hospitalized treatment.

Methods:

A retrospective study was conducted in 2019 on 509 patients admitted to an Italian private clinic specialized in post-surgery rehabilitation, which applies an original bio-psycho-social-environmental protocol and individual rehabilitation plans. Data regarding each patient were collected from medical records: age, haemoglobin, Body Mass Index (BMI), Cumulative Illness Rating Scale (CIRS), Tinetti scale (TS) and Barthel scale (BS) at admission and discharge. The outcome was measured as the difference (Δ) between the values at discharge and admission of BS (ΔBS) and TS (ΔTS). We performed a univariate linear regression using STATA, to determine which factors influence the outcome. A $p < 0.05$ was considered statistically significant.

Results:

Our sample (57.4% female) was 70.1 ± 10.4 years old. ΔBS was significantly influenced by motor performance at admission (BS: Coef. - 0.708, CI 95% [- 0.743 - - 0.673]; TS: Coef. - 1.697, CI 95% [- 1.849 - - 1.544]), global health conditions (CIRS Severity index: Coef. 4.925, CI 95% [1.037 - 8.814]) and age (Coef. 0.312, CI 95% [0.221 - 0,403]). ΔTS was significantly influenced by the same factors, BS: Coef. - 0.167, CI 95% [- 0.184 - - 0.149]; TS: Coef. - 0.667, CI 95% [- 0.703 - - 0.631]; CIRS Severity index: Coef. 1.254, CI 95% [0.012 - 2.511]; age: Coef. 0.090, CI 95% [0.061 - 0.120]. BMI and haemoglobin did not influence the studied outcomes.

Conclusions:

Patients with worse health conditions, advanced age and lower motor performance at admission obtain a higher outcome.

Key messages:

- A broader knowledge of rehabilitation influencing factors would provide higher outcomes.
- The diffusion of individual rehabilitation plans would allow the achievement of better results.

Abstract citation ID: ckac131.304
Perspectives of clinicians and patients on community-based maintenance care for adults with obesity

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Background:

Tertiary metabolic health services are in high demand as people with severe obesity increase. Once predetermined health goals have been achieved patients must transition to community-based care to urgently free up capacity in tertiary services. Maintenance of successful outcomes achieved via tertiary services is therefore important to limit rates of relapse back to these services.

Methods:

This qualitative project explored community-based care needs to help individuals living with obesity maintain health gains. An interview schedule guided one-on-one interviews with patients and staff from metabolic clinics in Sydney, Australia.

Results:

We interviewed 22 patients and 13 clinicians. A lack of appropriate and consistent clinical support in the community was identified by patients and clinicians. Most clinicians agreed primary care was key to successful maintenance care. Lack of primary care understanding of appropriate management and support for patients with obesity, lack of bariatric equipment and limited funding for allied health were all seen barriers to appropriate support beyond their clinics. Patients were highly reluctant to transition from tertiary clinics and reluctant to engage with community-based care due to experience of limited clinical/social support and bariatric equipment, demeaning clinical interactions, lack of care coordination and being stigmatised. Support groups outside of the clinic were also identified important in mitigating social isolation and stigma. Both patients and clinicians felt support groups have potential to provide important supplementary help to individuals with obesity outside tertiary settings.

Conclusions:

Currently, individuals aiming to maintain their weight are likely to struggle in the context of existing community care provisions. Integrated, community-based and affordable models of care are needed now to allow tertiary metabolic services discharge their patients safely.

Key messages:

- Tertiary obesity services are at capacity.
- Subsequent community care for people wth obesity needs to be mote appropriate tp promote weight maintenance.

Abstract citation ID: ckac131.305
Piloting a Health System Performance Assessment for Germany - insights from trend and equity analyses

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Background:

Health System Performance Assessment (HSPA) is a tool for the evaluation of the performance and efficiency of a health system and can be used for evidence-based policymaking. For the first time, a country specific HSPA for the German health system is piloted with a focus on trend and equity analyses.

Methods:

Based on the conceptual framework developed in a feasibility study, the pilot study in Germany has being conducted between 2020 and 2023. The framework includes 90 internationally compatible indicators, each of which can be assigned to one of nine dimensions (e.g., access, quality, population health, responsiveness, efficiency). The aim of this pilot study is to conduct trend analyses over the period 2000-2020 and equity analyses (e.g., age, gender, region, education). Data from 56 different national and international secondary data sources (e.g., epidemiologic registry data, claims data, and survey data) were collected, analyzed, and compiled in a report.

Results:

In total, 84 of the 90 indicators could be analyzed with data for Germany. The indicators (e.g., access to acute care, 30-day mortality, amenable mortality rate) are prepared as a trend analysis for Germany for up to 20 years and with regard to various equity aspects. Most indicators can be presented in international comparison with eight selected European countries (e.g., Denmark, France). Furthermore, recommendations were derived to improve the availability and/or quality of data.

Conclusions:

The first German HSPA pilot study provides valuable insights into the performance of the health system. The results based on the analysis of the 90 indicators are an important basis for identifying inequities and needs for improvement. In the future, the lessons learned from the pilot study can be helpful for a permanent implementation of a German HSPA. However, the fragmented data structure in Germany will be a future challenge.

Key messages:

- The first country specific health system performance assessment for the German health system was conducted as a pilot study.
- Trends over time, inequities, and needs for improvement can be derived from the analysis of 90 indicators.

Abstract citation ID: ckac131.306
Introduction of medical assistants in France: an innovative approach to healthcare access?

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Epidemic transition, sustained costs and health workforce shortage challenges have led numerous countries to strengthen primary care (PC) and implement new models of care. Faced with declining numbers of general practitioners (GPs), France has introduced medical assistants (MAs) in 2019 to guarantee access to care and maintain workforces in deprived areas. Trained to perform administrative and clinical tasks delegated by a physician, MAs are expected to optimize medical time and improve working conditions in practices. How does French model of MAs impact quality and productivity in GPs' practices and articulate with other policies? We conducted a qualitative case study in 6 pilot practices to explore the effects of MAs' work (interviews with 12 GPs, 6 MAs, collection of tasks performed by 6 MAs), complemented with views from public policy makers and health professional unions (9 interviews). MA was defined as a function centered on physicians' needs, accessible both to administrative staff and nursing professions. MAs with a clinical profile performed a wider range of tasks, were more prone to perform clinical tasks and build developed interactions with patients, and seemed better fitted for chronic disease care management. Recruitment of MAs by physicians is supported with grants that decrease yearly while practice productivity is expected to rise. In general, a gain of efficiency in daily workload enabled GPs to slightly increase their productivity. However, for most GPs, it primarily helped them to maintain high workload without burning out. Although MAs with clinical background seem better suited for patients' needs, recent figures have shown that more than half of MAs employed are former secretaries. If in-person secretaries could be endorsed with further administrative duties, MAs could hold a more clinical role in PC teams including physicians and allied health professionals. Other aspects than productivity must be taken into account in a support policy.

Key messages:

- Regardless of productivity objectives to attain, hiring MAs can relieve physicians' workload and stress, preventing them from burning out and guarantee access to care in deprived areas.
- MA's clinical profile could have a stronger impact on public health issues such as chronic disease care management.

Abstract citation ID: ckac131.307
The COVID – 19 pandemic influence on hospitalizations for ambulatory care-sensitive condition

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Aim:

To explore whether the COVID-19 pandemic influenced hospitalizations for ambulatory care-sensitive conditions (ACSCs) during the COVID-19 pandemic in Split-Dalmatia County, Croatia.

Methods:

We employed a cross-sectional comparative study using two different time periods, the prepandemic (March 2019 to February 2020) and the pandemic (March 2020 to February 2021) to explore possibilities of COVID-19 pandemic influence on hospitalizations for ambulatory care-sensitive conditions (ACSCs) during the COVID-19 pandemic in Split-Dalmatia County. The research used data from the national information system on hospitalizations from the Clinical Hospital Center Split, University Hospital Split. The ACSCs was classified in the categories of vaccine preventable, chronic and acute disease. The indicators were statistically analysed. The z-score test for two population proportions is used.

Results:

During prepandemic (March 2019 to February 2020) there were 48,289 hospitalizations, in the pandemic period (March 2020 to February 2021) there were 37,999 hospitalizations. The ACSCs hospitalizations made 6.4% in the prepandemic and 7.1% in the pandemic period. In the pandemic there was a significantly higher ACSCs hospitalizations compared to the prepandemic ($z = -3.9348$; $p = 0.00008$; $p < 0$), which was supported by a significant increase regarding ACSCs hospitalizations in the category of acute diseases, among women ($z = -3.6614$; $p = 0.00026$; $p < 0 .05$), in age groups 0-19 years ($z = -4.0492$; $p < 0.00001$; $p < 0.05$) and 20-64 years ($z = -3.8818$; $p = 0 .0001$; $p < 0.05$).

Conclusions:

The results of the study show that the COVID-19 pandemic contributed to the total number of hospitalizations as well as the hospitalization of the ACSC. One of the reasons for these changes was certainly the changed organization of the work of the entire health system due to the COVID-19 pandemic.

Key messages:

- The results of the study show that the COVID-19 pandemic contributed to the total number of hospitalizations as well as the hospitalization of the ACSC.
- One of the reasons for these changes was certainly the changed organization of the work of the entire health system due to the COVID-19 pandemic.

Abstract citation ID: ckac131.308
Measuring the performance of health systems in Latin America

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Background:

Efficiency has been identified as a key intermediate policy objective for Universal Health Coverage. Despite that, it was estimated that 20 to 40% of health sector resource utilization is wasteful globally. An efficient use of existing resources in healthcare is critical and a priority policy in sustaining positive health outcomes for the population. This study aimed to perform a longitudinal efficiency analysis was found concerning health systems specific to all the Latin America region over the last 13 years.

Methods:

Health Adjusted Life Expectancy (HALE), Diphtheria Pertussis Tetanus (DPT)Immunization and Survivability Rate of under-5 were chosen as outputs, while Pooled Health Expenditure, Gross Domestic Product (GDP) per Capita and Population over 65 were selected as inputs. Cross sectional Data Envelopment Analysis using five-year averages and a longitudinal Data Envelopment Analysis (DEA) were performed creating several model iterations with our selected indicators. All the models had an output orientation, adjusted for variable returns to scale and incorporating a five-year time lag between inputs and outputs.

Results:

Our cross-sectional DEA Analysis found that the best performing country ended up being Nicaragua, followed by Cuba, Honduras, Costa Rica and Chile, while the countries performing the worst were Suriname, Venezuela and Guatemala. When observing efficiency scores behaviors longitudinally, all our model iterations result in the region decreasing efficiency in their health systems by 2.5% to 6.9% from 2000 to 2013, depending on the model chosen.

Conclusions:

The study reveals that all countries in Latin American can improve their health systems efficiency performance to different extents. Latin America reduced total health system productivity between 2000 and 2013. Further studies are required to uncover the extent and causes of this regression. A similar analysis in Europe may be warranted and could aid policy making.

Key messages:

- Overall efficiency in Latin American health systems has decreased by 3% to 7% over the last thirteen years.
- Nicaragua, Cuba, Honduras and Costa Rica seem to have the most efficient health systems in the region, whereas Venezuela and Guatemala are the least efficient.

Abstract citation ID: ckac131.309
Use of diabetic healthcare according to the accessibility of diabetology services

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Background:

Diabetologists, as other specialists, are more likely concentrated in towns and cities rather than in the countryside so the people who live in these municipalities have a wider supply of health services. Our aim is to determine whether there are significant differences in the use of diabetology services between patients who live in the municipality with these services or not in Czechia.

Methods:

The sorted anonymized data obtained from the General Health Insurance Company of the Czech Republic (GHIC CR) were used. The studied patients were people with a diagnosis of type 2 diabetes mellitus (E11) who were insured by GHIC CR and used health services in 2019 in Czechia.

Results:

The distribution of providers of diabetology services (PDS) is relatively even throughout the country, and PDS are mainly concentrated in the municipality with a large population. In total, 52% of patients have the diabetologist in their municipality of residence. Patients living in the municipality with PDS have greater odds of using their services (OR 1.63, Cl 1.61-1.65). Specifically, 67% of the patients who have the diabetologist in their municipality of residence use diabetology services compared to 55% of the patients living in the municipality without PDS commute for diabetology services to the other municipality.

Conclusions:

The results show that diabetology services are concentrated mainly in towns and cities and patients living in the municipality with the diabetologist use more diabetology services compared to patients living in the municipality without them. At the same time, it seems that more than half of the patients in the municipality where is not PDS are willing and able to commute for diabetology services.

Key messages:

- Although patients living in the municipality without the diabetologist use diabetology services less often than with them, due to the commuting for healthcare, the differences are blurred.

Abstract citation ID: ckac131.310
Development of cancer policies between Europe Against Cancer Programme and Europe's Beating Cancer

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Issue/problem:

European Union has legally certain limitations in developing joint policies for services, activities and interventions that belong to the national competencies. Cancer control and cancer policy occupy a special place as they have received special attention throughout the last 40 years.

Description of the problem:

European Union launched its first important disease policy with the start of the Europe Against Cancer Programme in 1984/85. It was a step, supported by a few interventions and activities, which facilitated the development of several important policy tools. After its closure in 2003, there was some unease, especially in view of the forthcoming biggest enlargement of the EU in 2004. Several activities revived the EU cancer policy and these processes culminated in the adoption of the Europe's Beating Cancer Plan. There were some doubts whether the latter would be feasible but a careful development process at different levels resulted in success.

Results:

A policy analysis will be presented that will introduce key steps and documents that mark the period between the two milestones - Europe Against Cancer Programme (EACP) and Europe's Beating Cancer Plan (EBCP). We will present the development of various tools as well as the important outcomes of the different policies and interventions triggered by the two documents. The period between 2003 and 2019 will be elaborated in view of the adoption of EBCP. Three Joint Actions and their various outputs with a strong impact on the cancer policy development, contributing also to the development of flagships and actions of EBCP will be presented as well.

Lessons:

EU top level decisions and policies can be developed harmoniously and to the benefit of both - the EU and the Member States - when launched in a joint process and with the involvement of all the relevant stakeholders.

Key messages:

- EU policy documents are important drivers for the development of health policy tools at both the EU level as well as at the Member State level.
- A combination of top-level documents with carefully developed policy tools enables the development of cancer policies acting at both EU and Member State level.

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The development of a regional network for health care research in Hamburg, Germany

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Background:

At the University Medical Center Hamburg-Eppendorf (UKE), health care research has been established as one of five research priorities recommended by the Research Council with the founding of the Center for Health Care Research (CHCR) in 2006. The CHCR was involved in numerous research projects with the focus on strengthening regional networking. Despite the numerous initiatives, there is still potential for improvement with regard to a systematic and sustainable exchange in the region of Hamburg, Germany.

Methods:

These requirements led to the initiation of the 'Hamburg Network Health Services Research (HAM-NET)'. The mission of HAM-NET is to build an open forum for all relevant institutions, to concentrate their interests and needs in health services research and to promote and conduct innovative, efficient, needs-based and patient-centred health services research projects in the metropolitan area of Hamburg. Three main tasks were appointed: 1) linking health care research to relevant regional institutions, 2) promoting research activities and new fields of research and 3) using methodological expertise to promote young scientists.

Results:

By today 40 institutions from all sectors of health care joined HAM-NET. The regularly general meetings offer exchange and advice. Internal communication is promoted by mailing lists and newsletters. Also, HAM-NET presents itself with a website, logo and by organizing recurring events and participating in international and national congresses and networks. Within two funding phases a total of four overarching research projects were developed and implemented. Furthermore, a person with lived experience committee was established.

Conclusions:

For the further development of health care research as one the core disciplines of public health a regional network with an efficient infrastructure is needed. HAM-NET promotes this with the implementation of an innovative, efficient and patient-oriented network.

Key messages:

- Regional networks help to integrate multiple public health initiatives and community stakeholders.
- Public health networks can be established on multidisciplinary cooperations in different out- and inpatient sector levels.

Abstract citation ID: ckac131.312
Hospital discharge for stroke patients: Transitional Care is Brain

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Background:

Among cerebrovascular disease, stroke is a life-threatening neurological event and a main cause of serious long-term disability, with relevant healthcare and economic burden. Treatment of stroke is time dependent and organised integrated stroke care enables quick and effective responses to reduce stroke-related death and disability. This study aimed at evaluating the amount of hospital discharge to transitional care facilities for stroke patients to support integrated care models in the city of Pavia (Italy).

Methods:
In 2017 in Pavia, Fondazione IRCCS Policlinico San Matteo started a partnership with Fondazione Mondino to build a specific stroke pathway, becoming a leading centre for stroke treatment. We conducted a retrospective chart review (RCR) of patient-centred data to quantify the volume of discharge for stroke patients. Two trained public health residents reviewed medical records with stroke admission diagnosis during 2021, analysing onset (e.g., Emergency Room, other hospital, emergency network), ward, treatment and discharge types (e.g., home, death, transitional care facility).

Results:
Our RCR found 669 patients with a stroke diagnosis treated at San Matteo hospital in 2021, the vast majority of which were admitted to the neurology ward (375 patients, 56%). The recanalization rate was 32% (150 on 464 ischemic stroke patients). Regarding the discharge type, 299 patients (45%) were sent home, while 297 patients (44%) needed transfer to rehabilitation or long-term care facilities. About 8% (52 patients) of the overall sample died in hospital.

Conclusions:
Our analysis showed that, while most stroke patients were discharged and sent home, more than two-third need to be transferred to continue to get the right healthcare from the right professional. Transitional care facilities should receive the greatest consideration by systems and providers seeking to implement care models to reduce residual neurological disabilities for stroke patients.

Key messages:

- A fast and accessible emergency chain is essential to reduce residual neurological disabilities and the related healthcare and economic burden in stroke patients.
- Extending the stroke path model to other time-dependent diseases is increasingly high-priority to shape a strong and resilient healthcare system, ensuring qualified health coverage.

DO Health promotion, Health literacy, Behavioural insights

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The role of individual level health resources on health outcomes of newly settled migrants in Sweden

Abstract citation ID ckac131.313 has been removed

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Can the virtual reality intervention VR FestLab improve Danish studentś alcohol competences?

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Background:
VR FestLab is a newly developed simulated ‘‘party’’ where the player is being offered alcoholic beverages while steering their own party experience in virtual reality. We evaluated the efficacy of VR FestLab on drinking refusal self-efficacy of Danish male and female 15-18-year-old students and tested user satisfaction. Secondary outcomes were drug refusal skills, knowledge/awareness, communication skills, social support willingness, susceptibility to peer pressures, and outcome expectations.

Methods:
The intervention consisted of 15 minutes of gameplay and 30 minutes of group/in class discussion. The intervention group played VR FestLab where the control group played the VR game ‘‘Oculus Quest - First Steps’’ (no educational content). In a cluster-randomised controlled trial schools were randomly assigned to the intervention/control group. 13 Danish schools were recruited containing 181 students in intervention/191 in control groups. Students completed a questionnaire before and immediately after the intervention. Data was analysed using mixed linear regression models.

Results:
50% of students found VR FestLab to be realistic, 57% would like to explore it further, and 43% would recommend it to friends. We found a small, but non-significant effect on drinking refusal self-efficacy favoring the intervention. No differences between the intervention and control group were observed for the secondary outcomes.

Conclusions:
VR FestLab should be used with higher frequency than in this trial and in combination with other evidence-based alcohol prevention interventions adolescents. Further research is needed to improve the effectiveness of VR FestLab.

Key messages:
- VR FestLab could be a valuable contribution to school-based alcohol prevention education but cannot stand alone.
- Future research should focus on the dose-effect relationship of the novel tool.

Abstract citation ID: ckac131.315
Feasibility of a social network-based physical activity intervention targeting vocational students

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Background:
Globally, four of five adolescents do not meet the recommendations for physical activity (PA). This is a public health concern because moving large segments of young adults from inactivity to activity, is essential to reach the global target of a 15% relative reduction of inactivity by 2030 worldwide. This study aimed to pilot a social network-based PA intervention in a sample of young adults enrolled at vocational schools.

Methods:
Fourteen students from one vocational school located in Duesseldorf were encouraged to walk 10.000 steps per day over an intervention period of six weeks. In the WALK2gether intervention, students received general information on PA in a Facebook group and were instructed to use the pedometer app Pacer to monitor their individual steps and compare their daily step count with fellow participants. The framework by Thabane et al. (2010) was was taken as a basis for examining the feasibility of the methods and procedures employed and for estimating the magnitude of potential intervention effects.

Results:
The WALK2gether intervention turned out to be minimally resource intensive with, in total, 92 hours spent by the study staff on development and implementation. The recruitment rate was 19.2% and loss-to-follow was 28.6%. Descriptively analysed data revealed no noteworthy changes from baseline to follow-up neither in PA nor in other health outcomes, such as body mass index and quality of life. The target population did not interact in the Facebook group, while a moderate interaction with Pacer was noted.

Conclusions:
This pilot study and intervention were only partially feasible. Although the results ought to be interpreted with caution due to the small sample size, our results suggest that the target group would rather benefit from a structured PA regimen with regular check-ins and PA counselling, possibly by vocational school teachers, than the very autonomous approach piloted in this study.

Key messages:
- Results of this pilot study can inform the development and implementation of future social media-based PA interventions targeting young adults in vocational schools.
- Optimization of the intervention and studies on a larger scale are necessary.

Abstract citation ID: ckac131.316
Health promotion among unemployed people – meta-analytic evidence

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Background:
It is well known that unemployment impairs health. However, less is known about health promotion among unemployed people and healthy coping strategies to deal with unemployment.

Methods:
A random-effect meta-analysis was applied to statistically integrate quantitative controlled intervention studies among unemployed people.

Results:
The meta-analysis included 34 eligible primary studies with 36 independent intervention samples. For mental health, the average meta-analytic effect sizes for the comparison of intervention group and comparison group was significant and of small size after the intervention d = 0.25; 95% CI [0.10, 0.39], and at follow-up, d = 0.13; 95% CI [0.04, 0.22]. For health behavior (measured as physical activity), the effects were also significant after the intervention, d = 0.30; 95% CI [0.12, 0.47] (no data available at follow-up). Effects on self-assessed physical health status were very small and not significant. However, when health improvement was the only goal of the respective intervention (in contrast to studies with multiple goals, e.g., health improvement plus re-employment), the effect on physical health was significant, too, d = 0.15; 95% CI [0.04, 0.25]. Moderator tests showed that intervention effects on mental health were significantly stronger when cognitive-behavioral methods were used ($p < .05$), while the use other kinds of stress-management techniques ($p < .05$), of methods to increase social support ($p < .05$), or of relaxation techniques ($p < .07$) did not improve the effectiveness of the intervention.

Conclusions:
The present meta-analyses provided evidence that, on average, interventions aiming at improving unemployed people's health do indeed improve participants' health.

Key messages:
- The present meta-analysis confirms that it is possible to promote unemployed people' health. The moderator effects for type of intervention that were found here might be helpful for health promotion.
- The inclusion of cognitive-behavioral methods, appears to be a successful approach for health-oriented interventions with unemployed people.

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Nutrition Literacy of Overweight/Obese and Non-Overweight/Obese Turkish Women and Affecting Factors

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Background:
Nutrition literacy is having the skills and abilities required to prepare food, make healthy food preferences, and understand its effects on health, environment, and economy. Inadequate nutrition literacy can lead to an unhealthy diet, overweight, or obesity. Along with inadequate nutrition literacy, gender is also a risk factor for obesity. In this regard, it is seen that women's level of nutrition literacy has an important role in gaining healthy eating habits and preventing chronic diseases related to

nutrition such as obesity. This study aims to determine the level of nutrition literacy of adult Turkish women and the factors affecting.

Methods:

In this comparative descriptive research, 239 women were selected into 2 groups by their BMI, from Public Education Centers in Istanbul, Turkey, by using simple random sampling method. Data were collected using Introductory Characteristics Form and Adult Nutrition Literacy Assessment Tool. For statistical analysis, Pearson Chi-Square, Mann Whitney U and logistic regression were used.

Results:

In the study, adequate numerical literacy and food label reading rates in overweight/obese women were found lower (p = 0.000) than non-overweight/obese women. It was found that the number of main meals increases the nutrition literacy level of non-overweight/obese women 2.628 times (p = 0.012). In the overweight/obese group, it was found that number of children (p = 0.040), waist circumference (p = 0.048), snack amount (p = 0.022) and Youtube usage (p = 0.041) increase nutrition literacy levels.

Conclusions:

The nutrition literacy of both groups was found to be high. However it is highly affected by YouTube usage which provides a new perspective in terms of public health practices and policies. It is recommended for public health professionals to:

- use social media platforms and provide evidence-based information
- monitor the height, weight and BMI of individuals in the risk group
- organize interventions to strengthen nutritional literacy

Key messages:

- Adequate numerical literacy and food label reading sub-dimension mean scores of overweight/obese women was lower than the non-overweight/obese women.
- Spending time on Youtube increases the nutrition literacy levels in overweight/obese women by 91,116 times which points to the relationship between nutritional literacy and social media use.

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Changes in university student health behaviors since the beginning of the COVID-19 pandemic

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Background:

The COVID-19 pandemic lead many upheavals in the life habit whith lockdowns and curfews since March 2020 and possibly in the health behaviours of university students could be impacted. The objective of the study was to assess the evolution of the health behaviors of university students between before the COVID-19 period and May 2021.

Methods:

Two retrospectives online studies of a university students in France were in May 2020 and May 2021 were conducted. Socio demographics and academics environment data, tobacco smoking, binge drinking, cannabis use, and vigorous physical activity were collected in a declarative way.

Results:

In 2020, 3483 (72.5% of women, mean age 20.9 (SD = 2.46)) and in 2021, 3504 (74.4 of women, mean age 20.73 (SD = 2.32)) university students were included. After logistic regression, in 2020 compared to the pre-COVID19 period, the regular vigorous physical activity didn't change significantly while there appears to be a study period effect with a decrease of the regular binge drinking (AOR = 0.24 IC95% [0.20,0.29]). In 2021 compared to the pre-COVID19 period, the regular vigorous physical activity and the regular binge drinking decreased respectively, (AOR = 0.53; IC95% [0.48,0.59]) and (AOR = 0.60 IC95% [0.52,0.70]). Regular tobacco smoking and cannabis use didn't change significantly in 2020 and 2021 compared to the pre-COVID period.

Discussion: The decrease of binge drinking and physical activity between preCOVID-19 and 2021 could be attribute by the restricting mobility and social interactions. We did not observe an increase in risky health behaviors as smoking and cannabis use. These behaviors remain to be monitored in the future to assess the long-term effects of the pandemic COVID-19 on student health behaviors

Key messages:

- Health-promotion strategies directed at adopting or maintaining positive mental health should be developed for university students to better manage future lockdown periods.
- Recommendations to maintain health during the ongoing COVID-19 pandemic specifically target university student populations are needed.

Abstract citation ID: ckac131.319
Positive Health and palliative care: an exploration among nurses

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Background:

The current WHO definition of health seems to no longer meet the changes in the current Dutch health system. An alternative approach which puts emphasis on health, not disease, is Positive Health (Huber et al, 2011). This focus shifts the emphasis on improving resilience and well-being rather than the perspective on what is lacking in health.In this study, the attitudes towards the concept of Positive Health of palliative care nurses are examined.

Methods:

A mixed-methods approach design was used for this study. This involved the collection of both quantitative and qualitative data. Among the nurses, 134 questionnaires were administered. SPSS was used to analyze these results. For this study, six interviews were conducted and analyzed through thematic coding.

Results:

The quantitative analysis shows that the respondents are look positively about the Positive health description. Nurses find it important that it emphasizes that someone is more than his illness. In addition, the emphasis is on personal control. However, the question is also raised whether every patient can handle this. Nurses find the most important dimension 'quality of life'. This is followed by the dimension 'mental well-being' and 'spiritual existential'. The dimension 'daily functioning' is found to be the least important. The qualitative analysis also shows that the concept of Positive Health is viewed positively. The concept is considered positive, because it covers several areas of health. However, it was also indicated that the concept is still too broad. However, all respondents found that the concept can be applied in practice.

Conclusions:

This study shows that palliative care nurses have a positive attitude towards Positive Health. Nurses consider the all the dimensions important and also embed the aspects of it in their daily practice. However, the implementation of new concept should be explored.

Key messages:

- Palliative care nurses have a positive attitude towards Positive Health.

- The implementation of Positive Health in palliative care should be explored.

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Assessing perceived and functional health literacy among Cypriot parents

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Background:
Health literacy (HL) refers to people's competencies in accessing, understanding, assessing and applying health information to meet demands in healthcare, preventing illness and promoting health. In the case of children, parental HL is important in establishing health-promoting behaviours and better health outcomes.

Methods:
A cross-sectional study was conducted among parents of children, aged 6 months to 15 years, in Cyprus with the aim of assessing perceived and functional HL. A convenience sample of parents presenting in pediatric outpatient departments in three Cypriot cities rated their HL using the HLS-EU-Q47 and the NVS (Newest Vital Sign), a performance-based measure of HL. Participants were classified according to the overall and domain-specific scores and associations with socio-demographics were explored.

Results:
HLS-EU-Q47 mean score among 416 parents (83.2% female, 83.8% tertiary education) was 35.30 (SD = 7.45). Based on suggested ranges, almost half (42.6%) were classified as having inadequate or problematic HL. Consistently, 62.8% showed high likelihood or significant possibility of limited functional HL, based on the NVS with a mean score of 2.73 (SD = 2.02). Competency of understanding health information was rated higher (37.71, SD = 7.39), whereas assessing health information was rated lower (33.55, SD = 9.05). Among the three domains of the HLS-EU-Q47, the highest mean score was for healthcare (36.16, SD = 7.04) and the lowest score for health promotion (34.60, SD = 8.88). Parental HL was statistically significantly associated with education and financial difficulties.

Conclusions:
Moderate-to-low levels of perceived HL appear consistent with a performance-based measure of HL. As a high number of parents may face challenges in assessing and applying health information to improve outcomes for their children, healthcare services should be oriented towards identifying problematic HL, while Public Health interventions are needed to enhance parental HL.

Key messages:
- According to both a perceived and a performance-based measure of health literacy, the study suggests that a high proportion of parents in Cyprus may have inadequate or problematic health literacy.
- Health education interventions within clinical settings as well as at Public Health level are needed to enhance parental health literacy, currently not standard practice.

Abstract citation ID: ckac131.321
Teachers at vocational schools as ambassadors for physical activity? Developing an empowering webinar

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Background:
Childcare centres have the potential to promote health-enhancing physical activity (PA) in children. However, institutions with need for action seem to be hard to reach. During the project "QueB 2 - developing quality with and through physical activity" different strategies to empower multipliers in spreading awareness for PA were tested. Currently, the aim of the project is to involve teachers at vocational schools for early childhood education in order to sensitize prospective educators and ensure quality in planning interventions.

Methods:
The webinar was developed in three steps: (1) Four workshops were implemented in two vocational schools by participating 80 future educators to train them in planning PA interventions. (2) The collected students' recommendations and sample projects were categorized in eight steps of a theoretical model for project planning. (3) After finalizing the webinar, questionnaires were used to reflect on its application, utilization, and design.

Results:
The results of the second step were summarized in a manual for planning PA interventions in childcare centres. This forms the basis of the webinar to enable teachers to disseminate PA promotion in class. The developed modules were installed at a website and provided for free in order to be used by the interested public. In step three, teachers tested the webinar and filled in the questionnaire. The majority perceived the webinar as useful, appreciated its clear structure and appealing design, and expressed an increased awareness of factors concerning PA in childcare centres.

Conclusions:
Teachers at vocational schools perceived the webinar as useful to integrate parts of planning PA interventions in childcare settings in the curriculum. Transferring developed manuals and training modules to multipliers by providing an appealing, informative webinar seem to be a successful and sustainable way to ensure quality in planning processes.

Key messages:
- Involving teachers at vocational schools as multipliers for PA in childcare centres by performing a webinar is a sustainable strategy to maintain quality in intervention planning.
- Early childhood education students can act as ambassadors for PA.

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What do future public health doctors know about the One Health concept in Portugal?

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Background:
The One Health (OH) approach brings together a transdisciplinary collaboration between human, animal, and environmental health, to tackle emerging zoonotic diseases, antimicrobial resistance, and food safety. Therefore, incorporating of OH principles in the education of health care providers is fundamental.

Methods:
To assess OH knowledge, attitudes and practices (KAP), an anonymous, multiple-choice, online self-administered survey was sent to 1st year Portuguese Public Health Medical Residents (PPHMR), during an online congress targeted to them. A descriptive analysis was performed.

Results:

A 50.0% response rate was obtained out of the 42 PPHMR attendees. Only 33.3% were familiar with OH concept; 57,1% had heard of it but were not aware of its meaning, and 9.5% had never heard of it. Concerningly, 9,5% believed zoonosis were diseases transmitted between animals and 42.9% considered that ''antimicrobial resistance'' is applied to antibiotics only. Regarding major zoonosis, etiologic agents were not recognized for Cryptosporidiosis (47.6%), Echinococcosis (42.9%), Toxoplasmosis and Leptospirosis (38.1%), Dermatophytosis (33.3%), Rabies (28.6%), Borreliosis/Brucellosis (23.8%). Half (52.4%) were unaware of the transmission route of Brucellosis/Dermatophytosis, followed by Leptospirosis (38.1%), Toxoplasmosis (28.6%) and Borreliosis/Rabies (23.8%). Remarkably, all participants showed willingness to be informed on OH issues and agreed that prevention and speed of intervention would be higher with greater collaboration between health technicians. About education towards OH throughout their medical curricula, 61.9% classified it as low, 23.8% as absent, 14.3% as sufficient and none classified it as adequate or very adequate.

Conclusions:

This is the first study assessing KAP regarding the OH concept among PPHMR. Results highlight the need to bring OH to the Portuguese medical schools' agenda to better prepare the next generation of PPHMR to the emerging health crisis.

Key messages:

- Despite the interest shown by 1st year Portuguese Public Health Medical Residents concerning One Health, a general lack of knowledge on the topic was found.
- The majority qualified as insufficient their training on this subject, highlighting the need for medical schools to improve education and raise awareness regarding this transdisciplinary approach.

Abstract citation ID: ckac131.323
Tools for assessing implementation of health promotion standards in hospital/health service settings

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The International Network of Health Promoting Hospitals and Health Services (HPH) was initiated by the World Health Organization as a settings approach toward reorienting health services. Over 600 members from 30 countries promote the integration of health promotion into the hospital/ health service setting. The International HPH Network developed the 2020 Standards for Health Promoting Hospitals and Health Services, representing years of experience and expertise reflected in 5 standards, 18 substandards, and 85 standard statements. Complementary self-assessment tools were developed to operationalize the standards and to identify concrete measurable elements against which each standard can be measured. The aim of the tools is to assist hospitals and health services in transforming the setting into a health promoting one. The standards are comprehensive and address topics to encourage the complete refocusing of an organization's strategy and to stimulate a process of continuous internal improvement. Standards address management, patient-centered care, occupational health, health literate organizations, environmental sustainability, and target groups such as the elderly and children and adolescents. Excel and pdf tools may be utilized by institutions to measure and track progress in implementing each of the standards. The tools state measurable elements for each standard that were identified by an expert panel of HPH members and external subject experts to be directly observable and applicable across various regional and institutional contexts. As part of internal and external assessment processes, standards can be rated on a scale from 1 (not implemented) to 10 (fully implemented). The tools store data and generate graphs that allow organizations to assess their level of performance, identify areas for improvement, and devise data-driven action plans.

Key messages:

- Progress towards transforming the setting must be tracked and included in an organization's continuous internal improvement processes.
- The transformation of the hospitals/health service setting into a health promoting environment results in better health outcomes for patients, families, the community, and the environment.

Abstract citation ID: ckac131.324
A whole-of-community approach to promote cardiovascular health: Healthy Communities in Moldova

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A low-income country, Moldova is facing a rapidly growing burden of non-communicable diseases with a cardiovascular disease mortality rate of 202.2 per 100'000. Scarce resources require urgent preventative actions and involvement of communities and patients in the definition and design of locally relevant health promoting activities. Our intervention is a holistic, whole-of-community approach to foster local leadership in health promotion for the prevention of cardiovascular risks. The Healthy Life project to reduce the burden of non communicable diseases, funded by the Swiss Agency for Development and Cooperation (SDC), operates since 2016 in rural communities of Moldova. We present a 5-step model towards initiating Healthy Communities in Moldova based on 5 complementary steps:

1. Raising awareness on cardiovascular risk factors through community education seminars tailored to audience needs
2. Building multisectoral community coalitions for health between local elected leaders and community representatives around local health data and locally defined health priorities
3. Fostering community leadership in defining local health solutions through health asset mapping exercises
4. Community-led small projects based on identified needs and assets to improve local cardiovascular health
5. Empowering chronic patients for healthy behavior change through community-based self-management workshops

The Healthy Communities intervention was rolled out to 40 communities in 20 districts, reaching 1332 direct beneficiaries. Important learning emerged from social accountability mechanisms embedded in community coalitions which ensure regular, health-focused dialogue on community health. Using local assets to health problem solving is changing the perspective on the resourcefulness of community actors in health. Progress towards sustainability is achieved by local public authorities and community making a matching contribution to start-up funding to small projects.

Key messages:

- Our Healthy Communities model proposes a strength-based vision of health promotion which empowers community coalitions to self-organize for the prevention of cardiovascular risk factors.

- We promote bottom-up approaches that strengthen local health governance and community leadership into defining and addressing local health priorities.

Abstract citation ID: ckac131.325
Promoting health literacy during Covid-19 pandemic–valuable partnership with Portuguese pharmacists

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Issue/Problem:

COVID-19 pandemic has amplified the amount of health information available; however, hard-to-reach populations remain and much of the information available is not accurate. Therefore, the use of new proximity approaches in the promotion of health literacy is essential because people face challenges and barriers when trying to find information relevant to them.

Description of the problem:

From the beginning of the COVID-19 pandemic in 2020, the Division of Literacy, Health and Wellbeing of the Directorate-General of Health in Portugal developed Social Mobilization and Community Engagement training sessions-which included a presentation and a toolkit of flyers/posters/videos. These sessions had the goal of disseminating public health measures through good practices in health literacy and communication methods/skills to promote efficient communication among people who play an active role (as microinfluencers) in prevention and mitigation of risks associated with COVID-19, as is the case of pharmacists.

Results:

A total of 200 Portuguese pharmacists enrolled on the Social mobilization training session in November 2021. More than 150 initiatives were implemented thereafter by those microinfluencers (pharmacists) in the local communities-31% directed to children or young people, 31% to older adults, and 13.8% to migrants or tourists. 70% of the participants considered the materials of the toolkit as adequate and sufficient, and 62.1% answered that people in the community showed interest for those materials available in the pharmacies.

Lessons:

This Social mobilization project was important because it assembled and preserved trust- basing the information of the training on reliable sources about COVID-19 virus. It also trained the microinfluencers (pharmacists) in communication strategies. All these approaches were important to prevent and mitigate the impact of COVID-19 via adoption of non-pharmacological measures and promotion of vaccination.

Key messages:

- Portugal was pioneer in promoting Social mobilization and community engagement training sessions, maintaining a proximity communication, tailoring the information, and maximizing its impact.
- Within the group of health professionals, pharmacists are a privileged group to promote these communication strategies and social mobilization due to their proximity with the local community.

Abstract citation ID: ckac131.326
Measuring the burden of infodemics on health outcomes through harmonized global metrics

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Issue/problem:

Infodemics happen when an excess of information makes it difficult for people to discern what they see and hear to make good health decisions. Several challenges limit the usefulness of applying infodemiology research to the practice of managing infodemics including inconsistency in how information exposure is measured and a lack of focus on assessing associations with health behaviors.

Description of the problem:

In 2021, WHO partnered with the University of Sydney to develop a study toolkit. We sought to create novel tools for measuring information exposure that can be easily deployed, linked to surveys measuring health behaviors, and implements a standardized study protocol so that data can be directly synthesized into a global analysis of information risk factors associated with health behaviors.

Results:

A web-based study platform was developed, comprising tools for capturing information exposures within studies that link to health behavior surveys. The first tool is a smartphone application that asks users to actively record relevant information they see or hear in diary. The second application is a web browser plugin that passively tracks webpages with relevant keywords. Because localized studies follow a standardized protocol and de-identified participant data are recorded in a common format, local study investigators can opt-in to contributing study data to support global surveillance efforts.

Lessons:

Through standardization of measurement tools and relevant study protocols, the toolkit can be used to quickly collect and synthesize data for global or regional analysis of infodemics, including in Europe. Validation of the toolkit in the field is needed to inform its open-source release.

Key messages:

- A toolkit for measuring information risk factors associated with behavioral outcomes was developed.
- Global collaboration using the toolkit can improve synthesisability of studies investigating infodemic burden of disease.

Abstract citation ID: ckac131.327
The effect of alcohol marketing on people with, or at risk of, an alcohol problem: A rapid review

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Background:

Little is known about the impact of alcohol marketing on people with, or at risk of, an alcohol problem. A rapid review of primary studies was conducted with the aim of exploring the effect of alcohol marketing in this population.

Methods:

People with, or at risk of an alcohol problem were defined as people with an alcohol use disorder, in recovery from an alcohol use disorder, and hazardous and harmful drinkers. Searches for relevant literature were conducted through Medline, EMBASE and PsychINFO; reference list scanning and citation tracking of included studies; and grey literature searching of relevant websites. A narrative synthesis of included studies was undertaken.

Results:

The review included 11 studies, which focused on participants recovering from an alcohol use disorder (AUD, 6 studies) and those with hazardous or harmful consumption levels of alcohol (5 studies). 7 studies were quantitative and 4 were qualitative. The effect of alcohol advertising on alcohol use was only assessed in one small experimental study of young adult heavy drinkers, which found no apparent effect. Studies looking at other outcomes suggested that a significant proportion of people with or at risk of alcohol problems notice alcohol advertisements and can find them appealing, and that advertisements may have an effect on positive alcohol-related emotions and cognitions. Among people in recovery from an alcohol use disorder, findings suggested that there could be an effect on craving, and that alcohol marketing may be perceived to trigger a desire to drink.

Conclusions:

Several studies report effects of alcohol marketing which may translate into effects on consumption. There is also evidence that alcohol marketing is perceived to act as a trigger by people in recovery from alcohol problems. Further longitudinal and experimental research is needed to determine whether alcohol marketing has a causal effect on alcohol use in this population.

Key messages:

- The findings of the studies included in the review suggest that an effect of alcohol marketing in people with, or at risk of, an alcohol problem is likely.
- The impact of alcohol marketing on people with or at risk of an alcohol problem should be a concern for marketing regulators and a focus for future research.

Abstract citation ID: ckac131.328
Making Every Contact Count with people with MSK conditions: Exploring physiotherapist acceptability

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There are known risk factors that are associated with the onset and exacerbation of musculoskeletal (MSK) conditions and pain. Physiotherapists are uniquely placed to deliver brief interventions with their patients. Healthy Conversation Skills is the main training component of the Wessex approach to Making Every Contact Count. Despite its potential for promoting MSK health and wellbeing, there is no evidence to support its acceptability within MSK services. This is the first known study to explore the use and perceptions of the Wessex model of MECC HCS within MSK services. A mixed method design was used. Phase one employed an online questionnaire, open to all professionals trained in MECC HCS, consisting of items relating to implementation outcomes. Barriers and facilitators to delivery were explored and mapped to the Theoretical Domains Framework. Phase two invited physiotherapists for a follow-up interview and qualitatively explored their acceptability of delivering MECC HCS to patients with MSK conditions. MECC HCS was found to be highly acceptable, appropriate, and feasible. Physiotherapists reported using their skills at least daily but missed opportunities for delivering MECC HCS were evident. Barriers mapped mostly to ‘Environmental Context and Resources’ on the Theoretical Domains Framework. Qualitative themes developed during phase two were: ‘Recognising the patient as the expert supports change’, ‘MECC HCS improves physiotherapy practice’, ‘MECC HCS shared problem solving reduces workload’, ‘time as a perceived barrier to MECC HCS’ and ‘system-level support needed to sustain MECC HCS’. MECC HCS is a promising brief intervention for supporting people with MSK conditions. Further rollout of this intervention may be beneficial for meeting the goals of the NHS and Public Health England in prevention of MSK conditions and promotion of MSK health. Barriers associated with sustainability must, however, be addressed.

Key messages:

- Making Every Contact Count Healthy Conversation Skills is considered a highly acceptable brief intervention for supporting behaviour change in people with musculoskeletal conditions.
- Organisational, system-level barriers to implementation must be addressed in order to increase sustainability and enhance future roll out of the brief intervention.

Abstract citation ID: ckac131.329
Parents’ evaluations on the service delivery and communication skills of the pediatric dentists

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Aim:

In the study,it was aimed that parents who need oral health services for their children for any reason should evaluate pediatric dentists in terms of service provision and communication skills.

Methods:

The study was conducted with 123 parents who applied to a private oral health clinic in Ankara between 20/06/2021-20/07/2021.For parents,10 descriptive and 20 face-to-face questionnaires questioning service delivery and communication skills on a 5-point Likert scale were applied.

Results:

The mean age of the participants was 40.9±5.9 years.Only 34.1%(n = 42) of the parents who needed oral health services for their children directly applied to the pediatric dentist,while the others 65.9%(n = 81) applied to dentists who were not pediatric dentistry specialists.The mean score of evaluation of parents’ pediatric dentists in terms of service delivery and communication skills is 4.16±0.44.When pediatric dentists were evaluated in terms of service delivery and communication skills.74.8%(n = 92) made the explanations in a way that they could easily understand,67.8%(n = 82) did not speak fast enough to prevent them from understanding the words,66.9%(n = 79) stated that they created an environment that respects privacy and 72.6%(n = 85) stated that they allocated enough time as “always”.

Conclusions:

As a result, it has been determined that the frequency of parents applying to physicians who are not pediatric dentists for their children’s oral health problems is high. However,the parents who applied to the pediatric dentist found the pediatric dentist to be more competent in terms of service delivery and communication skills.It is necessary to increase the awareness of the parents about the pediatric dentistry expertise.

Key messages:

- Parental evaluations of pediatric dentists regarding service delivery and communication skills are important.
- Oral health literacy of parents should be developed.

Abstract citation ID: ckac131.330
Co-construct, implement and evaluate an intervention to prevent a sedentary lifestyle in children

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Background:

In children a sedentary lifestyle is associated with the development of chronic diseases, as well as unfavorable body composition and physical condition, lower levels of self-esteem, sociability, and school results. In Europe 39,8% of children (6-9 years) spend on average more than 2h/day in front of a screen, and 14,6% over 3h/day. In this context, designing and testing effective interventions to decrease sedentary behavior in children is a major public health research gap. The CIPRES intervention aims to reduce sedentary time in school-age children (7-10 years).

Methods:

The CIPRES intervention is co-constructed with key local actors, by using a socio-ecological approach, and theory-based on the transcontextual model. The intervention is evaluated by a cluster-randomized controlled study currently ongoing. The target population is made up of 1000 children from 13 primary schools (in years 4-5) from southeast of France with different levels of social deprivation. Main outcomes are assessed by accelerometer and questionnaires before (T0) and after a six-week intervention (T1) and include sedentary behavior, physical activity (PA) and variables of the transcontextual model.

Results:

Preliminary data were available in 152 children (53 intervention and 99 control). There was no significant difference across the time in sedentary time between intervention and control group (p = 0.11; $\eta^2 = 0{,}017$); however, moderate-to-vigorous physical activity (MVPA) tended to be better in intervention vs control (p = 0.06; $\eta^2 = 0{,}023$). In the intervention group, sedentary time and MVPA were significantly better across the time (p = 0.028 and p = 0.011, respectively) for children having a father with a university diploma as compared to children having a father with a lower education level.

Conclusions:

Preliminary results on a small group of subjects (n = 152) are encouraging and suggest a positive impact of the intervention on children. More results will be available by summer 2022.

Key messages:

- Based on the socio-ecological model, the CIPRES intervention aims to prevent sedentary in school-aged children.
- Preliminary data suggests a favorable impact of the intervention on physical activity.

Abstract citation ID: ckac131.331
Health literacy among older adults 77+ in Sweden

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Background:

Health literacy (HL) is an essential component of an individual's ability to gain access to, understand and use information to improve and maintain good health and is an important prerequisite for managing health and care needs. Therefore, knowledge on older people's HL is vital to meet the care needs of the rapidly aging population efficiently and equitably. Knowledge on HL in the older population is limited, both in an international perspective and in Sweden. Challenges linked to limited HL are expected to increase with advanced age, emphasizing the importance of conducting a study using a nationally representative sample of older adults. The aim of the study was to explore the level of HL in older adults living in Sweden.

Methods:

A cross sectional study using data from the Swedish Panel Study of Living Conditions of the Oldest Old (SWEOLD), which is a nationally representative sample of the Swedish population aged 77+ years (N = 1500). SWEOLD covers areas such as health, socioeconomic and social factors. HL is assessed with the communicative and critical health literacy scale. The data was collected through telephone interviews in fall 2021 and spring 2022. Respondents not able to answer themselves were excluded.

Results:

Preliminary results show that 49 % of the participating adults aged 77+ have limited HL. HL was significantly associated with age (77-85 years OR: 1.80; 86+ OR: 3.04), education level (OR: 1.76), vision (OR: 2.40) and cognitive ability (OR: 0.88). HL was not significantly associated with sex.

Conclusions:

These preliminary results shows that a large proportion of Swedish older people might face difficulties related to accessing, understanding, appraising, and applying health information in ways which promote and maintain good health, and stresses the importance of examining the topic in greater detail.

Key messages:

- A high proportion of older adults in Sweden have limited health literacy.
- Health literacy among older adults in Sweden varies with age, level of education, vision and cognitive ability.

Abstract citation ID: ckac131.332
Masculinity norms and help-seeking intentions after experiences of interpersonal violence

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Background:

High levels of self-compassion might increase men's willingness to seek formal help, including those men, who rigidly conform to masculinity norms (CMN). However, self-compassion has rarely been considered as an enabling factor for women's help-seeking intentions. The current study analyzed the links between CMN, self-stigma, self-compassion and willingness to seek formal help after experiences of interpersonal violence (IPV) in women and men.

Methods:

A cross-sectional online-questionnaire study was conducted with 491 German-speaking participants (65.6% women/34.4% men; age: M = 36.1 years; SD = 14.2). Participants read three vignettes about experienced IPV. Afterwards, they indicated how likely they would be to seek medical or psychological help if they were in the main characters' situation. The Conformity to Masculine Norms Inventory, Self-Stigma of Seeking Help Scale, Self-Compassion Scale were used. Separate manifest path models were calculated for women and men.

Results:

CMN and low self-compassion were linked to strong self-stigma. In turn, strong self-stigma was associated with reduced help-seeking intentions. In men, the interaction term Self-Compassion x CMN on self-stigma indicated that strong CMN was linked to increased self-stigma, especially in men with low self-compassion. Also, indirect links between CMN and help-seeking intentions via self-stigma have been found. However, in people with strong self-compassion, direct links between CMN and help-seeking intentions became evident.

Conclusions:

In women and men self-compassion was linked to reduced self-stigma. As is suggested from past research, self-compassion might "buffer" the link between CMN and self-stigma, especially in men. However, there might be an influence of strong CMN on help-seeking intentions also in people with strong self-compassion. This route might not be mediated by self-stigma and therefore, future research is needed to detect other potential mediators.

Key messages:

- Self-compassion might "buffer" the link between CMN and self-stigma in men.
- Future research is needed to study mediators between strong CMN and help-seeking intentions in people with strong self-compassion.

Abstract citation ID: ckac131.333
Use of TikTok by nutrition healthcare professionals: analysis of the Italian context

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Background:

Over the past 20 years, Social Media (SM) have become fundamental tools for quickly and effectively spreading health information in Europe. One of the most popular topics in the health sector is food and nutrition. TikTok is one of the most recent-born and most popular SM. Our study aims to analyze how healthcare professionals in the nutrition sector communicate through TikTok, and to assess characteristics of their accounts and videos.

Methods:

We included in the present study 53 Italian healthcare professionals who post videos on TikTok through a search on this SM using nutrition-related keywords. For each tiktoker, we described the characteristics of their last 10 videos, through an ad hoc checklist. We performed multilevel multivariable linear regression models in order to identify factors (healthcare professional or video related) that could be associated with a higher popularity of the video.

Results:

The 67.7% of the tiktokers considered were female; 46% had more than 30 years, 62.3% were biologists. The median number of likes was 300 (IQR 75 - 1070). The linguistic register was "formal" in the 11.3% of the videos. In the 31.9% of them, the location was the office of the healthcare professional. In the 67.3%, the topic was "diet-related". Multilevel multivariable linear regression models showed that "diet-related" topics were associated with more likes (coeff 1111.63, p = 0.048), and comments (coeff 13.42, p = 0.018).

Conclusions:

Many Italian nutrition professionals are present on TikTok, and perform videos in their offices discussing mainly diet-related topics. There are no specific factors associated with the popularity of their videos, other than the presence of "diet-related" topics. Since the TikTok audience is very young, and wrong messages on this topic could lead to serious health-related consequences, there is the need to pay a specific attention on the contents of the videos, to avoid the spread of potentially dangerous information.

Key messages:

- Italian healthcare nutrition professionals are present on TikTok and perform videos with diet-related contents in their workplaces.
- Since wrong information on diet and nutrition could lead to serious health consequences for the audience, it is important to monitor the content of the videos to avoid the spread of dangerous messages.

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Moveluencer - movement promotion in the context of covid 19

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In times of a pandemic, regular physical activity is recommended as protection against the additional stressors caused by a significantly changed daily routine and, above all, severe restrictions in social life. Within this context, promoting active mobility is a meaningful approach to improving the health of the population. The project 'MOVEluencer' is a physical activity promotion project following a multidimensional and participatory approach. It has been running since July 2021 in six small rural communities in Styria, a province of Austria (average: 2262 residents). These communities were selected based on inequality factors related to health and physical activity. The promotion of active mobility is at the heart of the project. The main target groups include children and adolescents, their parents, as well as older adults. The aim of the analysis phase was to identify infrastructural resources that are favorable to a physically active lifestyle through a photo contest. A total of 268 photos were sent in by 67 people (43% female). In spring 2022, 'movement events' were implemented to raise awareness in terms of active mobility among the population. These events were supplemented by the offer of fitness tests and approximately 265 persons (age: 10 to 84 years) participated. As a follow-on activity, 4 to 5 'walking buddies' will be trained in each community and they will subsequently offer regular walking meetings. In the 3rd project phase, specific physical activity programs will be developed and implemented together with the target groups of the project. Aspects for the sustainable anchoring of physical activity promotion are considered in each project phase. It has been shown that awareness of the health benefits of active mobility in rural areas is rather low. Therefore, improving lifestyle and infrastructural conditions as well as measures to promote physical literacy are important.

Key messages:

- Awarenes among the population regarding the health benefits of active mobility is low in rural areas.
- Social media campaigns to promote physical activity are successful in all age groups.

Abstract citation ID: ckac131.335
Hand Hygiene: do we know the WHO 5 moments?

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Background:

The proliferation of multi-resistant bacteria to antibiotics is one of the main global health problems of the 21st century. The World Health Organization (WHO) has listed antibiotic resistance as one of the top ten public health threats facing humanity. The hands become the main vehicle for transmission by contact of the microorganisms that cause healthcare-associated infections (HAIs). Its control provides a main point in patient safety. Hand Hygiene (HH) is a good practice consolidated in the technical guides of good practices for patient safety, being essential due to its easy use, low cost and effectiveness in preventing the cross-transmission of micro-organisms. Our objective is to analyze the knowledge of healthcare professionals in reference to HH according to the WHO's indications.

Methods:

Descriptive study through cross-sectional surveys based on the HH Knowledge Questionnaire for healthcare professionals translated by the Health Ministry, Social Policies and Equality of Spain and validated by the WHO, carried out voluntarily and anonymously between September 2021 and March 2022, prior and after training sessions in HH.

Results:

There were total of 558 surveys (questionnaires) with 57% correct answers in the questionnaires before training and 62.9% after the trainning. The highest percentage of correct answers, both before and after the trainning, correspond to the HH technique and the wrong ones are related to the 4th Moment and 3rd Moment of the WHO HH.

Conclusions/ recommendations:

Despite being immersed in a pandemic where adherence to the correct technique of HH has been revealed, the need for healthcare professionals to carry out continuous training regarding HH and Health-care associated infection (HAI) is unquestionable.

Key messages:

- Hand Hygiene is a crucial good practice to control Health-care associated infection.
- Continuous trainning improves compliance in Hand Hygiene.

Abstract citation ID: ckac131.336
Parent-child nature visits and young Finnish childreń nature connectedness

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Background:

It is well-known that frequent nature visits are associated with health benefits in children. Global climate crisis and environmental challenges emphasize the need for reconnecting children to nature, as well. Young children's nature connectedness (NC) involves enjoyment of nature, sense of responsibility, empathy, and awareness of nature. The study examines whether there is an association between the frequency of parent-child nature visits and young children's NC.

Methods:

The study uses WEB survey data from the Finnish Empowered by Nature project. Respondents, n = 1463, were parents of children aged 2 to 7 years old. NC was assessed by 11-items derived from the NC questionnaire of Sobko et al (2018). Multinomial logistic regression analysis was used and the lowest tertile of NC was used as reference group. Analysis were adjusted for child's age and gender, and highest education of parent.

Results:

Children with moderate (1-2 times a week in previous month) or high (3 times a week or more) frequency of parent-child nature visits were more likely to have strong than weak NC compared to children with low frequency (less than once a week) of adult-child nature visits. Odds ratios (OR) in adjusted models were: moderate frequency 1.67 (1.21- 2.32), and high frequency 2.31 (1.67-3.18). The odds of having medium NC compared to weak NC were more likely in moderate frequency compared to low frequency of parent-child nature visits in the adjusted model (OR 1.46; 1.07-2.00).

Conclusions:

The results highlight the importance of parents visiting nature frequently with their children during early childhood. It promotes young children's NC and may further contribute to raising environmentally responsible children.

Key messages:

- More frequent parent-child visits promote young children's nature connectedness which involves enjoyment of nature, sense of responsibility, empathy, and awareness of nature.
- A strong nature connectedness among children is highly relevant, as it may contribute to raise environmentally responsible children.

Abstract citation ID: ckac131.337
LärMiljö (Learning Environment) - study protocol: movement, outdoor learning and well-being in school

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Background:

Outdoor education (OE) is a teaching method aiming to promote children's learning, physical activity (PA) and wellbeing. OE in green areas may further increase positive effects. There is little knowledge on use of OE and its possible effects in a Finnish context. Also, there is a need to evaluate OE from a teacher perspective. The aim of the LärMiljö-study is to: a) survey the use of OE in Swedish-language primary schools and investigate factors related to its use; b) investigate the associations between OE and PA, wellbeing, nature relations and learning among children aged 9-13 years, considering other related factors.

Methods:

The self-determination theory (SDT) is used as theoretical framework. Data is collected via electronic surveys in Swedish-language primary schools, including: a) national surveys among principals and teachers; b) surveys among children and guardians. Children's PA is measured for a 7-day period via accelerometers and a diary is kept. Teachers keep a class diary on OE provided. Academic tests are performed. Data will be analyzed using quantitative methods.

Results:

This abstract describes the study protocol. The investigation of associations between OE and outcomes among children is mainly done by comparing classes that regularly use OE with classes that do not. Main outcomes are PA, psychosocial wellbeing, academic performance and nature connectedness; secondary outcomes are school motivation, social relations and sleep. Teachers' experience and use of OE is explored, as is perceived effects of and barriers to OE use. Based on SDT, associations between OE and need satisfaction at work, competence, motivation and work engagement are studied.

Conclusions:

The study represents a unique opportunity to explore OE use in primary schools, its effects among children and teachers, and what the supporting and hindering factors for its use are. The study contributes knowledge that can be used to promote learning and wellbeing in school.

Key messages:

- Outdoor education in primary school may promote school-children's learning, physical activity, wellbeing and nature relation, but more knowledge is needed, including the perspective of teachers.
- The LärMiljö-study will broaden the understanding of the potential effects of OE in primary education and school health promotion, and on factors supporting and hindering its use.

Abstract citation ID: ckac131.338
Digital Health Literacy in the Training of Informal Caregivers – Community Intervention

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Background:

Health Literacy allows optimizing healthy lifestyles and preventive and health protective behaviors (DGS, 2019). Low literacy can lead to a greater number of hospitalizations, a more frequent use of emergency services and a lower prevalence of preventive attitudes in the field of health. Internet-based interventions could have a positive impact on informal caregivers, reducing the geographical barrier, promoting self-efficacy in managing their own emotions, reducing burden.

Aim:

Contribute to the training of informal caregivers of a primary health care unit in Lisbon, through the promotion of digital health literacy.

Methods:

The Community Intervention project was carried out in the context of a home visit, focusing on 11 informal caregivers, through the presentation of an interactive digital manual. It was based on the methodology of health planning, through the elaboration of a diagnosis of the situation, definition of priorities, setting of objectives, selection of strategies, operational preparation and evaluation (Imperatori & Giraldes, 1993).

Results:

It was found that not all informal caregivers have access to the internet or digital technologies, and it was necessary to deliver the printed manual. Caregivers who accessed the interactive digital manual rated its content as very important, having accessed the suggested links without difficulty. The possibility of forwarding the digital manual to other caregivers was valid for all.

Conclusions:

Digital technologies promote communication in terms of health promotion, contributing to universal access and digital training in health, giving individuals the opportunity to increase care for their own health. The creation of digital health tools must be directed to the characteristics of the population. For individuals with low digital literacy, simple technologies must be created and for those who cannot or do not want to use digital tools, adequate alternatives must be created.

Key messages:

- Primary care health professionals may use digital technologies to promote health literacy.
- Vulnerable groups with low digital health literacy need support to increase access to digital technology that can promote health literacy.

Abstract citation ID: ckac131.339
A health promotion intervention for vulnerable schools (BeE-school): a cluster-randomized trial

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Background:

Noncommunicable diseases (NCDs) share key determinants like unhealthy diet, unhealthy 24h- movement behaviour (sleep, sedentary behaviour and physical activity), leading to other risks including overweight, obesity and raised blood pressure. Although the manifest of the NCDs in childhood is rare, risk behaviours, obesity, and raised blood pressure that accelerates their development begin during childhood. The current study aims to analyze the effectiveness of the intervention program based on the promotion of health literacy and lifestyles, on children's health literacy, lifestyles (e.g. dietary intake, 24hmovement behaviour) and overweight and obesity.

Methods:

478 children (6 schools) aged 6-12years old will participate in this cluster-randomized trial, having schools as the unit of randomization, assigned into intervention (239-3schools) and the control arm (239-3schools). This project is currently performing social listening (online and offline) and stakeholders' involvement. Data collection includes sociodemographics, health literacy and infodemic resilience, dietary intake and children's 24-h movement behaviour (e.g. accelerometry), anthropometry (e.g. weight, height and waist circumference) and blood pressure. It will occur at baseline and after the intervention (follow-up, 6 months after the beginning of the intervention).

Results:

Expected outputs and outcomes include the 1-creation of a model for characterizing NCDs and health topics based on artificial intelligence techniques (e.g. deep learning, social network analysis methods).2- improved health literacy and infodemic resilience of children, families and teachers.3- enhanced children's lifestyles. 4- reduce NCDs' physical risk factors (e.g. overweight, raised blood pressure).

Conclusions:

A feasible intervention program for school-aged children with vulnerabilities enhances tailored policies about health promotion and NCDs' prevention, respecting the contextś singularities.

Key messages:

- Health promotion and NCDs prevention are crucial for the well-being of our societies.
- Feasible intervention programs advocates for evidence-based policies that respect local singularities.

Abstract citation ID: ckac131.340
Codevelopment and evaluation of a multicomponent intervention to improve HPV vaccination in France

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Background:

HPV vaccine coverage (VC) in France has always been lower than in most high-income countries. The French authorities launched in 2018 the PrevHPV national research program aimed at codeveloping with stakeholders and evaluating the impact of a multicomponent intervention to improve HPV VC among French adolescents.

Methods:

We identified three components to address main barriers to HPV vaccination in France: adolescents' and parents' education and motivation (component 1); general practitioners (GPs)' training (component 2); and access to vaccination at school (component 3). We developed the intervention using the UK Medical Research Council framework for developing complex interventions as a guide. We used (i) findings from published evidence; (ii) primary data on knowledge, attitudes, behavior and preferences collected through a mixed methods approach (quantitative/qualitative studies, discrete choice experiment); (iii) the advice of stakeholders (e.g., adolescents, parents, school nurses, GPs) involved in working groups. We will evaluate the effectiveness, efficiency and implementation of the components (applied alone or in combination) through a pragmatic cluster randomized controlled trial. The primary endpoint is the HPV VC ($\geq$ 1 dose) among adolescents aged 11-14 years, 2 months after the end of the intervention, at the municipality level.

Results:

Primary data highlighted the need to improve adolescents, parents and school staff knowledge on HPV and to help GPs communicate with patients on this topic. They provided guidance on the most effective communication contents. For each component, we codeveloped tools with a participatory approach (e.g., eHealth tools for adolescents, a decision aid tool for GPs). The trial will end in June 2022; 90 middle schools (i.e., about 40,000 adolescents) and 46 GPs accepted to participate.

Conclusions:

Should the intervention prove effective, results from the implementation evaluation will help us refine it before scaling it up.

Key messages:

- The PrevHPV study is supported by the French health authorities and conducted by a multidisciplinary consortium to tackle a long-lasting public health concern in France.
- It will add to the small number of studies that compared the effectiveness of various strategies to promote HPV vaccination and will provide key results on cost-effectiveness and implementation.

Abstract citation ID: ckac131.341
Sport federation investment in health promotion: program implementation and viability

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Background:

Researchers have called for a better recognition of the potential of sports clubs for health promotion (HP), but less is known on the support provided by sports federation. The present study analyses the the implementation of the Gaelic Athletics Association (GAA) Healthy Club Project, to investigate its organization's viability.

Methods:

A single case study was realized, based on observation, document analysis and interviews, to document the viable system model.

Results:

Results have identified a three-level structure, where 6 employees at national level support the work of 28 volunteer's county health and well-being officers and 439 clubs implicated. Strengths of the organization are the identification of a single national referent for clubs or county, the learning process and openness to novelty, as well as the enhanced workforce through county implication as role model. Challenges are the financial and human resources provision, the ability to implicate county and club board and the training in HP of volunteers. Interlevel relationship are supported by the creation of a community of practice and the centralization of the project at national level, but hindered by a clear definition of county tasks. The strengths of the controlling system include a steering committee implicating partners completing each other and the proper use of evaluation to build evidence on the project, where challenges remains in wider collaboration within the GAA.

Conclusions:

The present work has underlined key scaling up factors of the HCP implementation to support its viability, which could be learnt from other sports federation implementing HP interventions.

Key messages:

- Sports federation have a key role to play to support sports clubs to promote health, by developing specific programs.
- Health Promotion development in sports clubs has similar scaling up implementation factor than other public health interventions.

Abstract citation ID: ckac131.342
Impact of a multidisciplinary intervention on Mediterranean diet adherence and cardiovascular health

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Background:

Cardiovascular diseases represent a significant public health issue, and the promotion of healthy lifestyles plays a major role in their prevention. Good adherence to the Mediterranean diet has a protective effect on cardiovascular health and may reduce the risk of developing cardiovascular disease. Our prospective study aimed to evaluate the impact of educational lifestyle interventions on cardiovascular risk parameters and the improvement in adherence to the Mediterranean diet of the involved population.

Methods:

Participants have been recruited by General Practitioners in Torresina neighborhood in Rome. From December 2018 to June 2020, 41 patients were involved in nutritional, psychological, and physical activity meetings by a multidisciplinary team of healthcare professionals. In particular, a nutritionist provided information to patients on balanced nutrition, considering the Mediterranean diet as a dietary model. Information on lifestyle, dietary habits and physical activity, anthropometric data and laboratory measurements were collected at baseline and after 12 months. The variations of the evaluated parameters were analyzed by paired t-test e Wilcoxon signed-rank test.

Results:

The analysis showed statistically significant decreases in weight ($p = 0.03$) and BMI ($p = 0.02$), as well as in systolic ($p < 0.001$) and diastolic ($p = 0.001$) blood pressure and in total ($p = 0.02$) and LDL ($p = 0.01$) cholesterol level. Results also showed an improvement in the adherence to the Mediterranean diet ($p = 0.001$): the frequency of consumption of fruits and vegetables, legumes, cereals and fish has increased significantly, while the consumption of meat, milk and dairy products and alcohol decreased.

Conclusions:

This study highlights that a multidisciplinary educational program can be effective in improving healthy habits and in reducing cardiovascular risk factors, supporting its implementation in primary prevention at the community level.

Key messages:

- Promoting healthy lifestyle through primary prevention and health promotion actions is critical to reduce the onset of cardiovascular diseases.
- A population-based multidisciplinary educational intervention may be effective in improving adherence to a healthy, balanced diet and decreasing cardiovascular risk factors.

Abstract citation ID: ckac131.343
Crowdsourcing to Reduce Stigma Around HIV testing Among Adolescents and Young Adults in Kazakhstan

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Background:

New cases of HIV infection are increasing among adolescents and young adults (AYA) in Kazakhstan, and now account for over 23% of all HIV infections. Testing is key to reducing new infections, yet HIV-related stigma is a major barrier. Crowdsourcing contests could engage AYA in the development of interventions and increase the likelihood that an effective approach will be developed to reduce stigma and increase HIV testing among Kazakhstan AYA.

Objective:

To determine the response to a crowdsourcing approach to collect media content for the development of an intervention focused on HIV testing stigma reduction among AYA in Kazakhstan.

Methods:

To organize the crowdsourcing contest we organized a community steering committee; developed platforms to solicit crowd input; engaged AYA to contribute ideas through social media and in-person events. We present data on social media use and contributions.

Results:

The contest website was visited by 2,893 people, and 76 AYA submitted 91 works for the contest from all over Kazakhstan. Most AYA (60%) visited the website of the contest via social media. Types of submitted content for the contest included video: 31 (34.0%), pictures: 29 (31.8%), text: 24 (26.3%), and other types of content including a chatbot, online game, and website: 7 (7.6%). Fifty (65.7%) participants were between 13-19 years, and 26 (34.2%) were between 20-29 years. Thirteen (17.1%) submissions were in Kazakh, and the rest in Russian 63 (82,9%). A number of submissions required further guidance due to a lack of understanding about stigma, accurate facts, and copyright issues.

Conclusions:

AYA engaged in a crowdsourcing contest and used multiple modalities/types of content, from younger and older AYA, in both Kazakh and Russian, and representation from most regions of the country. Providing clearer guidance about facts and stigma may be helpful prior to submission.

Key messages:

- Crowdsourcing approach has a potential to engage adolescent and young adult into development of various types of media content focused on public health issues, such as HIV testing stigma reduction.
- Adolescents and young adults may need additional information and guidance regarding complex concept of stigma around HIV testing.

Abstract citation ID: ckac131.344
Attitudes of university students towards mandatory COVID-19 vaccination: a cross-sectional survey

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Background:

Vaccination is an effective public health measure to control the COVID-19 pandemic. In Italy, vaccination against SARS-CoV-2 was made compulsory by law for some job categories, such as healthcare and education workers. Although students required a valid COVID-19 certificate to access university, they were never subjected to mandatory vaccination. In this context, we investigated their attitudes towards mandating COVID-19 vaccination to be able to access schools and universities.

Methods:

We conducted a cross-sectional survey from September 2021 to February 2022. A multivariable logistic regression model was built to identify predictors of positive attitudes towards the outcome. Adjusted odds ratio (aOR) and 95% confidence intervals (CIs) were calculated.

Results:

We collected 5287 questionnaires, grouped into three periods (September-October 2021, November-December 2021 and January-February 2022). The highest proportion of students supporting COVID-19 mandatory vaccination (62.5%) was found between November and December 2021. Multivariable analysis showed that November-December and January-February participants had higher odds of having a positive attitude towards the vaccine mandate than September-October respondents (aOR = 1.26, 95% CI:1.09-1-48; and aOR = 1.22, 95% CI:1.01-1.48). Other positive predictors were age (aOR = 1.01, 95% CI:1.01-1.03), higher levels of perceived COVID-19 severity (aOR = 1.09, 95% CI:1.05-1.14), concern for the emergency (aOR = 1.09, 95% CI:1.05-1.14), getting vaccinated for fear of infecting other people or being infected (aOR = 1.08, 95% CI:1.04-1.12; and aOR = 1.07, 95% CI:1.03-1.10) and believing that vaccines could end the pandemic (aOR = 1.49, 95% CI:1.41-1.56).

Conclusions:

Attitudes towards COVID-19 mandatory vaccination changed over time, probably in relation to the pandemic trends. Moreover, feeling involved in the pandemic situation seems to be related with a positive attitude.

Key messages:

- Pandemic trends may affect the attitude towards vaccine mandates. Mandating vaccines to access universities could be taken into account in emergency situations to ensure a safer learning environment.
- Involvement in the pandemic situation seems related with a supportive attitude towards vaccine mandates, suggesting that awareness is a key factor to be addressed to implement mandatory vaccination.

Abstract citation ID: ckac131.345
Promoting the key moments of hand hygiene in a Targeted Hygiene intervention at COP26

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The COP26 conference in Glasgow, November 2021 presented a unique public health challenge in the midst of the COVID-19 pandemic. With 38,457 delegates attending, this international event posed a risk for SARS-CoV-2 infection. We used Targeted Hygiene theory to carry out a large event risk assessment process that focused on how spaces were used, referred to evidence from scientific literature, and identified key moments for surface and hand hygiene interventions. We relied on behavioural science evidence to optimize hand hygiene compliance at the event. To do so, we secured the opportunity to use hand sanitizer by determining the most suitable locations for over 500 hand sanitizing stations. To further motivate uptake of personal hygiene, kits were provided for each delegate with hygiene messaging to improve knowledge of the importance of hand hygiene in breaking the chain of infection. A COP26-branded face covering, personal hand gel and wipes were provided in the pack. Training and cleaning protocols centred on Targeted Hygiene were developed for cleaning teams to implement. Compliance monitoring through observation and daily real-time reporting of over 250 adenosine triphosphate (ATP) checks on just-cleaned surfaces provided reassurance for public health agencies that our Targeted Hygiene approach was effective.

The messaging and cleaning interventions were carried out for the duration of the COP26 conference. The number of individuals officially affiliated with COP26 that tested positive was ∼2 in 1,000 as compared to ∼11-12 in 1,000 individuals in Scotland during the same period (6-13 November 2021 as reported by Public Health Scotland). Whilst no single control can be attributed to this achievement, effective hand and surface hygiene interventions contributed by helping to break the chain of infection. This risk-based approach to Targeted Hygiene serves as a blueprint for effective, sustainable and measurable nonpharmaceutical interventions at large scale events.

Key messages:

- To mitigate risk of infection at COP26, key moments for surface and hand hygiene were identified and emphasized in cleaning protocols and education.
- Using a risk-based approach to Targeted Hygiene serves as a blueprint for effective, sustainable and measurable non-pharmaceutical interventions at large scale events such as COP26.

Abstract citation ID: ckac131.346
The effect of social desirability bias on the measurement of subjective health literacy of children

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Background:

When measuring children's health literacy (HL) with self-report questionnaires, there is doubt whether high scores reflect good HL, or if they are caused by social desirability bias, meaning that children present themselves favorably. This study explores how the tendency to answer in a socially desirable way impacts HL scores.

Methods:

A cross-sectional study was conducted among fourth-graders in North-Rhine Westphalia, Germany. The study was designed as a representative survey starting in 12/2020, which could not be realized due to pandemic-related constraints. Data collected between 07/21 and 11/21 is included here. Subjective HL was assessed with the HLS-Child-Q15 and a validated 10-item scale (AFS) was used for social desirability bias. Also included in linear regression explaining HL scores are age, sex, country of origin, home language, family affluence (FAS), interest in learning new things about health, the belief that parents are able to answer own questions about health and frequency of conversations with parents about health. Variables were dichotomized where necessary.

Results:

$n = 364$ students are included (49.5% female). Mean age is 9.5 years ($SD = .69$). In the regression model ($F(9, 271) = 6.724$, $p<.001$), which explains 15.5% of variability in HLS-Child-Q15 scores, frequency of communication about health at home ($\beta = .147$, $p<.01$), interest in learning about health ($\beta = .268$, $p<.001$), and the belief that parents are able to answer own questions about health ($\beta = .209$, $p<.001$) are the only significant predictors. Sociodemographic variables and the tendency to answer in a socially desirable way don't have a significant effect on HL.

Conclusions:

Our findings suggest that social desirability is not a significant source of bias when measuring children's HL with the HLS-Child-Q15. Communication about health at home and children's interest in health seem to be much more important for children's HL. Further research is necessary to verify these findings.

Key messages:

- Social desirability doesn't seem to be a source of bias when measuring children's HL with the HLS-Child-Q15.
- Speaking about health at home and children's interest in health are important predictors of HL.

Abstract citation ID: ckac131.347
Facemasks and Public Health: analysis of bacterial contamination in FFP2 masks

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Background:

Facemasks (FM), due to the Covid-19 pandemic, are extensively used and often worn beyond the recommended time. This has led to questions about the negative impact persistent contamination on FMs might have on public health. The study aims to assess the level of contamination reached in a small cohort of subjects after the recommended use (8 h) of FM.

Methods:

This descriptive study was carried out between January and April 2022 on 17 people: 9 women and 8 men aged between 25-45 years. These two groups were divided into two micro-groups: women were selected according to their skincare habits (no skincare and skincare with cosmetics). In contrast, men were selected according to the length of their beards (thick or short beard). The FM was worn for 8 h in a controlled office setting, to avoid possible uncontrolled variables. Then, the FM was cut, placed in a tube with a recovery medium and centrifuged. The supernatant was removed and the pellet resuspended. Aliquots were plated on Petri plates and incubated for 48 h at 36 °C to count the Colony Forming Units (CFU). The statistical analysis was conducted using Stata software, performing the Wilcoxon matched-pairs and setting a significance level of $p < 0.05$.

Results:

Women had higher FM contamination than men (= 4960 vs 3130 CFU/ml). Also, we found more colonies (= 18890 vs 3420 CFU/ml) in the FMs of women without skincare ($p = 0.06$), while among men, more colonies were reported for those with a thicker beard than for those with a shorter one (= 3300 vs 2960 CFU/ml).

Conclusions:

Extensive FM use increases bacterial contamination exponentially. This could lead to changes in the facial microbiome, inducing skin conditions (such as allergic dermatitis and acne). Facial skin conditions are important public health issues for people wearing FMs daily. In addition, responsible handling of this equipment is essential to avoid the spread of SARS-CoV-2 through contact with these items, which can persist for many days.

Key messages:

- Gender and physical characteristics may influence the level of contamination present on FFP2 face masks.
- There is a need to increase community awareness on the proper handling of facemasks, prevent health problems for users, and limit the spread of infection to those around them.

Abstract citation ID: ckac131.348

Digital Health Literacy during COVID-19: gender differences from a Florentine University experience

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Gender appears to be a strong predictor of online health information-seeking behaviour (OHISB). Gender differences in OHISB have been studied in different countries with different results, but no studies investigated gender-specific behaviour among University students during the COVID-19 pandemic, which has brought with it a consequential infodemic. We sought to investigate any gender differences in OHISB in the period between the first and the second wave of the COVID-19 pandemic. A questionnaire promoted by the COVID-HL network was administered to 2996 students of all the courses at the University of Florence. It included existing validated scales adapted to the COVID-19 pandemic and newly developed scales. Gender differences were tested using the χ2 test or the Mann-Whitney U test, where appropriate. Male students reported a higher score in DHL than females ($p < 0.001$). However, female students reported using more often different sources for online information seeking ($p < 0.05$, except for YouTube), searching more corona-related topics ($p < 0.05$, except for economic and social consequences) and considering "very important" each item in the "Importance of internet information search" section ($p < 0.05$). Furthermore, female students are more likely to be "often dissatisfied" or "partly satisfied" with information about COVID-19 ($p < 0.001$) and to search more often for information for themselves and other people. Our study confirmed that gender could affect the way students search for health information on the Internet. Since students, in particular females, have been affected by stress and anxiety during the pandemic, these findings could help institutions to promote gender-specific education programmes to improve students' DHL and their mental health outcomes, as well as to provide health information that fit specific gender needs.

Key messages:

- Gender influences how university students search on the Internet for health information.
- This should guide institutions to better address educational programmes to improve their Digital Health Literacy.

Abstract citation ID: ckac131.349

Awareness of Female Genital Schistosomiasis: A cross-sectional survey in rural Madagascar

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Background:

Infections with S. haematobium are endemic in tropical regions and emerging in some European countries. Prolonged chronic infection with S. haematobium can cause Female Genital Schistosomiasis (FGS), which can lead to serious gynecological conditions, including infertility. However, awareness of FGS is limited, as are adequate guidelines and public health strategies to manage the disease. The aim of this study is to determine the levels and quality of FGS awareness among women and healthcare workers (HCW) in the Boeny region of Madagascar, where the disease is endemic.

Methods:

Data collection involved a cross-sectional survey of adult women ($n = 694$) and HCWs ($n = 93$) on topics, such as respondents' sociodemographic background characteristics, FGS awareness, and risk perceptions. Results were analyzed using descriptive statistics including proportions and 95% confidence intervals.

Results:

Of the 694 women included in the study, 11.2% (CI [9.0-13.8%]) had heard of FGS. Among these, 34.6% (CI [24.1-46.2%]) were unaware of the gynecological symptoms signature for FGS, and 41% (CI [30.0-52.7%]) were unaware of the urological symptoms of the disease. Out of the 93 HCW surveyed, 53.2% (CI [42.6-63.6%]) had heard of FGS. Among these, 42.0% (CI [28.1-56.8%]) were unaware of the gynecological symptoms, and 52.0% (CI [37.4-66.3%]) were unaware of the urological symptoms.

Conclusions:

Preliminary results show overall low levels of FGS awareness among the study population. While more women reported to have never heard of FGS than HCW, the proportion of HCWs who did not know the gynecological and urological symptoms of FGS was higher. Given the occurrence of FGS in Europe and the chronic character of the disease it would be crucial to conduct similar investigations in Europe. Such findings can contribute to the design of targeted local and global FGS awareness campaigns to improve the health of women affected by this disease worldwide.

Key messages:

- Awareness of FGS among the study population in Madagascar, an endemic country, is low.
- Lack of awareness can delay the identification of the disease and increase individual and community burden.

Abstract citation ID: ckac131.350
The role of health literacy in vaccination behaviours: a systematic review

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Background:

Health literacy (HL) is recognized as a driver of health-promoting behaviors, including preventive actions. However the influence of HL on vaccines uptake remains unclear. This study aimed at summarize the evidence on the role of HL in vaccination behaviors.

Methods:

PubMed, Scopus, and Web of Science were searched. Observational studies of any design conducted worldwide, published through June 2021 and investigated the association between HL and vaccination intention or status using HL validated tools were included. Any vaccine was considered. An adapted Newcastle-Ottawa Scale was used to assess quality.

Results:

Twenty-one articles were included, 6 investigated intention to vaccinate and 15 explored vaccination status. Studies of the first group had a cross-sectional design, considered anti-COVID-19 vaccination and were judged of high or fair quality. Population investigated was heterogeneous as well as the tool used to assess HL. Five analysis provided adjusted estimates. HL seemed not influence the vaccination intention in 3 studies whereas adequate HL was associated with positive attitude to get vaccinated in the remained 3 ones. The majority of articles assessed vaccine status, had a cross sectional design (N = 11) and were of high quality (N = 8). The HL tool more frequently used was TOFHLA (N = 5), sample investigated was heterogeneous included parents of children who received vaccinations (N = 5). Four articles considered multiple vaccinations, thus providing a total of 19 analysis. Vaccine against influenza was the most investigated (N = 11) and 15 studies provided adjusted estimates. No association was found between HL and the receipt of vaccination in 11 analysis, whereas HL levels significantly influenced vaccination uptake in 8 studies.

Conclusions:

Health literacy did not seem to strongly influence people decision on vaccinations. Difference in population and vaccines considered, but also in tool used to measure HL might explain the heterogeneity of the results.

Key messages:

- The impact of HL on vaccination behaviours remains controversial.
- Efforts to extend the studies on targeted populations applying a comprehensive HL measurement tool should be devised.

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Covid-19 vaccination adherence and correlated factors in patients with substance use disorders

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Background:

Analyzing trends and patterns of vaccination during COVID-19 pandemic is important to understand how current policies are working. Evidence regarding the general population is already available, but hard-to-reach populations as migrants or minorities, but also people suffering from a Substance Use Disorder (SUD), have not been fully explored. To understand the extent of vaccine adherence and evaluate associated factors in this population subgroup, we conducted a cross-sectional study in collaboration with Villa Marini Foundation, national agency of the Italian Red Cross for pathological addictions.

Methods:

We developed a questionnaire regarding COVID-19 vaccination, adherence to prevention measures, concerns about COVID-19 and questions relating to drug use that we administered to each participant. Only people aged over 18 with a diagnosis of SUD were included in the study. A multivariable logistic regression model was built to identify the predictors associated with anti-SARS-CoV-2 vaccination, estimating adjusted odds ratios (aOR) and 95% confidence intervals (CIs).

Results:

We recruited 200 participants between December 2021 and January 2022. Most respondents were male (84.5%), Italian (72%), aged 44 years on average. A total of 40 patients (20%) reported they haven't received any dose of COVID-19 vaccine; the most common motivations were lack of trust in the vaccine and fear of side effects. At multivariable analysis, the use of heroin appears to be negatively associated with vaccination acceptance (aOR = 0.31 CI 95%: 0.11-0.81) as well as not being Italian (aOR = 0.27 CI 95%: 0.12-0.63).

Conclusions:

The vaccination rate in our sample was consistent with the one of the general Italian population in the same period, whereas the reasons behind the lower adherence to vaccination in the heroin group need to be further investigated. It's also important to reduce possible bureaucratic obstacles that could explain the lower number of vaccinated foreign citizens.

Key messages:

- People with Substance Use Disorder are a fragile and often overlooked population that needs to be considered during Public Health intervention and vaccination campaigns.
- The access to vaccination for foreigners should be made more simple and easier to increase accessibility and participation.

Abstract citation ID: ckac131.352
Behavioral innovations in the management of obesity and overweight using the COM-B model

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Background:

Increasing overweight and obesity rates represent one of the global health challenges in the 21st century. Obesity is a gateway to many non-communicable diseases and shorter life expectancy. Understanding individual capability, opportunity, and motivation for health behavior change (COM-B) may help to develop effective public health interventions. However, so far, only a very few studies examined interventions based on behavior change theories. Thus, we aimed to assess the potential facilitators and barriers to behavior change in weight management using the COM-B model.

Methods:

We included 146 people with overweight and obesity (66.7% female; mean age 46.62±14.51 years; body mass index 32.46±6.51 kg/m2) from primary care settings. All participants completed the Brief Measure of Behavior Change (COM-B), the General Self-Efficacy Scale (GSE), the Rosenberg Self-esteem Scale (RSE), and the Self-Rated Heath scale (SRH). Multiple linear regression analyses were used to analyze the data.

Results:

In univariate analyses COM-B domains were positively associated with female gender, living with a partner, lower body mass index, and higher SRH. However, the associations between sociodemographic and clinical variables and COM-B domains were no longer significant when self-esteem and general self-efficacy were added to the multivariate regression models. Self-efficacy was associated with reflective motivation (β: 0.53; $p < 0.001$), physical capability (β: 0.43; $p < 0.001$), and psychological capability (β: 0.44; $p < 0.001$) the most significantly. Self-esteem was strongly associated with physical capability (β: 0.41; $p < 0.01$). Total explained variances in the final models varied from 17.7% to 25.0%.

Conclusions:

Personal resources may play a significant role in weight management and should be included in tailored public health interventions (Grant support: VEGA: 1/0748/22).

Key messages:

- Interventions focused on the enhancement of personal resources may improve weight management.
- Behavioral and cultural aspects should be considered when designing effective public health interventions.

Abstract citation ID: ckac131.353
Impact of community outreach programme on improving cancer related preventive health behaviour

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Cancer services were negatively affected due to the Covid-19 pandemic and will have likely delayed early detection and diagnosis. The Irish Cancer Society (ICS) planned and delivered a number of cancer roadshow events in 4 deprived regions in Ireland to address improvements in awareness of cancer signs, importance of screening, positive lifestyle changes and encourage medical care-seeking behaviour. Health checks (blood pressure, BMI & CO2 monitoring) and motivational interviews were carried out by ICS nurses and trained ICS volunteers. Data was collected via anonymous questionnaire from participants and volunteers. SPSS was used for analysis. 98 people (54 male, 44 female) participated; 87.7% found the information provided useful, 84.7% approved of the health check and 72.5% stated that they would likely make changes to their current lifestyle to reduce their cancer risk. Moderate/high understanding of cancer signs and symptoms and moderate/high awareness of cancer risk factors both rose post event (from 62.2% to 81.6% ($p < 0.001$) and from 49% to 61.2% ($p < 0.001$) respectively). If symptomatic for cancer 77.6% of participants would likely visit their GP and 73.5% would likely contact ICS. Younger people (aged ≤40 years) were more likely to consider consulting a healthcare professional if symptomatic ($p = 0.027$) and to contact the ICS ($p = 0.007$) for more information. High numbers of participants (98.9%) and volunteers (95.2%) recommended a nationwide roll out. Volunteers reported moderate/high levels of public engagement; the most common topics discussed were own treatment experience, cancer screening, information on making lifestyle changes and ICS services. Volunteers reported the need for more training and improvements to some organisational aspects. More rigorous cancer health promotion programmes are required to counter disrupted cancer services. Our results suggest such cancer roadshow events are both feasible and beneficial at this time post pandemic.

Key messages:

- Health literacy is continuous process to achieve positive health outcomes.
- Reaching out to people in different setting is acceptable and potentially effective.

Abstract citation ID: ckac131.354
Longitudinal relationships between youth assets, seat belt use while driving, and the environment

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Background:

Positive youth development theory can provide an alternative approach to promote Seat Belt Use while Driving in a Car (SBUDC) among youth. The study aims to explore the relationship between youth assets, and the neighborhood environment in predicting SBUDC.

Methods:

The Youth Asset Study (YAS) is a 4-year (5 waves) longitudinal study of a random sample of 1,111 youth (12-17 years old) and their parents, taking place in a Midwestern city, USA from 2003-2008. Seventeen youth assets were developed. The environment was measured objectively via the broken windows survey and subjectively via parents' interviews. Assets and environmental factors at Waves 1-4 were predicted SBUDC at Waves 4-5 while controlling for demographics. Data were analyzed via marginal logistic regression and generalized estimated equations analyses.

Results:

The sample consisted of 1001 youth: 53% female; mean age = 14.36 (SD = 1.59); 50% with income <$35,000; and 69% two-parent families. The proportion of youth not wearing a seat belt while driving increased from wave 4 to 5 only among African American youth. Individually, most assets had a positive relationship with SBUDC (ORs ranged from 1.3 to 2.7), with general aspirations for the future, educational aspirations for the future and positive peer role models having the largest ORs [2.7, 95% CI (1.7, 4.3); 2.2, 95% CI (1.5, 2.0); 1.9, 95% CI (1.5,2.4)] respectively. Youth with a higher (≥ 12) number of assets were almost twice as likely to use a seat belt while driving than those with a lower (<12) number [OR = 1.8, 95% CI (1.4, 2.3)]. Only one environmental factor had a significant effect on SBUDC [(OR = 1.32, 95% CI (1.01, 1.72)]. Assets retained their impact on SBUDC, controlling for the environmental and demographic factors.

Conclusions:

Youth assets can be a promising approach to promote SBUDC among teens with emphasis on promoting general aspirations for the future, educational aspirations, and positive peer role modeling.

Key messages:

- Building youth assets can be another mechanism to promote seat belt use while driving among youth.
- The neighborhood environment might not be as important as other factors are in the promotion of seat belt use while driving.

Abstract citation ID: ckac131.355
Longitudinal relationships between youth assets, seat belt use as a rider, and the environment

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Background:

Positive youth development theory can provide an alternative approach to promote Seat Belt Use while Riding in a Car (SBURC) among youth. The study aims to explore the relationship between youth assets, and the neighborhood environment in predicting SBURC.

Methods:

The Youth Asset Study (YAS) is a 4-year (5 waves) longitudinal study of a random sample of 1,111 youth (12-17 years old) and their parents, taking place in a Midwestern city, USA from 2003-2008. Seventeen youth assets were developed. The environment was measured objectively via the broken windows survey and subjectively via parents' interviews. Assets and environmental factors at Waves 1-4 predicted SBURC at Waves 4-5 while controlling for demographics. Data were analyzed via marginal logistic regression and generalized estimated equations analyses.

Results:

The sample consisted of 1001 youth: 53% female; mean age = 14.36 (SD = 1.59); 50% with income <$35,000; and 69% two-parent families. The proportion of youth not wearing a seat belt while riding in a car decreased from wave 4 to 5 among all youth. Individually, most assets had a positive relationship with SBURC (ORs ranged from 1.4 to 2.0), with parental monitoring, responsible choices, general aspirations for the future and good health practices having the largest ORs [2.0, 95% CI (1.5, 2.7); 1.9, 95% CI (1.5, 2.6); 1.8, 95% CI (1.2,2.8); 1.8, 95% CI (1.5,2.3)] respectively. Youth with a higher ($\geq$ 12) number of assets were almost twice as likely to use a SBURC than those with a lower ($^{<}$12) number [OR = 1.9, 95% CI (1.5, 2.3)]. Only one environmental factor, had a significant effect on SBURC [(OR = 0.64, 95% CI (0.45, 0.90)]. Assets retained their impact on SBURC, controlling for the environmental and demographic factors.

Conclusions:

Youth assets can be an alternative approach to promote SBURC among teens with emphasis on promoting parental monitoring, responsible choices, general aspirations for the future, and good health practices.

Key messages:

- Building youth assets can be another mechanism to promote seat belt use while driving among youth.
- The neighborhood environment might not be as important as other factors are in the promotion of seat belt use while driving.

Abstract citation ID: ckac131.356
Promoting migrant health literacy in adult education, from research to practice

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Background:

As migration affects health, migrants need context-appropriate health literacy (HL) to maintain and promote health. Possible venues to improve HL are adult education programs, i.e., language courses (LC). However, empirical evidence on these courses and their contribution to HL is scarce. Moreover, general HL recommendations and conceptually developed HL programs often proved unsuitable in practice as they insufficiently incorporate the multiple influences. This paper's purpose is to show, using key findings, how ethnographic research can contribute to developing appropriate programs and how the transfer from research to practice can succeed.

Methods:

The SCURA project conducted extensive ethnographic research on HL in second LC, i.e., 100 h participant observation in 2 classes, 40 teacher interviews, analysis of 24 textbooks, and teacher training. On this basis, we designed programs and drew lessons from comparison with other programs.

Results:

The study revealed that health and HL as a situational social practice play a key role in LC e.g., as prerequisites for attendance and learning, part of the syllabus, and an occasion for informal conversations. Multiple concepts of health and HL coexist and influence HL promotion. Besides the setting and course conditions, teachers strongly shape HL activities and students show varying degrees of HL practice. We exposed the complexity and diversity of HL situations, meaning-making processes, strategies to acquire and promote HL, and actual space of action. Then, we developed participatory practicable approaches to promote HL in the educational offer. Compared to other programs, the ethnographic study allowed us to address the major factors, tap into the actual space of action, and increase acceptance, uptake, and sustainability.

Conclusions:

Improving HL in existing offers requires a profound understanding of the logic of the field. Ethnographic studies facilitate describing these peculiarities and tailoring interventions.

Key messages:

- Ethnographic studies allow understanding the relevant factors, actors, situations, contexts, processes, strategies, the logic within and the scope for action.
- The empirical evidence gained in ethnographic studies enable researchers to develop promising, accepted, and sustainable interventions.

Abstract citation ID: ckac131.357
Promoting migrant HL, good practice in adult education and lessons learned for other interventions

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Problem:

Migration is a global phenomenon, and migrants face myriad challenges, e.g., building context-specific health literacy (HL). To sustainably promote HL, translations, interpreters, or programs in other languages are insufficient. Courses that promote HL holistically are needed, e.g., second language courses. In the SCURA research project, part of the HLCA Consortium, we ethnographically studied language courses and developed interventions. The insights gained are relevant not only for courses promoting HL of migrants or in Germany but also for other target groups and countries.

Description:

Based on extensive ethnographic research, we participatory created interventions to promote HL. As language courses promote HL to varying degrees but are severely limited by the rigid conditions and support, we identified strategies to improve HL therein and ensure uptake and sustainability: add-in, pimp-up, dive deeper. The multimodal intervention consists of an extensive collection of teaching ideas, materials to prepare and reflect on sessions, and a 6-part teacher training (in-house, online, and self-study course, based on adult learning principles). The 90-minutes sessions address Health in Language Courses, Health and Me, Using materials, Critically Analyzing Materials and Developing Empowering Activities, Promoting Family HL, and Mental HL. A hands-on tool was developed to help teachers intentionally promote the seven components of HL.

Results:

The preliminary results of the ongoing evaluation showed that the flexibly adaptable and applicable offerings, the online workshop, and self-study courses, were well received. The teachers liked the choice of topics and the combination of short inputs and many recommendations for practice.

Lessons:

The project's success relies on knowing the context and setting, considering the needs of all stakeholders, and developing offerings that are a relief but not an additional burden, and that can be easily integrated into the program.

Key messages:

- A thorough ethnographic understanding of the course is key to developing interventions that will be perceived to be appropriate and relevant.
- HL promotion should integrate teachers' HL, informal occasions on health information exchange, diverse and multilingual ways to engage with health information and a systematic, deliberate development.

Abstract citation ID: ckac131.358
Health literacy and its association with health outcomes among students in upper secondary education

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Background:

Health literacy (HL) - as a broad range of health-related competencies and skills- has been recognized as a determinant of health outcomes, and suggested to be a modifiable health resource and a factor contributing to empowerment and equity. Thus, there is a need to identify the state of HL in various population groups. The aim of this study was to investigate HL levels and associations between HL, physical activity and subjective health among students in general upper secondary and vocational Swedish-language schools in Finland.

Methods:

The study used cross-sectional data from the Finnish LIITU-study among students in Swedish-speaking general upper secondary and vocational schools (N = 887; age 16-20 years) conducted in the spring and autumn 2020, during the covid-19-pandemic. Students answered a web-based questionnaire during school hours. HL was measured with the 10-item Health Literacy for School-Aged Children (HLSAC) instrument. Data was analyzed with descriptive statistics and logistic regression analyses.

Results:

According to preliminary findings, one third of students had high HL. HL was higher among female than male students, general upper secondary school students than vocational school students, and in spring than in autumn 2020. A higher proportion of students with high HL, as compared to students with low/medium HL, reached the national recommendations for physical activity, perceived their health to be excellent and, moreover, did not have recurrent psychological symptoms.

Conclusions:

The findings confirm previous research findings on the importance of HL in promoting health outcomes. The pandemic year 2020 provided a unique perspective to the subject. It would be important to survey and discuss the role of schools in providing equal opportunities for the promotion of HL as this may contribute to decreasing health disparities in the population.

Key messages:

- One third of students in upper secondary education (age 16-20 years) had high HL; there were differences between genders, students on different educational paths, and in spring and autumn 2020.
- High HL was associated with better self-rated health, less psychological symptoms and reaching national recommendations for physical activity among students in upper secondary education.

Abstract citation ID: ckac131.359
Do religious people in Western Balkans have faith in COVID-19 vaccines?

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Background:

Recently, it was established that more religious people tend to have less favorable views of vaccination. The aim of this study was to assess the relationship between the religiousness and attitudes towards COVID-19 vaccination and disease, in five Western Balkans countries.

Methods:

Using online questionnaire and convenience sampling procedure, data were obtained from 1605 respondents aged 18-75 years. Perceived COVID-19 vaccine safety and efficacy, and observed danger and susceptibility to disease were assessed by short five-point Likert scales. Religiousness was estimated using single item scale. Multivariate regression analysis was employed.

Results:

In Serbia, respondents who assessed themselves as more religious considered vaccine against COVID-19 as less safe ($\beta = -.10$, $p<.01$) and effective ($\beta = -.12$, $p<.01$), were more prone to the attitude that dangers of COVID-19 are not that serious ($\beta = -.09$, $p<.01$), and believed to a greater extent that they are less susceptible to the virus ($\beta = -.07$, $p<.01$). Similarly, in Bosnia and Herzegovina more religious individuals were less convinced that vaccine is effective ($\beta = -.07$, $p<.05$), less inclined to believe that danger of the virus is serious ($\beta = -.07$, $p<.05$), and assessed their susceptibility as lower ($\beta = -.06$, $p<.05$). More religious people in Montenegro ($\beta = -.06$, $p<.05$) regarded the vaccine as less safe, while in North Macedonia ($\beta = .06$, $p<.05$) and Albania ($\beta = .08$, $p<.01$) stronger religiosity was associated with more favorable attitudes towards vaccine safety.

Conclusions:

The relationship between religiosity and attitudes towards COVID-19 vaccination and disease is culturally conditioned. While in some Western Balkans societies religious beliefs render individual with a sense of lack of control triggering worry and anxiety, in some others they work as psychological shield against existential threats.

Key messages:

- Religiosity should be considered as a relevant factor in vaccination campaigns implementation.
- In the societies where negative attitudes towards vaccination prevail among the believers, religious leaders should be peculiarly educated and encouraged to participate in vaccination campaigns.

Abstract citation ID: ckac131.360
Organizational health literacy and health promotion in health care settings: Results from Germany

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Introduction:

Health care organizations (HCO) are increasingly required to provide health literate structures and processes to strengthen organizational health literacy (OHL). So far, little is known about the extent of OHL in HCO in Germany. Aims are therefore 1) to examine the level of OHL in health care organizations, and 2) to investigate the impact of organizations level of health prevention and workplace health promotion on the level of OHL.

Methods:

Analyses are based on a nationwide cross-sectional study (online survey) among management staff (N = 564) in HCO (hospitals, nursing homes, facilities for disabled people). OHL was measured by the German version of the 'Health literate health care organization 10 item questionnaire' (HLHO-10). Health prevention and workplace health promotion were operationalized by the ''Worksite Health Promotion Capacity Instrument' (WHPCI). Uni- and bivariate analyses were carried out, on an item-basis and as an index (median-split).

Results:

Regarding OHL, 55.1 % of the health care organizations reported below-average levels of OHL. On an item-basis, the highest below-average levels were given for the standard 'communication' (59.1 %) and the 'provision of information to patients/residents via various media' (57.4 %). Regarding the level of health prevention (51.8 %) and the existence of workplace health promotion structures (55.7 %), more than half of HCO reported a below-average level. In addition, results showed that HCO that indicate a below-average level of prevention and few structures of workplace health promotion also revealed a below-average level of OHL.

Conclusions:

There is need to strengthen OHL in German HCO.

Key messages:

- HCO are required to strengthen HLO, particular in communication and participatory approaches.
- A higher level of prevention and workplace health promotion on HCO can contribute to the implementation of OHL initiatives.

Abstract citation ID: ckac131.361
Assessing sun protection practices for children: knowledge and behaviours of parents

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Background:

The development of melanoma in adulthood is strongly associated with sunburns during childhood. Parental knowledge and behaviours play a key role in sun protection behaviour from which children can acquire general and integrated learning patterns. With this being known, numerous positive preventive health behaviours can be initially shaped in the family, with children having parents as a model.

Methods:

A cross-sectional approach (web-based questionnaire) was conducted to gather information regarding parents' knowledge and behaviours of children's sun protection, alongside the predictors that might influence the adoption of these behaviours, between April and May 2021. The survey was disseminated to 53 primary school teachers from 9 schools in Cluj-Napoca Romania, and the data set included 355 valid surveys (parents with at least one child aged between 0 to 12 years old) out of 476 total surveys. Descriptive statistics, Chi-square tests of association and logistic regressions were computed.

Results:

The study showed differences in children's sun exposure patterns, their sunburn and parental sun protection behaviour. Overall, parents reported fair sun protection behaviours and children's sunburn frequency was overall moderate among all children in the previous summer season. However, an increase in children's age generates an increase in parents' sunscreen application for their children in both planned and incidental situations. There were statistically significant associations between parents' sex and their knowledge about the fatal consequences of skin cancer or their level of education and the damage produced by tanning bed usage or sunscreen efficiency measures.

Conclusions:

These results are a starting point for various program interventions that can be done for parents in order to increase their knowledge on sun protection practices for their children.

Key messages:

- Skin cancer is substantially preventable if unprotected exposure to ultraviolet radiation is reduced during the first years of a child's life.
- Parental knowledge and behaviors play a key role in sun protection behavior from whom children can acquire general and integrated learning patterns.

Abstract citation ID: ckac131.362
Health Literacy, Covid-19 and risk perception: a cross-sectional survey in Prato in the 2nd wave

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During the Covid-19 pandemic, individual and collective public health measures were undertaken to control the spread of the virus. Their effectiveness relies on people's abilities to understand and adopt the correct behaviors. This study aims to evaluate the role of Health Literacy (HL) in influencing the adherence to Covid-19 preventive measures and risk perception of a sample of workers employed in various activities involving close contact with the population in the province of Prato (Tuscany, Italy) in the second pandemic wave (November-December 2020). A cross-sectional survey was conducted on a sample of public workers (e.g., teachers, educators, assistants/aides, other health personnel). Data on knowledge, attitudes and practices towards (KAP) Covid-19 preventive measures and risk perception were collected. HL was measured with the HLS-EU-Q6 tool. Spearman correlation analysis was used to assess the correlation between HL and KAP and Covid-19 risk perception. Multivariate linear regression analyses were performed to evaluate the role of HL in predicting KAP and Covid-19 risk perception, adjusted for sex, age, comorbidity, educational level, country of birth. A total of 402 people participated in this study; 47.8% had a problematic HL level. The HL level was correlated with KAP and practices towards Covid-19 prevention measures; no significant associations were found with Covid-19 risk perception. In multivariate models, HL significantly and positively predicted a higher level of knowledge of Covid-19 preventive measures (B = 0.413 for problematic HL; B = 0.542 for sufficient HL). Confirming a previous study conducted in Prato in the first pandemic wave, HL did not predict adherence to Covid-19 infection control measures, probably due to fear of the disease and attention towards prevention behaviors being still higher in the second pandemic wave.

Key messages:

- HL skills are linked to understanding of public health measures.
- HL skills should be improved to favor the adherence to correct behaviors.

Abstract citation ID: ckac131.363
Living Lab: Design a digital health intervention for healthy diet of ethnic minority adolescents

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Eating habits cultivated during adolescence continue through adulthood, and can widen the health gap in adulthood for vulnerable ethnic minority adolescents (EMA). Living Lab is a methodological approach through which stakeholders co-create innovations as citizen scientists in real-life settings. This study aimed to design a digital health intervention (DHI) for enhancing the heathy diet of EMA using the Living Lab approach. The DHI's content and strategies were derived through literature reviews and focus group interviews. The Living Lab was structured by using 5 principles: real-life setting, user engagement, multi-stakeholder participation, multi-method, and co-creation. It has four activity phases of discovering problems, exploring solutions, solving problems, and disseminating solutions putting more emphasis on the use of digital device and multiple stakeholders such as peers and teachers in co-ideation. DHI participants were grouped into equal proportions of EMA and Korean-ethnic peers. The DHI operates for 2 hours once a week for 4 weeks, with orientation and wrap-up sessions before and after the DHI. Each activity of the co-working process is designed by applying behavior change techniques such as prompts/cues, framing/reframing, and credible sources in a digital educational environment: creating content using Google Jamboard and Padlet, and working on the metaverse platform ZEP. The responses and feedback from the participants are received through an online reflection diary weekly. Usability and acceptability of digital technology are assessed by an online survey on completion of the DHI. The efficacy of DHI is assessed through the change in dietary behavior and food literacy. This study was designed to enable EMA recognize the harmful effects of an unhealthy diet and co-create solutions through dynamic activities in a digital environment. Further, it may serve to change the cultural sensitivity of native peers that influence the health choices of EMA.

Key messages:

- Digital-based intervention would be an effective way for vulnerable ethnic minority adolescents to engage in healthy diet.
- The Living Lab approach was used as an essential strategy to develop a digital health intervention to improve the healthy diet of ethnic minority adolescents.

Abstract citation ID: ckac131.364
Appraising the quality of guidelines for caries management using AGREE II: a systematic review

Anna Odone

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Background:

Caries is one among the most prevalent dental disease and its prevention and treatment are crucial from both dental care and public health perspectives. Yet, caries' management greatly varies across contexts according to the availability of specific Clinical Practice Guidelines (CPGs). Here, we present the results of a systematic review aimed at the appraisal of the current available CPGs on caries prevention and treatment.

Methods:

A literature search was performed in PubMed, EMBASE, SCOPUS, and seven relevant guidelines databases up to March 2022, exploring CPGs published from 2012. The literature review was conducted in accordance with PRISMA guidelines. The Appraisal of Guidelines, Research and Evaluation (AGREE) II checklist was used to measure the methodological rigour and quality of the retrieved CPGs.

Results:

The systematic search resulted in a total of 1403 records, and 21 CPGs met the inclusion criteria. Overall, these considered different aspects of caries prevention and treatment. Regarding the appraisal through the AGREE II tool, the overall median score was 60.2% and 11 out of 21 CPGs were classified as ''Recommended'', while the others as ''Recommended with modification''. The domain analysis showed that the highest median scores were reached for Scope and Purpose (88.9%), Clarity of Presentation (86.9%), and Rigor of Development (67.8%), while the lowest were seen for Stakeholder Involvement (63.3%), Applicability (17.5%), and Editorial Independence (50%).

Conclusions:

This systematic review showed that the rigor of CPGs for caries prevention and treatment remained suboptimal according to AGREE II evaluation, and highlighted that more efforts are needed to improve their quality. The AGREE II checklist is a comprehensive and easy-to-use tool for the development of CPGs, and its use ensures that evidence-based approaches are incorporated into consistent recommendations for the translation of evidence into practice.

Key messages:

- The rigor of CPGs for caries prevention and treatment is suboptimal according to AGREE II evaluation, however, more efforts are needed to improve their quality.
- The AGREE II checklist is a comprehensive and easy-to-use tool for the development of CPGs.

Abstract citation ID: ckac131.365
Exploring behavior change motivation in an outpatient sample with more than one health risk behavior

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Background:

Evidence from western countries shows that the majority of adults have two or more health risk behaviors. The motivation to engage in a health behavior change (HBC) is the most proximal determinant of behavior change in the future. The aim of this study was to investigate the intention to increase physical activity and to quit smoking in an outpatient sample that show both health risk behaviors.

Methods:

We used baseline data ($n = 109$) of an intervention study (Germany, 2016-2019) on physical activity and smoking cessation. Eligibility criteria were: aged 40 to 65 years, systolic blood pressure ≥ 130 mmHg, no history of cardiovascular event or vascular intervention. We collected information on HBC motivation, sex, age, and self-rated health (SRH) and identified 32 physically inactive smokers. Descriptive analyses and Fisher's exact test were used to explore the proportion of those motivated for HBC and differences according to sex, age (45-55 vs. 56-65 years), and SRH (excellent-good vs. poor-very poor).

Results:

Participants (50% female) were on average 52.6 years old and 78% had school education ≤10 years. Overall, 44% intended to change physical inactivity only, 34% intended to change both behaviors, 13% wanted to change neither, and 9% intended to change smoking only. There was no difference in HBC motivation according to sex and age. But, there was a significant difference according to SRH (Fisher's exact = 0.048); e.g., there were more individuals motivated to change both behaviors among those with lower SRH (64%) compared to those with higher SRH (19%).

Conclusions:

In this baseline sample of an intervention study, the majority of participants intended to change physical inactivity but not smoking. Among those with lower SRH, almost two-thirds intended to change both behaviors. Thus, individuals with more than one health risk behavior differ in their HBC motivation. Lower SRH may offer a window of opportunity to promote HBC interventions.

Key messages:

- Physically inactive smokers with a systolic blood pressure ≥130 mmHg differ in their motivation to change these behaviors.
- Lower self-rated health may offer a window of opportunity to promote interventions to change health behavior.

Abstract citation ID: ckac131.366
Assessing the impact of the COVID-19 infodemic on older people in the region of Crete

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The COVID-19 pandemic has been accompanied by an unprecedented infodemic, a key global public health challenge. Older people are more susceptible to COVID-19 and to misinformation, with WHO indicating the need for research on how people process and manage information in physical and digital environments to better understand how this phenomenon affects individuals. A qualitative study was developed in to explore the infodemic impact on elderly groups (eligible beneficiaries, aged 60-75 y, users of social services in the Heraklion Regional Unit, Crete Greece). Preliminary results indicate low trust levels for information delivered online and through media. Physicians remain the most trusted and preferred source of information, yet participants questioned their expertise level given the various issues emerging during the pandemic. Most of them report poor quality, incomplete information and point out the misleading role of media pluralism. Key topics of concern include the origin of SARS-CoV-2 and the safety and effectiveness of COVID-19 vaccines. The majority strongly believes that coronavirus is of lab origin, as they have read on the Internet. They are also susceptible to fake news and myths surrounding COVID-19 vaccines. Many of them also suffer from "pandemic fatigue", i.e., information overload, preferring not to further follow COVID-19 updates. Fear about their vulnerability was the major factor mentioned regarding scientific evidence, stating they prefer information to be conveyed clearly and in an understandable manner. Some exchange information with relatives and friends whilst others prefer not to discuss COVID-19, unless they consider the other person knows more than they do. Nevertheless, they all believe they make the best choices on how to protect their health, whilst having mixed feelings about the manner and content of communication received both in physical and digital environments.

Key messages:

- COVID-19 care for the elderly should encompass infodemic management elements, incl. information presented using simple terms, from updated and regularly verified sources, ideally in printed form.
- Health and social care professionals' training should include media discourse, compassionate care, and motivational communication techniques rather than directional speeches of coercion and fear.

Abstract citation ID: ckac131.367
What influences the intention to get vaccinated against COVID-19 in the Western Balkans?

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Background:

Although effective vaccines against COVID-19 have been developed with the unprecedented speed, insufficient vaccine uptake suggests that many people are unwilling to get vaccinated worldwide. The aim of this study was to assess factors influencing intention to get vaccinated against COVID-19 in five Western Balkans countries.

Methods:

Total of 700 unvaccinated respondents aged 18-75 participated in the study. Intention was assessed by a single item gauging the likelihood of getting vaccinated on a 5-points Likert scale. Multiple linear regression was used to determine whether socio-demographics (gender, age, religiousness, educational level, employment status, presence of chronic diseases) and attitudes towards vaccination predict intention to get vaccinated.

Results:

Proportion of respondents willing to get vaccinated against COVID-19 ranged from 22.6% in Serbia to 40.4% in Montenegro. In Bosnia and Herzegovina and Albania stronger intention to get vaccinated in the future was associated with confidence in vaccine safety ($\beta = .24$, $p<.01$ and $\beta = .20$, $p<.01$ respectively) and efficacy ($\beta = .28$, $p<.01$ and $\beta = .26$, $p<.001$), higher feeling of danger of the disease ($\beta = .21$, $p<.05$ and $\beta = .17$, $p<.05$) and higher social responsibility ($\beta = .35$, $p<.001$ and $\beta = .18$, $p<.01$). Confidence in vaccine efficacy ($\beta = .34$, $p<.001$) and social responsibility ($\beta = .24$, $p<.01$), accompanied with higher sense of susceptibility to the disease ($\beta = .13$, $p<.05$), were significant predictors of intention in Serbia. In North Macedonia willingness to get the vaccine was significantly associated only with social responsibility ($\beta = .09$, $p<.001$), while in Montenegro age was the single predictor ($\beta = -.32$, $p<.001$);

Conclusions:

Results of this study suggest that vaccination campaigns should focus on specific set of socio-psychological factors in each country, enhancing confidence in vaccine efficacy and appealing to collective responsibility as most prevalent determinants of vaccination intention in Western Balkans.

Key messages:

- Specific set of socio-psychological factors influenced vaccination intention in each country.

- Most prevalent factors influencing intention to get vaccinated against COVID-19 were confidence in vaccine efficacy and social responsibility.

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Addressing health literacy to reduce inequalities among migrants: which profiles need our attention?

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Health literacy, the ability to access, understand, appraise, remember and use health information and services, has great potential to reduce inequalities in access to and outcomes of care. People may have different patterns of health literacy needs and strengths. Yet, the design of interventions is frequently not responsive to the specificities of different segments of the population, including migrant groups. We aimed to identify profiles of migrants to inform the co-design of interventions targeting people at risk of poor outcomes. A cross-sectional survey was conducted with 1126 adult migrants living in Portugal. Data were collected using the 9-dimension HLQ (Health Literacy Questionnaire), and a sociodemographic questionnaire. A cluster analysis of data was performed. Semi-structured interviews were conducted with 15 migrants, stratified by the clusters. The optimal cluster solution yielded 16 profiles revealing diversity in combinations of strengths and needs across the HLQ domains. While 29.8% of migrants scored moderate to high on all 9 domains (profiles 2, 6, 8, 16), 63.4% of participants struggled with 1 or several aspects of health literacy, namely 'Feeling understood and supported by healthcare providers'. Notably, 36.8% (6 profiles) exhibited difficulty across most of health literacy domains. The interviews provided a tangible description of the health literacy needs and resources with five main themes (access, understand, appraise, retrieve and use). Regarding 'access', migrants expressed different preferred learning styles and needed to access different sorts of information at distinct times. The 'use' of information was rarely a one-time decision but a decision that people needed to make repeatedly. Health literacy is a highly diverse concept where subgroups exhibited diverse patterns. The cluster analysis can be used to inform the co-design, prioritisation and implementation of locally designed, fit-for-purpose solutions to improve health literacy.

Key messages:

- Health literacy profiles can inform interventions to mitigate health inequalities among vulnerable migrant groups.
- The identification of distinct profiles can contribute to minimise the disconnect between what people/communities need and what is developed to improve health and equity.

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A unified qualitative-quantitative method to evaluate the impact of being a near-peer health educator

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Grasping the complexity of public health interventions is of increasing interest. Program evaluation may involve previously known and unknown variables; the former are best explored with quantitative, the latter with qualitative methods. As part of the impact evaluation of the Balassagyarmat Health Education Program (BEP), a near-peer education intervention targeting adolescents from a disadvantaged region of Hungary, we aimed to understand the complex effects of being an educator on medical students' knowledge about the biopsychosocial model of health. Thus, we developed a unified method that enables us to conduct an exploratory study on the effects of our intervention, then quantify and model that qualitative data. We started the method design with literature review and consultations with methodological and public health experts. We then refined the research questions based on a focus-group discussion held with 6 peer educators. After a set of pilot-interviews, we chose simulation interviewing as our knowledge elicitation procedure, then finalized the protocol with the help of additional piloting. In this unified method, simulation interviews are administered to peer educators and aligned controls, and cognitive task analysis is performed with the help of visual stimuli. Codes are developed inductively and, along with segmentation procedures, applied deductively to the entire dataset via the Reproducible Open Coding Kit. Resulting quantified narratives are further processed with Epistemic Network Analysis. The relative frequency of code co-occurrence in each segment is modelled with networks enabling the qualitative and statistical comparison of data between subsamples. Building on the benefits of qualitative and quantitative approaches, this method offers a complex evaluation of the impact of health education interventions. By strengthening the methods of program evaluation we aim to facilitate the development of more effective interventions.

Key messages:

- Qualitative and quantitative methods can be unified in program evaluation to promote a deeper understanding of the complexity in public health interventions.
- Cognitive task analysis as a knowledge elicitation procedure can be used for the impact evaluation of health education programs.

Abstract citation ID: ckac131.370
Coronavirus-related health literacy and knowledge among German fourth-graders

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Background:

Little is known about how easy it is for children to deal with coronavirus-related information, or to what degree children have accurate knowledge about the virus. However, both might influence children's preventive behaviors. Thus, this study explores children's coronavirus-related health literacy (CHL) and related knowledge.

Methods:

In a classroom survey among fourth graders' in North-Rhine Westphalia, Germany (07/21 - 11/21), 4 items were used to assess CHL. 5 items were used to measure coronavirus knowledge, while also assessing the frequency of speaking about the coronavirus with parents. Sociodemographic characteristics were recorded, including family affluence (FAS). Bivariate correlations are reported.

Results:
n = 364 students are included (49.5% female), the mean age is 9.5 years (SD = .69). 47.5% of the sample find it rather difficult or very difficult to find information about the coronavirus, while this share is 36.1% for understanding, and 39.1% for appraising coronavirus information. 22.4% say it's difficult to not infect themselves or others (applying information). Dealing with coronavirus-related information is more difficult for children who less frequently talk to their parents about the virus (ρ = 0.166, p<.01) and have lower family affluence (r = .119, p<.05). While certain misbeliefs are rare (''the coronavirus doesn't exist''; 3.9% agreement; ''Children can't get infected''; 3.0%), the belief that eating healthy prevents an infection (15.6%), that all infected people have coughs and fever (62.8%), and that a face mask doesn't help prevent an infection (44.3%) are more prevalent. Children who have a home language other than German state more inaccurate knowledge (p<.05).

Conclusions:
This study suggests that children's needs for accessible and understandable information on the coronavirus were met only party. Also, certain misbeliefs are prevalent which might undermine adherence to preventive measures. More research is needed to verify these findings.

Key messages:
- In our sample, children's needs for accessible and understandable information on the coronavirus were met only party.
- Misbeliefs about the coronavirus are prevalent which might undermine preventive measures.

Abstract citation ID: ckac131.371
A study on doctors' health status living in Turkey

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Background:
Health is a human right for every individual independent from his/her occupation. If provided, physicians' wellbeing might also have a positive influence on the patient care and the population health. In this paper, health (or risky) behaviors, and health status of a group of doctors in Turkey were presented based on the results of a descriptive study.

Methods:
Study population was accessed via google form created by the Turkish Medical Association. 626 physicians participated in the study. Perception of health status, nutritional status, tobacco use, and physical activity status of the participants were recorded. Doctors were also asked about their chronic disease existence. Ethical approval and institutional permission were obtained before the study. Study was conducted between 2020 and 2021. Logistic regression analysis was performed for further analysis.

Results:
Of the 626 physicians participating in the study, 374 (59.7%) were male and 252 (40.3%) were female. Mean age of the physicians was 45.3±10.7. 58.3% (n = 359) of the physicians perceive themselves as healthy and very healthy. 57.8% (n = 362) of the physicians stated their eating habits as healthy. Majority of the physicians (n = 516, 82.4%) were not doing enough physical activity as recommended by the World Health Organization. 28.0% of the physicians (n = 175) used tobacco products. 48.1% of the physicians (n = 301) had a chronic disease. The three most frequently mentioned chronic diseases have been cardiovascular diseases (n = 141; 46.8%), diabetes mellitus (n = 67; 22.2%) and mental diseases (n = 42; 13.9%). Young age, positive perception of health, not using tobacco decreased the chronic disease risk in the logistic regression model.

Conclusions:
Physicians were not good in performing healthy life behaviors and almost one out of two doctors had a chronic disease. Our results emphasized a strong need to enhance a program for the doctors to integrate healthy life skills into their life practices.

Key messages:
- Doctors have poor health which can also influence population health.
- Medical associations may lead to enhance healthy life practices among doctors.

DP Health workforce, practice and training

Abstract citation ID: ckac131.372
Improving the quality of medical records

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Background:
Medical record is an essential tool both in patients' diagnostic and therapeutic pathways and communication between different care providers. It also has an economic-administrative, medical-legal and epidemiological function. From an economic-administrative point of view, a medical record allows an evaluation and review of services to better manage the corporate health budget. In addition, it allows traceability and complete transparency of the health activities carried out. The study evaluates the formal quality of medical records compiled in an Italian private clinic before and after a training intervention.

Methods:
In June 2019, a retrospective study was carried out to assess a private clinic's quality of medical records. One month later, healthcare providers were trained on the appropriate compilation of medical records, whose pre-printed format was structurally improved. In March 2020, we verified the quality of medical records produced after that training intervention. Statistical analysis (Wilcoxon test) was carried out through Stata.

Results:
A total of 149 medical records were reviewed. Statistically significant improvements (p < 0,05), between before and after training intervention, were for overall readability (33.3% vs 74.7%), completeness of admission and discharge dates (33.3% vs 74.40%), for completeness of anamnesis (13.6% vs 63.9%), for completeness of therapeutic card (53% vs 85.5%), in the reduction of non-compliance corrections (22.7% vs 4.8%),

signature presence of physical examination (34.9% vs 71.1%) and for signature presence in the hospital discharge card (86.4% vs 96.4%).

Conclusions:

The results show that simple measures, such as staff training and restructuring of the format, are effective in improving the quality of medical records.

Key messages:

- Healthcare providers should perceive the proper completion of medical records as a common goal.
- Well-completed medical records contribute to better health care.

Abstract citation ID: ckac131.373
Training Needs and Quality of Public Health Inspectors in Greece during the COVID-19 pandemic

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Background:

Public Health Inspectors (PHI) task is to promote health, respond to emerging threats in Public Health and prevent and control of the communicable and environmental diseases. During the COVID-19 pandemic, PHI and other Healthcare Workers faced greater biological risks of infections and therefore personal protection was of great importance for their health and safety. Staff education and training is an important factor of disaster management capability and may help prevent and control pandemics. This study took place during the COVID-19 pandemic and aimed to investigate the training needs and training quality of Greek Public Health Inspectors.

Methods:

A nationwide cross-sectional study was conducted between March and June 2021 in Greece. An online survey was distributed to respondents by email through the National Public Health Inspectorate Administration. The survey included seven Likert scale items for assessing the training needs (health and safety of work, stress management, health services administration, crisis management in the health sector, natural disasters, personal protective equipment and protection against biological agents and protection from chemical agents) and two Likert scale items for assessing the training quality.

Results:

The response rate was 30.5 % (185/606 PHI). The 62.2% were females with a mean age of 49 years old (sd = 8.2) and a mean work experience of 15.9 years (sd = 8.5). Most participants (64.51%) reported high training needs on health and safety at work, stress management and personal protective equipment. Most participants (43.78%) also reported low training quality. Training needs were higher for women and in urban and semi-urban workplace environments.

Conclusions:

High training needs and low rate in training quality are important issues for PHI in all workplace environments. PHI need training in health and safety at work, stress management and personal protective equipment.

Key messages:

- High training needs and low rate in training quality are important issues for Public Health Inspectors in all workplace environments in Greece.
- Future training for Greek Public Health Inspectors should focus on health and safety at work, stress management and personal protective equipment.

Abstract citation ID: ckac131.374
Trends in emigration of Polish health professionals. Where are we heading?

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Background:

Migration of health professionals is one of the key challenges for many healthcare systems. In Poland this phenomenon is still under-researched. The aim of our study was to explore the estimated trends and directions of emigration among Polish health professionals.

Methods:

The research was based on the data analysis of specifying the number of people who applied for the certification of their professional qualifications (the right to practice a profession) at five national registers maintained by chambers of health professionals: 1) doctors and dentists, 2) nurses and midwives, 3) physiotherapists; 4) pharmacists and 5) laboratory diagnosticians. The gathered data reported information which allows for an approximate determination of how many professionals are considering a decision to migrate from Poland. Additionally exploration of data from the European Commission Regulated Profession Database in the EU Single Market was performed.

Results:

About 7-9% of Polish doctors and nurses have applied for certificates, which confirm their right to practice their profession in other European countries. The number of such certificates applied for by physiotherapists is also worrying. Emigration among pharmacists and laboratory diagnosticians is rather marginal. The biggest number of certificates, was issued to health professionals in the years 2004-2007, right after Poland joined the EU. In the period 2008-2015 the trend was not constant and it was related to the healthcare reform and changes in health professionals' remuneration. Since 2016 the number of health workers applying for the certificates is by to a certain extent falling. The main destination of Polish emigrants were and are: United Kingdom, Germany, Sweden, Spain, Ireland, and EFTA countries (Norway, Switzerland).

Conclusions:

Implementation of a mechanism for monitoring emigration is necessary, but systemic improvement of working conditions in Polish healthcare system is also needed.

Key messages:

- The emigration, especially of young generations of medical staff, causes significant problems for the Polish healthcare system.
- More in-depth research on migration of health professionals is necessary.

Abstract citation ID: ckac131.375
Factors associated with Finnish home care workers job satisfaction

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Background:

In Finland, home care is seen as a primary form of care for older people. However, rising numbers of clients with increasingly complex conditions have led to deteriorated working conditions and poor job satisfaction among home care staff. In this study, we examined if greater amount of direct care time, higher team autonomy, number of unique clients, and client's need for care are associated with job satisfaction.

Methods:

Data for the study was collected in October 2021. The amount of direct care and number of unique clients were obtained from a staff time measurement in home care units. The level of team autonomy was obtained from a survey sent to managers of participating organizations. Demographic information and a score for job satisfaction were retrieved from a survey for workers in the participating organizations. Client's need for care was based on Resident Assessment Instrument (RAI). Data was analyzed using multiple linear regression.

Results:

The number of respondents was 387, of which the majority were practical nurses 307 (79%). Higher team autonomy was associated with better job satisfaction, whereas higher number of unique clients and higher amount of direct care time were associated with poorer job satisfaction. The models were adjusted with clients' care needs, but these effects will be further examined.

Conclusions:

The results demonstrated that the workers are more satisfied if there is enough time to perform the work, they have adequate number of clients, and teams have autonomy over their work. This seems to be the case despite the level of clients' need for care, however this needs further analysis. By increasing job satisfaction, better retention of care workers and attraction of care work might be achieved.

Key messages:

- Higher team autonomy is associated with care worker's job satisfaction.
- Enhancing care continuity is important, therefore, when planning home care workers' workday, it is important to consider that the workers could work with clients they know.

Abstract citation ID: ckac131.376
Multiprofessional teamwork in Finnish health and social service centers, experiences of managers

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Background:

Health and social service centers are developed for the first contact points in Finland. Long waiting times, shortage of staff and lack of coordination have been major problems in primary care. As a solution, multiprofessional teams and better collaboration between professionals have been built. This study explores, how the teams work and what challenges they have.

Methods:

The study is based on 16 interviews (25 managers) in 5 health and social services centers. County provided specialized care in the whole area as well as primary services in two centers, one center was provided by a municipality, and two by a private firm. The managers were asked about work organization, their experiences of the team model and about well-being of employees. The interviews were analyzed using content analysis.

Results:

The managers saw the team work as functioning rather well. They also highlighted effective digital services and task shifting. Easy consultation of GP' was important as nurses were the first contact for clients in phone. In this call, the client' case was tried to be handled as far as possible. The competences of new professionals, such as social workers or psychiatric nurses had high value for the team. But the service processes and team-building were in progress. Working in mutual facilities and easy consultation of professionals was seen important. In most organizations clients were separated to different teams based on their service needs (acute or chronic conditions), or earlier clientele. As a result, some teams gained a more burdensome clientele, which increased stress.

Conclusions:

Multiprofessional work can streamline and improve the treatment process, but this requires more information which ways to collaborate work best for the clients and professionals.

Key messages:

- Multiprofessional team work, task shifting and digital services may increase efficiency and well-being of workers at health and social centers.
- Easy consultation of GP's is required for task shifting.

Abstract citation ID: ckac131.377
Longitudinal analysis of Israeli nurses' perceptions, trust & emotions during the COVID-19 pandemic

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Background:

The nursing sector is the largest human resource in the healthcare system providing direct patient care. The Covid-19 pandemic has forced nursing teams into a sustained state of emergency, and with it, much uncertainty and risk taking.

Aims:

Examining the emotions, risk and threat perceptions, trust in the healthcare system and compliance with Ministry of Health (MOH) regulations among nurses at two points in time during the COVID-19 pandemic in Israel.

Methods:

Research questionnaires were distributed to nurses at the height of the pandemic's first wave (March-May 2020). Among the respondents, 140 agreed to continue with the follow-up study. During the pandemic's third wave (January 2021), the research questionnaire was re-sent to these respondents. Of these, 80 filled-in the second questionnaire.

Findings:

Naturally, there was a higher level of experience among the nursing staffs in dealing with the virus in the second as compared to the first period in time. During the first wave, approximately a fifth of the participants (21%) reported that they had cared for patients who had been confirmed as having COVID-19, while during the third wave, most of the participants (66%) reported caring for people who had been confirmed as having contracted the virus. The findings demonstrate significantly lower levels of compliance with regulations and risk perception, and a significantly higher level of emotions in the third wave as compared to the first. However, there was no change in the level of trust in the healthcare system or in the pandemic-related threat perception.

Conclusions:

The findings provide us with some information regarding the process the nursing staffs have undergone (and are still undergoing) in dealing with the pandemic, and may point at a 'pandemic fatigue' amongst them. This concept relates to progressively lower regulation compliance levels appearing over time, affected by the target population's emotions, experiences and perceptions.

Key messages:

- It is important to assist the nurses' emotional regulation with the help of professionals in the organization, form colleagues' support groups and ensure management recognition of the situation.

- Resilience-raising steps should be taken, for example by ensuring rest times and sufficient medical and protective equipment.

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Developing and implementing a methodology for forecasting of medical doctors in Slovenia

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Issue/problem:
Modelling and forecasting the number of health professionals in Slovenia, in particular medical doctors, and nurses, has been a serious challenge for health policy for decades. No serious methodology has ever been implemented to support this process.

Description of the problem:
Methodology was developed with the support of the EU SRSS (Structural Reform Support Service) mechanism and further adapted according to the specifics of the Slovenian health system and of the needs of the MoH. The project took two years and was developed jointly with the relevant stakeholders - MoH, National Health Insurance, Medical and Nursing Chambers, Association of Public providers of health care. It was building on the experiences of Austria and Germany. Methodology included the supply and demand side of retrospective data and forecasting data on the population demographic structure as well as the current numbers of doctors and nurses in training.

Results:
We have developed a model for forecasting the needs for medical specialists and we tested it on the example of paediatrics, gynaecology, orthopaedics, general surgery, neurology, infectious diseases, and urology. We calculated the forecasted needed numbers for the year 2035 for each of the specialties, where we also indicated the increases and decreases in demand expected based on the demographic, epidemiological and service use projections.

Lessons:
Most importantly, the report was endorsed by all the participating stakeholders in the process. The MoH adopted the methodology as a part of the planning mechanism for prospective and current needs for medical specialists in training. Some flaws in the processes identified together with the inadequacies in the updating of data on health professionals led to the MoH's recommendations to providers on regularly updating their data in the national health providers' registry.

Key messages:
- Methodology developed in the project was implemented as a part of the requirement for the planning of medical specialists.
- Processes enacted in the project contributed to the improvements in the national health providers registry.

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Transformation-oriented leadership in German hospitals: beneficial attributes and competencies

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Introduction:
Due to a shortage of health professionals and economic pressure, many German hospitals are required to transform the clinical work environment to increase job satisfaction, but also to attract and retain health professionals. Leadership is a key factor for the successful implementation of organization-wide change. The aim of this study was to identify the attributes and competencies among leaders that are beneficial for implementing and managing hospital-wide transformations.

Methods:
A qualitative study design. In 2020, 18 face-to-face, semi-structured interviews were conducted with chief nursing officers, ward managers, nurses and physicians in five German hospitals which have started implementing a hospital-wide transformation (e.g. Magnet® or Pathway®). Interviews were recorded and transcribed verbatim. Data were analyzed in Atlas.ti using the content analysis method according to Mayring.

Results:
Results show five beneficial leadership elements to instigate and steer hospital-wide transformation: (1) Charismatic leaders are role models and idealists with well-communicated visions that are grounded in clinical practice and reflect the clinical practitioners. (2) Mentally strong leaders have courage, stamina, and are resilient. (3) Empowering leaders are highly supportive and increase the intrinsic motivation of employees. (4) Imparting interprofessional appreciation refers to leaders who cultivate a respectful relationship with persons from other professional groups and recognize their daily performance. (5) Agile leaders are well and quickly accessible for employees and respond situationally to changing demands in everyday work.

Conclusions:
Interviewees described characteristics of hospital leaders as success factors for establishing and maintaining continuous change processes. Charismatic and supportive leaders are critical to transform the hospitals' culture and values. In addition, equitable interprofessional collaboration is of utmost importance.

Key messages:
- Charismatic, agile, empowering leaders can have a positive impact on system-wide change processes.
- The successful transformation of hospitals' work environment needs interprofessional appreciation and the mutual acknowledgement of competences.

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Migration from Latin America to Italy and EU: the issue of health professionals

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Introduction:
The estimated shortage of more than 15 million health and social care professionals, including over 6 million nurses, together with the significant phenomenon of international migration of such professionals, emerged, during COVID-19, with even more evidence. During the pandemic the danger of a collapse of health systems in many areas due to a shortage of staff was manifest. This leads, among other reasons for several professionals to migrate from South America to Italy and Europe.

Methods:
an integrative review analysis (2011-2021), of trend in terms of legislation and policy documents were conducted using health and social database and gray literature. 34 different documents were included in this review.

Results:
Several initiatives have been developed to establish international and/or bilateral obligations among countries in terms; however, this showed to be insufficient. There is confusion in terms of the necessity of harmonizing rules, nursing curricula,

monitor systems, and innovative rules for recognition. With covid-19 and the increase in shortage of health professionals, a number of countries decide to reduce the general criteria of recognition.

Conclusions:

It is time to develop specific actions aimed at setting up a passport for public health and health care professionals which allows guaranteeing prior certification and accreditation of skills by independent agencies. There is the need to set up a joint effort/actions among different stakeholders such as Government, Higher Education institutions, International Labor health market actors, and NGOs in the field of migration, labor, and training of public health and health care professionals to better meet health needs worldwide

Key messages:

- it is necessary balancing the rights of individuals to migrate with the potential loss of essential health care services in source countries.
- migration and shortage of nurses is a serious ethical issues.

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The effect of the SARS-CoV-2 pandemic in the compliance of hand hygiene in ICU in a tertiary hospital

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Background:

Hand hygiene (HH) is one of the main preventive methods for healthcare-associated infections. Our aim is to compare the level of HH compliance in 2021, SARS-CoV-2 pandemic period, with the previous 2019 period.

Methods:

Descriptive cross-sectional study of direct observation on compliance of HH in adult intensive care unit (AICU) and neonatal intensive care unit (NICU) in a third-level hospital in Madrid during the years 2019 and 2021. Trained healthcare workers observed and recorded hand hygiene opportunities (HHO) among staff (nurse, nurses' aide, physicians and orderly) using the World Health Organization's "My Five Moments for Hand Hygiene" tool. All observations of professional that attended patients in SARS-CoV-2 isolation units were excluded.

Results:

Overall, there was a total of 1199 HHO, 961 in AICU (2019:466; 2021:495) and 238 in NICU (2019:122; 2021:116). HH compliance in AICU improved from 57.5% in 2019 to 65.9% in 2021 ($p = 0.008$) and remained unchanged in NICU (2019:90.2% vs 2021:88.8%; $p = 0.730$). In AICU all professional categories, except nurse's aide, improved HH compliance being statistically significant in physicians (2019:33.8% vs 2021:50.0%; $p = 0.009$). In relation to the 5 moments, an increase in HH compliance was observed in: before and after touching a patient/after touching patient surroundings, being only statistically significant in moment after touching a patient (2019:69.4% vs 2021:83.7%; $p = 0.001$). In NICU there were no significant changes between the two periods regarding to the professional category or the five moments of HH. In NICU there were no significant changes between the two periods regarding to the professional category or the five moments of HH.

Conclusions:

The increase in compliance of HH within the adult ICUs demonstrates this adaptation, stating a behavioural change in the habits of professionals. This increase was no observed in the NICU since their compliance was already extremely high.

Key messages:

- There has been an increase in HH compliance in the AICU.
- The HH method has varied, becoming COVID-19 specific.

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Syllabi collection on diversity and intersectionality in public health: reflecting on the development

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Background:

Highlighting the intersectionalities between different markers of diversity and health inequities encourages the reconsideration of normativities in public health (PH). We developed an open access collection of syllabi on the relevance of intersectionality and diversity in PH together with the Association of Schools of Public Health in the European Region (ASPHER).

Objectives:

We developed the syllabi in a participatory, iterative process guided by transformative teaching pedagogy. We reflect on this process and how this can inform the enhancement of the syllabi themselves, as well as future curriculum development.

Results:

We recruited a core group of 9 PH researchers, teachers and professionals from all career levels from participants of introductory session presentations in different settings (e.g., 14th EPHC, ASPHER Retreat). The core group met once a month for one year online, and each meeting took the form of co-working sessions in breakout rooms to develop the syllabi based on interest and expertise. We designed a qualitative online survey to evaluate and ensure the scientific rigor and pedagogical value of the syllabi. We invited critical and constructive input from ASPHER member school professionals with expertise in intersectionality, diversity or curriculum development in PH in terms of content and pedagogy.

Conclusions:

Drawing from the expertise of the PH community we combined diverse professional and cultural backgrounds, experiences from different career levels and PH education systems, as well as specialisation in the PH field. The transformative pedagogical approach was considered particularly valuable in strengthening competences such as reflexive strategies and self-, social- and global awareness which are key to teaching on diversity and intersectionality issues. The peer-review structure supports the uptake in PH education and a sustainable implementation. The collection will also allow PH faculty to diversify their pedagogical approaches.

Key messages:

- Inclusion of health inequities, diversity and social injustice issues is crucial in public health curricula, since an intersectional perspective is increasingly acknowledged in public health research.
- The syllabi collection will equip public health teachers of all career levels to develop their own course material on social identities and their significance for public health.

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Evidence-based development of new qualification models for public health practice and science

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The Public Health Service (PHS) needs a sufficient and well-trained workforce to fulfill core public health activities. Given the multitude of complex challenges, from often short-term crisis management to long-term health promotion, a better integration of science and practice in the PHS is essential. In Germany, there is a lack of systematically established cooperations and integrated training concepts. However, both are essential to ensure continuous knowledge transfer between science and practice. In the EvidenzÖGD study, representatives from practice, teaching and science jointly develop and pilot new qualification models to qualify public health professionals for work at the interface of practice and science. Based on a systematic analysis of existing collaborations and qualification models, 23 expert interviews were conducted to identify qualification approaches that will enable future public health professionals to work at the interface between science and practice. In a stakeholder workshop planned for July 2022, a multistage decision-making process based on strategic orientation mapping will be conducted to prioritize the identified approaches and generate ideas for new qualification models. In total 17 papers were analyzed and inductively coded according to three main categories. In addition to (1) context-related aspects, such as credentialing, recruitment strategies and resources, also (2) content-related aspects, such as training forms and didactical concepts were extracted. Furthermore, criteria relevant for the further development and continuation of the models (3) could be identified. By strengthening the scientific nature of practice in PHS and anchoring PHS-relevant topics in academia, the EvidenzÖGD project contributes to a sustainable strengthening of evidence-informed approaches in PHS practice. The evidence-informed, participatory development of a tailored qualification model is intended to promote the pilot of the model, which is due in 2023.

Key messages:

- Integrated qualification models support the strengthening of evidence-based approaches in the public health service (ÖGD) and promote the integration of ÖGD-relevant issues in science.
- Participatory approaches with explicit consideration of the perspective of young health professionals ensures that new qualification approaches meet the needs and requirements of future generations.

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Determination of Admission Criteria for Global Public Health Master at the University of Georgia

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Background:

Recent events in the world, wars, pandemics, have once again raised the issue of the need for competent human resources in global public health (GPH). In Georgia, there are master's degree programs in public health where global health is mostly offered as an elective or core course of the curriculum. University of Georgia (UG) is involved in the ERASMUS + project in GPH (BACE). UG initiated to create new GPH Master Program, which will be response towards local, regional and international challenges and demand.

Objective:

Main objective of developing GPH program was to address and meet national and international global health education needs and challenges. The aim of the study was to identify evidence-based prerequisites for the MPH in GPH (UG). We conducting document review based on the GPH competency model (GPHCM) and evaluated: 1) GPH & MPH programs of the top 20 world university ranking (THE/2022); 2) CUGH associated programs; 3) Georgian MPH programs; 4) Georgian education documents (such as Georgian National Qualifications Framework (GNQF)); 5) Main directions of career development in global health. In addition, interviews with national experts were conducted (in education, employment, program leaders) using the Delph method.

Results:

Study found that depending on the scope and content of the program, prerequisites for obtaining MPH in GPH varies. In addition to English competence and a high GPA, working or research experience or interviews or additional exams or other are required. In Georgia, there is no adopted GPHCM, but GNQF allows the establishment of MPH in GPH. UG new Master program (120 ECTS) will include 99 ECTS core (including research practicum & thesis) and 21 ECTS elective courses based on 6 domains of GPHCM. The program will mostly focus on population health management at a global level.

Conclusions:

Study findings suggest any undergraduates with appropriate conditions could be eligible for admission to the UG (MPH in GPH).

Key messages:

- UG admission prerequisites for Health Science undergraduates: National entrance exam, English proficiency B2, working experience and motivation letter.
- UG additionally admission prerequisites for Health Science undergraduates: basic knowledge epidemiology and medical terminology (if credits available or test).

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Towards collaborative action: A project on interprofessional stroke care in the Covid-19 pandemic

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Background:

Stroke is one of the leading causes of disability in adulthood. Cooperatively organised stroke care requires a high degree of interprofessional competence of junior professionals.

Objectives:

The project aim was to develop interprofessional competences for stroke care, to identify gaps in care as well as approaches to innovation during the pandemic through joint research. The focus was on person-centred care, communication and collaboration, roles and responsibilities, including stroke-navigators. German Bachelor students of occupational therapy, physiotherapy and speech therapy of the 7th semester (n = 22) were accompanied online in 60 teaching units in 2020/2021. The seminars consisted of (a) theoretical introduction to interprofessional stroke care (b) case-based collaboration with problem-based learning (c) applied health services research. The evaluation was based on a central questionnaire and written reflections from all students.

Results:
The following themes were identified and investigated in 5 interprofessional groups: (1) Impact of the Covid-19 pandemic on the acute care and rehabilitation of stroke patients, (2) International comparison of interprofessional stroke care based on guidelines to improve current practice, (3) Interprofessional diagnostics in stroke care, (4) Interprofessional patient-centered goal setting in outpatient stroke care, (5) Agreements of actors involved in stroke treatment to best serve the needs of the patient. The response rate to the centralised evaluation was low (14%). The project was rated good to very good in terms of planning and presentation, relevance, and interaction with students.

Conclusions:
The students reported central aspects for interprofessional learning: The reflections predominantly described growth in professional competences, in skills for cooperation and problem solving, which can be transferred to professional life. The main point of criticism was the necessity of digital teaching in the pandemic.

Key messages:

- Empowering interprofessional cooperation through a joint project of different Bachelor programmes helps to strengthen the students' professional identity and shared responsibility for stroke care.
- Online teaching can be a valuable facilitator of learning, but should not completely replace face-to-face teaching for stroke care.

DQ Infectious diseases, preparedness and vaccines

Abstract citation ID: ckac131.386
Time trends in Surgical Site Infection rates in a Tunisian university hospital

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Background:
Surgical site infections (SSIs) are the most common hospital-acquired infections (HAIs) in low- and middle-income countries. Many reports have shown that surveillance and management of factors associated with SSI decreased rates and improved overall outcomes.This study aimed to appraise the prevalence trend and risk factirs of SSIs during 10-year period (2012 - 2021) in a Tunisian university hospital.

Methods:
The SSI surveillance module is based on the National Healthcare Safety Network (NHSN), Centers for Disease Control and Prevention (CDC). For the current study, data collected over ten years through point prevalence surveys were analyzed. Univariate and multivariate logistic analysis were used to identify SSI risk factors.

Results:
Overall, 2957 patients were observed; the mean age was 48.4 ± 23.5 years and 57.2% were male. We identified 289 infected patients (9.8%) and 319 HAIs (10.8%). SSIs were found in 21.6% of cases.The prevalence of SSI decreased from 27.9% in 2012 to 21.6% in 2021. However, this decrease was not statistically significant. The majority of the positive cultures were Staphylococcus aureus (14.3%) followed by Escherichia Coli (11.1%) and Klebsiella pneumoniae (9.5%). Antimicrobial resistance was found in 17.5% of cases. Univariable analysis found that lenght of stay ($p < 10\text{-}3$), obesity ($p = 0.047$), the use of antibiotic treatment in 6 months ($p = 0.002$), and the use of central line ($p < 10\text{-}3$) were associated with SSI. Independent risk factors significantly associated with SSIs were length of stay (aOR = 8.6), the use of central line (aOR = 3), and the use of antibiotic treatment in 6 months (aOR = 2.2).

Conclusions:
With continuous surveillance, the prevalence of SSIs decreased. In Sahloul university hospital, there has been a strengthening of the application of hygiene standard precautions during the two last years, and more particularly the respect of hand hygiene, combined with continued inpatient antimicrobial stewardship programs.

Key messages:

- Active surveillance and management of factors associated with surgical site infection (SSI) decreased the incidence and improved overall outcomes.
- With continuous surveillance, the prevalence of SSIs decreased over the 10-year study period.

Abstract citation ID: ckac131.387
Antimicrobial stewardship programs in Italy: structure, process and outcome indicators, 2017-2019

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Background:
The increasing spread of antimicrobial resistance (AMR) represents a global public health threat, and a significant challenge for healthcare delivery. Antimicrobial stewardship (AMS) programs have proven to be effective and cost-effective strategies for optimizing antimicrobial use. We aimed to assess key aspects of AMS programs implemented in acute-care trusts of the region of Piedmont, and to evaluate changes in antimicrobial usage against a score we attributed to structural and functional elements of AMS programs.

Methods:
AMS programs operating in acute-care trusts in the region of Piedmont were investigated via a survey addressing program characteristics, divided into structure and process quality indicators. All public health trusts of the region of Piedmont were invited to complete the survey. The indicators were selected based on core elements identified by international guidelines and were reviewed by a multi-disciplinary panel. Antimicrobial usage was expressed as defined daily doses, DDD per 1000 patient-days. The annual means for the years 2017-2019 were considered, as well as the percentage change between 2017 and 2019. Variables were investigated in relation to structure and process scores using Spearman correlation. Analyses were performed using SPSS v. 27.0 (SPSS Inc., Armonk, NY).

Results:
In total, 25 AMS programs were surveyed. Higher scores were achieved for process rather than structure indicators. Improvements in total antimicrobial usage (-4%) were found between 2017 and 2019. A moderate correlation was found

between structure score and percentage change in antimicrobial usage (Spearman's ρ -0.603, p 0.006).

Conslusions:

This study highlighted important areas for improvement, such as accountability, microbiological laboratory quality management and feedback. Repeated measurements of structure, process and outcome indicators will be important to guide continuing quality improvement efforts.

Key messages:

- Results of this study support the effectiveness of AMS programs in reducing antimicrobial use.
- Important areas for improvement were identified. Improving the organization of AMS programs in particular should be prioritized.

Abstract citation ID: ckac131.388
Linear pathway analysis of European botulism poisoning response guidelines

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Background:

Botulism is a rare illness caused by Clostridium botulinum toxin with a naïve case fatality ratio of 40-50%. There is no coordinated collective worldwide reporting on cases and comparatively few recommendations on case management. This study examined 14 European botulism treatment guidelines.

Methods:

A ten-language search was conducted to examine European botulism guidelines. The guidelines were classified by differential diagnosis advice; expert advice access; mention of causalities; contract tracing; biological sampling method; and treatment access rapidity. The guidelines were linearly represented on a probability pathway. Quantified probabilities were entered into the algorithm. Probabilities for algorithmic delay or deviance were estimated or mathematically modeled against Hamiltonian, Ford- Fulkerson and Kruskal pathways. Case recognition was deemed proportional to the availability of information at point of care and produced a hazard function related to a Bayes' probability model.

Results:

Two guidelines did not display all diagnostic information in one place, and six European nations had incomplete descriptions of the chain of causality linking botulism cases: factorially reducing the Borel algorithmic likelihood of diagnosis through contact tracing and decreasing the affectable survival chance. Another limitation was specialist advice and treatment availability in a 48-hour window. Survival probability models to the quoted naïve minimum constraint of a 60% survival factor were depicted, with pharmacokinetic tendential to an exponential decay model. This highlighted the importance of well-constructed case management and logistical stockpiling methods.

Conclusions:

In botulism poisoning the 48-hour window is cited as crucial to patient survival chances, to this extent, the availability of clear diagnostic criteria including causation considerations, expert advice access and logistically considered therapeutic stockpiles could improve survival probability.

Key messages:

- An international standard for botulism guidance may further improve botulism case identification and survival rates.
- National botulism guidelines with direct contact method to an expert and with strategic positioning of therapeutic stockpiles may reduce time to treatment and improve survival chances.

Abstract citation ID: ckac131.389
Trust and its relations to vaccine beliefs: a latent class analysis on 140,000 individuals worldwide

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Background:

Research shows that vaccine-related beliefs (i.e., about efficacy, safety, purpose) may reflect a host of within-person and contextual factors yielding homogeneous subgroups of individuals. This study aims to characterize distinct subgroups of people and identify ideal targets for tailored public health interventions to increase vaccine adherence.

Methods:

Latent class analysis was used to derive subgroups based on unique response profiles using the 2019 Gallup survey of 140 countries (>140,000 individuals). We modeled a composite of vaccine beliefs as a distal outcome examining differences for the obtained classes, with and without covariates in the model.

Results:

A 5-class model fit best with classes distinguished primarily on whether individuals possessed or sought personal knowledge about science, medicine, and health, whether they trusted science, scientists and have confidence in the healthcare system. The lowest levels of vaccine beliefs were reported by a class not endorsing any of these indicators and the highest levels by a class endorsing all the indicators ($p < 0.001$). Age class showed a U-shaped relation with vaccine beliefs, while higher educational level ($p = 0.025$), higher subjective income ($p = 0.006$) and employment ($p < 0.001$) were related to higher vaccine beliefs. Country-level income was moderately related to class membership and vaccine beliefs were higher in lower-income countries ($p < 0.001$).

Conclusions:

Our findings suggest that more work is needed to improve trust in science and medical providers. Tailored interventions grounded in a community-based and empowering approach with the collaboration of multiple stakeholders seems to be needed to improve vaccination rates. This can only be achieved when individuals trust science, scientists and healthcare providers and accrue the necessary wisdom to make good healthcare decisions that affect not only themselves but their fellow citizens.

Key messages:

- Efforts to alter vaccine beliefs should touch on where people access information on science and health, the processes that build trust, and their belief whether science improves well-being.
- Public health interventions should focus on reassuring individuals that science and health workers are benevolent. An essential first step in the health worker-patient relations is building trust.

Abstract citation ID: ckac131.390
Control of Acinetobacter baumannii outbreak in intensive care units in Tunisia, 2022

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Introduction:

Acinetobacter baumannii is an emerging pathogen that is increasingly resistant to antibiotics and is mainly responsible for pneumopathy in fragile patients. This germ is frequently responsible for epidemics in hospitals. We aimed to describe the steps of the investigation of an outbreak of Acinetobacter baumannii affected our hospital, the measures implemented and the follow-up of the actions.

Methods:

Following alerts issued by the microbiology department concerning 5 swabs detecting Acinetobacter of the same strain and the same antibiotic resistance profile in 3 different departments of intensive-care units (ICU), a team of the prevention and healthcare security department went onsite for an investigation in the hospital.

Results:

We identified five cases with identical strains of multi-resistant Acinétobacter. The field visit allowed to identify some deficiencies in professional practices. All the patients were hospitalized in ICU (medical and surgical). The synoptic table showed that there was an overlap of hospitalization periods.A crisis cell was set up to validate, coordinate and implement control measures in accordance with CTINILS recommendations. Indeed, we proceeded to a technical isolation of the cases in their hospitalization sector, reinforced the basic hygiene and bio-cleaning measures and sensitized the medical and paramedical. Given that the three ICU departments shared the same medical staff during night shifts, the assumption that the germ was carried by the caregivers was the most likely hypothesis. We proceeded with a swab of the elements of the environment in the services concerned. Results showed that Acinetobacter was found on the nursing cart (visibly clean). A training about bio-cleaning and hygiene standard precautions is programmed.

Conclusions:

Continuous surveillance, continuous hygiene trainings, combined with a rapid reaction capacity in case of identification of a new case, is essential to control the spread of nosocomial germs.

Key messages:

- Multidrug-resistant Acinetobacter baumannii (MRAB) is an emerging cause of intensive care unit (ICU) outbreaks.
- Enhanced infection control measures limited the outbreak.

Abstract citation ID: ckac131.391
Flu shot in the era of COVID-19 vaccination: findings from a research hospital of Rome

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Influenza represents a major burden for public health. Healthcare workers (HCWs) are a priority target group for flu vaccination. During the COVID-19 pandemic, when SARS-CoV-2 vaccines were not yet available, susceptibility to influenza vaccination especially by HCWs increased. The aim of this study is to analyze the flu vaccination coverage among HCWs and to study which factors affected their adherence given the concomitant COVID-19 vaccination. The retrospective study was conducted in an Italian research hospital from October 2021 to January 2022. A total of 7,048 individuals was included. Age class, gender and job category variables were analyzed. Statistically significant differences among groups were tested through $\chi 2$ test. Univariate and multivariate analyses ($p < 0,005$) were performed to assess differences towards vaccination attitude. The flu vaccination coverage rate was 24.6%. Among the selected job categories, 29.8% of physicians, 19.9% of nurses and 19.7% of other HCWs were vaccinated with a statistically significant decrease ($p < 0.001$) across all categories respect with the last campaign. The findings of the logistic regression depicted that the 40-59 years old age class, compared with the youngest age class (OR 1.30, 95% CI 1.12-1.43) as well as being physician (OR 2.79, 95% CI 1.87-3.41) with the respect to being nurses, had a higher adherence to vaccination. Interestingly, being male, is associated with a statistically significant reduction (OR 0.71, 95% CI 0.59-0.87) in vaccination uptake. Study findings showed a several decline in the flu vaccination coverage comparing with previous campaigns, probably due to the concomitant administration of the booster dose against SARS-CoV-2. This alarm should not be underestimated and requires timely and innovative organizational approaches (i.e., combined vaccine). Further studies are needed to analyze the reasons for this poor adhesion and the strategies to be adopted to increase the awareness of the HCWs.

Key messages:

- Reaching high coverage rates and restore a positive trend for the future campaign for flu vaccination it is essential strategy to protect HCWs themselves, their patients and the hospital community.
- Decision-makers should implement consistent communication strategies to lessen vaccine hesitancy among HCWs.

Abstract citation ID: ckac131.392
Prevalence and risk factors of hepatitis C virus infection in Armenia, 2021

Anahit Demirchyan

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Background:

Liver damage caused by hepatitis C virus (HCV) is common, especially in low- and middle-income countries. Chronic HCV infection is among the leading causes of chronic liver disease, cirrhosis and hepatocellular carcinoma. Data on prevalence and risk factors of HCV infection are important for planning effective interventions to fight the virus. This study investigated the prevalence of HCV, its genotypes and factors associated with chronic HCV infection in Armenia.

Methods:

The study included 3838 individuals 18 years and older selected via stratified two-stage cluster sampling from all regions of Armenia. Anti-HCV antibodies were detected using a third generation immunoassay. Those testing positive were further tested by Polymerase Chain Reaction and genotyping. Shortly after testing, the participants underwent a telephone survey. Logistic regression model was fitted to identify factors associated with chronic HCV infection.

Results:

The participants mean age was 49.5 years, 70.0% were female. The prevalence of HCV antibodies weighted by age and sex was 1.9% (95% CI 1.5, 2.3), and chronic HCV infection - 0.7% (95% CI 0.4, 0.9), with genotype 3 being the most common (41.7%), followed by genotypes 2 (37.5%) and 1 (20.8%). The prevalence of both antibodies and chronic infection were higher among 50-69 years old (3.4% and 1.3%, respectively). In weighted analysis, the risk factors for chronic HCV infection included male sex (95% CI 1.23, 11.59), having tattoos (95% CI 1.10, 7.80), and reporting liver disease (95% CI 1.24, 14.61). Being employed was protective (95% CI 0.14, 0.93).

Conclusions:

This study was the first attempt to measure the prevalence of HCV infection among the general population of Armenia, creating prerequisites for estimating the HCV-related disease burden and developing strategies to cope with it. The identified risk factors demonstrate that there is still room for strengthening safety measures to prevent the transmission of HCV in Armenia.

Key messages:

- The prevalence of HCV antibodies is 1.9% among adult population of Armenia, increasing with age. Over one-third of seropositive cases have chronic infection caused by HCV genotypes 3, 2 or 1.
- Having tattoos is associated with higher risk of being infected with HCV, demonstrating the need for strengthening safety measures during similar procedures to prevent viral transmission.

Abstract citation ID: ckac131.393
Costs of delivering human papillomavirus vaccination in Tanzania

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Background:

Cervical cancer caused by human papillomavirus (HPV) is the most frequent cancer in women in many low-income countries.Tanzania implemented a national HPV vaccination program in 2018 using a two-dose quadrivalent HPV vaccine. This study aimed to (1) estimate financial and economic costs of a two-dose vaccination program based on experiences with the national vaccination program, (2) estimate costs of a one-dose vaccination schedule to enable future cost-effectiveness analyses, and (3) assess the effect of alternative assumptions for future vaccination coverage rates on estimated costs of vaccination.

Methods:

The WHO Cervical Cancer Prevention and Control Costing (C4P) tool was used to estimate the incremental costs of the national vaccination programme from the perspective of the Tanzanian government using data collected via surveys, workshops, and interviews with local stakeholders. Deterministic sensitivity analyses were performed to estimate the effect of alternative assumptions for coverage rates and delivery strategies and to assess the impact of a potential one-dose vaccination schedule.

Results:

The total financial and economic costs were US$10,117,455 and US$45,683,204, respectively, at a financial cost of $5.17 per two-dose fully immunized girl (FIG), and an economic cost of $23.34 per FIG. Under the assumption of a one-dose vaccination schedule, costs per FIG would reduce to financial costs of $2.51 and economic costs of $12.18.

Conclusions:

The overall cost of Tanzania's HPV vaccination program was lower per vaccinee than previous demonstration projects in the region suggest. These data provide important baseline data for Tanzania's HPV vaccination program to date and may serve as a guide for improving coverage going forward. The findings may also aid in the prioritization of funding for countries that have not yet added HPV vaccines to their routine immunizations.

Key messages:

- If a single dose regimen were found to be as effective as a two-dose series, it would result in significant cost savings as well as an increase in the number of girls that could be reached.
- School-based vaccinations resulted in the lowest price per fully immunized girl, but other settings are needed to achieve equitable high coverage of HPV vaccination in Tanzania.

Abstract citation ID: ckac131.394
Knowledge about HPV vaccination among Croatian university students

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Background:

Studies have shown the low uptake of the human papillomavirus (HPV) vaccine among university students. Knowledge about the HPV virus and the vaccine can be a factor that may sway an individual's decision to receive the vaccine. This study aimed to investigate HPV vaccine uptake and knowledge about HPV vaccination among Croatian university students.

Methods:

This cross-sectional questionnaire study was conducted from February to May 2021 period. A validated, anonymous questionnaire that contained questions regarding demographic data, data about HPV vaccine uptake, and data regarding knowledge about the HPV virus and the vaccination was self-administered to a cross-faculty representative student sample of the University of Osijek in Eastern Croatia.

Results:

The study sample included 840 subjects with, median age of 20 years (interquartile range 20-21), 45.8% males, and 54.2% females. The prevalence of vaccination uptake in the studied population was 20.8%. The study revealed that there were 25.6% of students with a low level of knowledge and 74.4% of students with satisfactory levels of knowledge about the HPV virus and the vaccination. The excellent knowledge about the HPV virus and the vaccination was more frequently shown by students who studied in biomedicine and health area of science ($p < 0.001$) and students with an excellent average grade of study ($p < 0.001$). HPV vaccination uptake was higher among females ($p < 0.001$), students who studied within biomedicine and health area of science ($p < 0.001$), students with an excellent average grade of study ($p < 0.001$), and students who showed excellent knowledge about the HPV virus and the vaccination ($p < 0.001$).

Conclusions:

The majority of Croatian university students had a satisfactory level of knowledge about the HPV virus and the vaccination but the vaccination uptake is still very modest. Additional efforts are needed to organize more appropriate education and promotion of vaccine uptake in the studied population.

Key messages:

- The HPV vaccination uptake among Croatian university students is very modest although the majority of students have a satisfactory level of knowledge about the HPV virus and the vaccination.
- Continuous examination of HPV knowledge gaps and identification of factors influencing vaccine uptake is key to increasing vaccination rates in the Croatian university student population.

Abstract citation ID: ckac131.395
Improving childhood vaccination in minorities: a realist review of health system interventions

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Background:

Most minority populations in Europe have lower childhood vaccine uptake than the general population. Improving uptake in these populations requires specifically developed, context-specific interventions. As part of the EU-funded RIVER-EU project, we conducted a realist review to identify interventions effective at improving vaccine uptake among underserved communities.

Methods:

We searched MEDLINE, EMBASE, CINAHL, COCHRANE, and Proquest for articles published between 2005 and 2022, using combination keyword searches in English. Following title and abstract screening, full texts were assessed for relevance. We also searched grey literature and references of references. Data extraction and analysis was performed by two reviewers. Programme theories were generated from included articles and data extraction were carried out paying particular attention to context, mechanisms, and outcome configurations.

Results:

From 1942 screened titles we selected 87 studies for full-text review of which 34 were included. We identified 10 primary intervention categories: parental and youth education; clinic outreach; quality improvement; health provider training; school-based education; technology interventions; cash incentives; home visits; comic books; community leaders education; and consent policy changes. The analysis highlighting contextual factors enabling or hindering each intervention category's success is ongoing.

Conclusions:

Several intervention categories can potentially improve vaccine coverage among underserved minority populations. We will describe their effectiveness and the contextual factors contributing to their success or failure to inform the development of tailored interventions targeting these populations.

Key messages:

- Improving vaccination in underserved minority populations requires identification of effective interventions, barriers/enablers to their success, specific to the context in which they are implemented.
- Appropriately tailored health system interventions are effective at improving vaccine uptake among underserved minority communities.

Abstract citation ID: ckac131.396
COVID-19 knowledge among Ukrainian refugees in Poland

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Background:

The constantly growing refugee population may constitute public health threat in Poland in the context of COVID-19 pandemic. This study objective was to investigate COVID-19 knowledge among Ukrainian refugees in Poland.

Methods:

This cross-sectional study was carried out between March-April 2022 among Ukrainian refugees registering in Zielona Góra, Poland. An anonymous, self-administered questionnaire was used which included 10 questions related to COVID-19 knowledge. Each correct answer was given 1 point.

Results:

Response rate was 96.0%, 190 Ukrainians responded (mean age 37.8±15.7 years; 42.1% males); 52.1% were living in the cities >50,000 inhabitants; 61.6% reported high SES; 39% higher education; 44.2% were married. The mean knowledge score was 3.47 (SD ± 2.2), 15.8% collected >50% points. The knowledge level was higher among those with higher SES ($p < 0.0001$) and higher education ($p = 0.003$); 31.7% stated that SARS-CoV-2 is an animal-human transmitted disease (more with high SES, $p = 0.004$), 55.0% considered COVID-19 as highly contagious disease (more living in bigger cities, $p = 0.04$), 26.3% reported that SARS-CoV-2 infection ensures lifetime immunity (more unmarried, $p = 0.02$); 24.7% correctly stated that compared with 18- to 30-year-olds COVID-19 mortality rate is about 10 times higher in those who are >65 years (more with higher education and high SES; $p < 0.05$, $p = 0.01$ respectively), 44.4% - that COVID-19 treatments are now available (more with high SES and higher education; $p = 0.03$ both). Regarding prevention, 37.0% reported that FFP3 is the most protective type of mask, 43.3% that vaccines effectively protect against COVID-19 (more with high SES; $p = 0.006$, $p < 0.001$ respectively).

Conclusions:

COVID-19 knowledge among Ukrainian refugees in Poland was far unsatisfactory, in particular among those with lower education and lower SES. Educational campaigns are urgently needed to effectively raise the knowledge level in this vulnerable group to better control the pandemic.

Key messages:

- This study results may be used by public health experts to expand educational campaigns targeting Ukrainian refugees in Poland.
- COVID-19 education oriented to Ukrainian refugees in Poland should specifically address deficits of knowledge identified in this study.

Abstract citation ID: ckac131.397
Measles, rubella, mumps and chicken pox seroprevalence of health workers in a second level hospital

Inmaculada Guerrero Fernández de Alba

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Healthcare workers are a professional group subject to a risk of occupational exposure to a variety of infectious agents. From a public health perspective, their immune status has a great impact on the worker's own health, on the patients and on the general population. Measles, mumps, rubella, and chickenpox are vaccine-preventable diseases caused by viruses. Seroprevalence surveys are a powerful evaluation tool that provide information on the frequency, distribution, and dynamics of communicable diseases. In this study, the prevalence of immunity to measles, mumps, rubella, and varicella viruses was analyzed in healthcare workers in a General Hospital of Granada (Spain). A cross-sectional study examining the seroprevalence was carried out in a population of health professionals incorporated into the General Hospital between January 2021 and February 2022. 260 professionals were studied, classified into groups according to age: 20-29, 30-39. Serum determination of IgG to measles virus was performed using a marketed chemiluminescent immunoassay. The resulting seroconversion rates were: 66.54% measles, 89.75% rubella, 84.62% mumps, and 88.08% chickenpox. The lowest rates were observed for measles, resulting in a minimum among professionals between 20-29 years of age, with a seroconversion rate of 65.4%. In general, women had a higher percentage of antibodies against measles. The highest rates were for the varicella virus, reaching up to 93.18% among health professionals between 30-39 years old. Considerable decrease in titers of antibodies against measles is observed in healthcare workers, especially in the age group 20-29 years, which may be due to the loss of serological protection as time goes by since vaccination with the 2nd dose of Triple Viral, possibly due to the absence of contact with the wild virus. It will be necessary to assess the need for new vaccination strategies in certain population groups such as healthcare workers based on their risk of exposure.

Key messages:

- It will be necessary to assess the need for new vaccination strategies in certain population groups.
- More seroprevalence studies are necessary to update the status of protection against infectious disease.

Abstract citation ID: ckac131.398
Exposure of pre-school aged children to schistosomiasis: a call for public health strategies

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Background:

Schistosomiasis is a disease of poverty, prevalent in tropical regions and emerging in Europe. Mass drug administration (MDA) is a common strategy to fight the disease. Pre-school aged children (PSAC) are conventionally considered not to be at high risk of infection and thus usually excluded from MDA. However, chronic infections at young ages can result in serious health consequences. Our study aims to better understand the schistosomiasis transmission routes in PSAC and risk perceptions among caretakers in the endemic context of Madagascar.

Methods:

This is a cross-sectional sub-study embedded in the clinical trial freeBILy. Using a mixed methods approach, 86 women and their two-year-old children in four communities of the Amoron' I Mania and Itasy regions of Madagascar in April 2022 were interviewed using structured questionnaires, focus group discussions and in-depth-interviews. Additionally, structured observational data were collected on the behaviours of 20 PSAC around waterbodies in the communities where notes and anonymised photos were taken.

Results:

Preliminary analysis shows that knowledge of schistosomiasis, its transmission routes and effects is limited. Risky behaviours of children were reported during the observations. They joined their mothers during daily activities and spent between 3-60 mins in rivers, lakes and rice fields. The exposure time to potentially contaminated waters was sufficient to represent a risk for infection.

Conclusions:

Even though our preliminary results show that PSAC are at risk of schistosomiasis infection, they are currently excluded from systematic public health interventions. The lack of risk awareness among caretakers in endemic countries calls for actions to establish tailored programs on health literacy and education. Treatment should be considered for PSAC as well as the implementation of awareness campaigns, both locally and globally given the re-occurrence of schistosomiasis in countries outside the tropics.

Key messages:

- Pre-school aged children are exposed to the risk of early infection with schistosomiasis.
- Public health programs against schistosomiasis should address pre-school aged children in endemic countries and in health promotion strategies globally.

Abstract citation ID: ckac131.399
Safe Hands 3.0: new tool to prevent healthcare associated infection

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Background:

Healthcare associated infection (HAI) is a Public Health problem. Hands of healthcare workers are a key for transmission. Compliance with WHO 5 moments for hand hygiene (HH) has been emphasized, but there are other aspects: appropriate use of gloves and healthy hands skin of professionals. Gloves protect the professionals but it may increase cross-transmission. Hands dermatitis is a handicap for the use of alcohol-based handrubs. Data collection and analysis, to have a good communication system to improve training, information and to get feedback from professionals are necessary. The aim of this work is to develop the Safe Hands 3.0 Project in a General Hospital.

Methods:

Preventive Medicine and Public Health Department carried out a descriptive study carried out in a 477-bed General Hospital in last semester 2021. Compliance with HH and the possible causes of non-compliance were assessed with observations and knowledge surveys included appropriate use of gloves in healthcare practice and the impact on hand in professionals. The surveys were carried out using Lime Survey for mobile devices and Google for WhatsApp.

Results:

From 550 observations of HH compliance for the WHO 5 moments is less than 40%. Half of non-compliance was due to inappropriate use of gloves. 266 surveys answered highlighting the need for continued training. Survey on hand skin health perception was answered by 182 professionals, 44% reported dermatological issues and 81% notice that their work damaged their hands skin. A corporate logo was created, use the hospital website and a structured Communication Plan for its implementation.

Conclusions:

To prevent HAI transmission, the concept of Hand Hygiene is limited. Safe Hands 3.0 Project comes up with a bundle of care: proper use of gloves, compliance the WHO 5 moments and skin care of healthcare workers' hands. Update data management and a corporate communication plan with social networks is necessary to improve training and compliance.

Key messages:

- A bundle of care is the key for Safe Hands: proper use of gloves, compliance the WHO 5 moments and skin care of healthcare workers' hands.
- Update data management and a corporate communication plan with social networks is necessary to improve training and compliance.

Abstract citation ID: ckac131.400
Design of a care pathway for Hepatitis C: a pilot study with three University Hospitals from Tuscany

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Monitoring and evaluation activities are recognised as key to quality improvement in healthcare performance. The present study is intended to design a performance evaluation system for care pathway for patients with chronic Hepatitis C virus

(HCV) infection, to follow them along the continuum of care throughout regional healthcare services, from diagnosis to treatment course completion. Four phases of the care pathway, namely diagnosis, linkage to care, treatment, and outcome were identified. Each phase of the care pathway was populated by a set of observation and evaluation indicators. Data sources were: administrative health data from the Tuscany Regional Healthcare System; patient-reported experience and outcome measures collected by means of questionnaires administered by the health professionals during patients' consultation in the three University Hospitals of the Tuscany Region. The availability of data, collected from the administrative flows and thanks to the active involvement of health professionals, showed the feasibility of designing a care pathway for HCV. More particularly, using administrative data, three performance indicators were calculated for the prevention phase, two for the linkage to care phase and two more for the treatment and outcome phases, respectively. Moreover, two indicators related to linkage to care and outcome phases were designed, but data require further investigation. On the other hand, using patient-reported experience data, four indicators can be calculated for the linkage to care phase, while regarding patient-reported outcomes, the feasibility of calculation depends on the number of patients that will be involved in follow-up visits. The care pathway designed may be useful to: identify shortcomings of the healthcare services for chronic HCV patients; foster quality improvement actions; inform allocation of resources to accelerate HCV elimination in Tuscany.

Key messages:

- The authors propose a care pathway for Hepatitis C, consisting of four distinct phases, populated respectively with diagnosis, linkage to care, treatment, and outcome indicators.
- The care pathway can be used as a management tool for the identification of possible quality improvement actions to be undertaken with respect to the healthcare services provided to HCV patients.

Abstract citation ID: ckac131.401
Public Health Response to Outbreaks of Highly Pathogenic Avian Influenza (H5N1)

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Aim:

Human infections from highly pathogenic avian influenza (HPAI) H5N1 are associated with significant morbidity and mortality internationally. This study aimed to use routinely available data to examine key strategies to prevent H5N1 transmission to humans during outbreaks in poultry in residents in Cavan, Louth, Meath and Monaghan.

Study design:

Cross-sectional based study.

Methods:

Data were obtained from Health Protection Team (HPT) in the Department of Public Health (DPH), HSE North-East and Department of Agriculture, Food, and the Marine (DAFM). Data entry and analyses were conducted using Microsoft Excel 2016.

Results:

The public health response focussed on contact tracing, monitoring, and follow-up for household, farm-workers, and DAFM staff exposed on the affected farms. A total of 157 contact episodes were identified. Contacts received advice about active monitoring from their last exposure. A total of 111 (80%) were recommended chemoprophylaxis for exposure to HPAI H5N1. During the active monitoring period, two contacts developed acute respiratory symptoms, and parainfluenza 3 and rhino/enterovirus were identified in these individuals respectively.

Conclusions:

The findings of this study, using routinely gathered data, highlighted that collaboration between public health and DAFM at regional and national level was key to rapid response to these outbreaks of HPAI in domesticated poultry. In addition, the public health response was successful in preventing H5N1 transmission from domesticated birds to humans.

Key messages:

- HPAI H5N1 virus infections transmissions from poultry to humans is low.
- Effective public health measures are crucial to further mitigate the risks to an absolute minimum.

Abstract citation ID: ckac131.402
Flu immunization during pregnancy: a cross-sectional study among Italian healthcare providers

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Background:

Flu vaccination during pregnancy has been proven to be effective in preventing illness and hospitalization in both pregnant women and newborns. However, flu vaccination uptake is still suboptimal. The study aimed to assess if healthcare providers (HCPs) are knowledgeable about flu vaccination recommendation during pregnancy and if they routinely recommend the vaccination.

Methods:

The present survey was carried out among obstetricians-gynaecologists (OBs), midwives and primary care physicians (PCPs) in the Southern part of Italy. Data were collected through an anonymous self-administered questionnaire that included professional information, knowledge, perceptions and practices on flu vaccination during pregnancy.

Results:

96 participants were hitherto enrolled (36.5% OBs, 35.4% PCPs and 28.1% midwives). Among the responders, 63.5% and 66.7% knew that flu vaccination can be administrated during any trimester of pregnancy and reduces the risk of preterm birth and miscarriage, respectively. Alarmingly, more than a fifth (22.9%) of the sample believed that vaccines during pregnancy are more dangerous than safe and only 67.7% routinely recommend the flu vaccine to all women regardless of their stage in pregnancy. Among HCPs who did not recommend the flu shot, the most frequently reported reasons were that flu vaccine recommendation was outside the scope of their practice (62.5%), that women are more hesitant about vaccines during pregnancy (37.5%) and lack of time (25%).

Conclusions:

The preliminary results highlight alarming gaps in knowledge (e.g. immunization timing) and suboptimal routine recommendation of the flu vaccine that represents a missed opportunity. Indeed, it has been demonstrated that when women are offered vaccination, most tend to accept it.

Key messages:

- Unmotivated concerns about vaccine safety during pregnancy have to be addressed among HCPs to enhance flu recommendation and, subsequently, immunization coverage in pregnant women.

- Strategies to disseminate evidence-based recommendations to HCPs regarding flu immunization during pregnancy have to be implemented and evaluated in order to improve public health.

Abstract citation ID: ckac131.403
COVID-19 sequelae among competitive athletes: a systematic review

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Background:
During the COVID-19 pandemic, several professional athletes from different sports were infected by SARS-CoV-2. The aim of this systematic review was to evaluate the currently available scientific evidence regarding the cardiological, pulmonary, psychological, and combined sequelae, in professional athletes.
Methods:
The present systematic review was performed following the PRISMA statements, thereby searching on 3 databases: PubMed, ISI Web of Science, Scopus. Primary studies published between January 2020 and March 2022, investigating symptomatic and instrumental sequelae in competitive athletes after COVID-19 infection, were included.
Results:
A total of 1,957 articles were screened, finally 18 were included (6 cohort studies, 2 case-control studies and 10 cross-sectional studies). Studies' sample size ranged from a minimum of 12 to 1908 athletes playing different sports. In addition, the studies examined the following type of sequelae: 12 cardiological, 2 psychological, 1 pulmonary and 3 combined. Regarding the cardiological field, the prevalence of anomalies in instrumental examinations ranged 0-27.89% for first level tests (echocardiography, electrocardiogram, troponin), and 0-6.21% for second level tests (cardiac magnetic resonance). The prevalence of myocarditis and pericarditis in the athletes ranged from 0 to 3.33%, whereby the prevalence of myocarditis was in the range 0-2.32% and that of pericarditis in the range 0-2.22%.
Conclusions:
The results show that post SARS-CoV-2 infection cardiac sequelae have a quite low prevalence among competitive athletes included in our review, but it would be important to set up a gradual and continuous testing approach to preserve sports performance. Public health framework, such as vaccination campaign, is important both at European and international level in order to address potential consequences of infectious diseases among competitive athletes.
Key messages:
- It is important to monitor all COVID-19 sequelae in European competitive athletes playing different sports.
- Considering anti-COVID-19 vaccination in competitive athletes as an important preventive measure, to limit the circulation of the virus and the physical consequences that may occur.

Abstract citation ID: ckac131.404
Understanding barriers to dTap vaccination recommendations during pregnancy among healthcare workers

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Background:
Diphtheria, tetanus and pertussis (dTap) vaccination is heavily endorsed during pregnancy. However, maternal dTap immunization rates in Italy remain low. Lack of healthcare workers (HCWs) recommendation to get vaccinated represents one of the main barriers to immunization during pregnancy. Therefore, this study aimed to investigate what HCWs know about dTap vaccination, practices and potential barrier to recommending immunization during pregnancy.
Methods:
This cross-sectional study was conducted among obstetricians-gynaecologists (OBs), midwives and general practitioners (GPs) in 2 regions of Southern Italy. An anonymous self-administered questionnaire was used to collect data on professional information, knowledge, risk perceptions and practices regarding dTap vaccination during pregnancy.
Results:
Until now 94 HCWs were recruited (36.2% OBs, 35.1% GPs and 28.7% midwives). Overall, 63.8% knew that dTap vaccination has to be administered during the third trimester of gestation and 94.7% that it is able to protect newborns against pertussis before active immunization. One-third of the HCWs believed that vaccines in pregnancy were more dangerous than safe. Seven out of ten HCWs routinely recommended dTap vaccine and provided information about dTap vaccination to all pregnant women. Most frequent reported reasons for not recommending dTap vaccination during pregnancy were that it was outside the scope of their practice (72.4%), that women are more vaccine hesitant during pregnancy (42.9%), lack of time (28.6%), lack of knowledge on the topic (28.6%) and the belief that the vaccine could interfere with the development of the fetus (14,3%).
Conclusions:
Lack of knowledge, unsatisfactory recommendation of dTap immunization during pregnancy and uncertainty over their responsibility around vaccination suggest that public health organisations should strengthen dissemination and implementation of evidence-based recommendations.
Key messages:
- Barriers to recommending dTap immunization during pregnancy remain among healthcare workers.
- Strategies (e.g. electronic reminders) to facilitate HCWs in recommending and informing on dTap immunization should be implemented and evaluated to improve vaccination coverage in pregnant women.

Abstract citation ID: ckac131.405
Self-reported vaccination against SARS-CoV-2 and adverse events in multiple cohorts

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In two studies (''App-based infection assessment in RESIST (iAR)'' and ''Digital infection monitoring in persons living with immunodeficiency (DIMI)''), we monitor health related items, as vaccination against SARS-CoV-2 and conduct syndromic surveillance of acute respiratory infections in high-risk populations, i.e. elderly persons and persons living with HIV, respectively. In a third very similar study ("Sensors for measuring aerosols and reactive gases to deduce health effects (SMARAGD)") mainly healthy adults participate. To record incident or recurring transient health events, risk factors and further health data in real-time, we developed the eResearch system "PIA - Prospective Monitoring and Management App". Recruitment for RESIST, SMARAGD and DIMI started in March 2021 and is ongoing. The questionnaire was presented in April 2022. Preliminary results include 86 participants from the three cohorts. In total, one indicated to be not vaccinated, none were vaccinated once, three (3.5%) twice, 63 (73.3%) three times and 19 (22.1%) four times. Participants reported the following adverse events after immunization (AEFI): after 40 applied doses with Vaxzevria® 24 AEFI (60%); after 158 doses of Comirnaty® 41 AEFI (26%); after 62 doses of Spikevax® 19 AEFI (30.7%); and after three doses of Janssen®, one AEFI (33.3%). In these cohorts, 20 (23.36%) participants stated having had a SARS-CoV-2 infection, of these 16 (80%) after the last vaccination dose, three (15%) before the first dose and one (5%) in between doses. Most participants were vaccinated three times, with Comirnaty being the most applied vaccine, as in officially reported numbers. AEFI varied according to vaccine and were higher than in the German surveillance system (1.64/1000 doses). Most infections were indicated to have been diagnosed after the booster vaccination. The results are limited by the small sample size and possible bias through self-reporting and social desirability regarding vaccination status.

Key messages:

- Overall, most participants were vaccinated with Comirnaty and had three doses of vaccine. Of the participants with a diagnosed SARS-CoV-2-infection, most got infected after the booster vaccine.
- The number of reported AEFI was higher than in the official surveillance in Germany.

Abstract citation ID: ckac131.406
Elizabethkingia miricola: an opportunistic pathogen in ICU

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Background:

The Elizabethkingia genus is formed by a group of bacteria which are widely distributed in nature. Elizabethkingia is not part of human microbiota, therefore is considered to be an opportunistic pathogen. In the last years, it has become a cause of potentially fatal disease, becoming an emerging bacteria of increasing relevance. The objective of this study is to describe the impact of Elizabethkingia bacteria in infected patients in the ICU of a hospital in Granada.

Methods:

Descriptive study. Patients who have been isolated in a biological sample of Elizabethkingia miricola throughout the year 2.021 in the ICU of San Cecilio University Hospital in Granada. Date and place of isolation were registered. Other variables registered were sex, age, length of ICU stay, days between ICU admission and bacterium isolation, days between bacterium isolation and death, infection, cause of admission or cause of death.

Results:

Bacterium was isolated in 15 patients. Cause of admission was COVID-19 in 73.3% of patients. 73.3% were men and 26.6% women.The average age was 56.9 years. The average length of ICU stay was 43.8 days. 4 patients were diagnosed with ventilator-associated pneumonia and 5 patients were diagnosed with tracheobronchitis.The average days between ICU admission and bacterium isolation was 26,4 days. The average days between mechanical ventilation and bacterium isolation was 25.9 days. 53.3% of patients died. The average days between bacteria isolation and death was 18.2 days.

Conclusions:

Elizabethkingia miricola is an emerging bacterium under special vigilance due to its capacity to cause major morbidity and mortality in admitted patients in ICU. The rapid identification and the study of the antibiotic susceptibility is considered of special relevance so they can be correctly managed to avoid infections and complications resulting from this microorganism.

Key messages:

- Elizabethkingia is a special surveillance bacterie due to its morbidity and mortality effects.
- Elizabethkingia could be a severity indicator in admitted patients to the ICU.

Abstract citation ID: ckac131.407
Vaccines for older adults; the low-hanging fruit of disease prevention

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Background:

The COVID-19 pandemic highlighted the significance of vaccination for older adults (OA), however, more health benefits could be gained with vaccination against influenza, pneumococcal disease, herpes zoster and tetanus as their uptake remains rather low. As healthcare professionals (HCP) play an important role in the vaccination decision making of OA, this study identifies obstacles in vaccination communication between HCP and OA.

Methods:

80 in-depth structured interviews have been conducted with HCPs in Hungary (HU), Italy (IT), the Netherlands (NL) and France (FR). Participants were general practitioners, medical specialists, public health physicians, occupational physicians, pharmacists, geriatricians, specialists elderly care and nurses. The interview included questions on HCPs' perceptions regarding information provision to OA on vaccines. Data were analyzed cross-country, using thematic analysis.

Results:

Preliminary results reveal that a factor hindering HCPs to initiate conversations with OA on vaccines was lack of time (FR, IT, HU, NL). In hospitals this was often due to (acute) clinical problems taking precedence over discussing vaccines (IT, NL). In ambulatory settings the high number of patients waiting to be seen prevented discussing vaccines with OA (HU). Moreover, HCPs sometimes forgot to discuss vaccines with OA (NL, HU, IT). Patient factors hindering the conversation of HCPs on OA vaccines were a negative attitude (IT, HU) and lack of understanding the information provided (IT, HU). Also, misinformation on vaccines (FR, HU), as well as anti-vax beliefs from patients (NL) or their relatives (FR, IT) hampered the conversation on vaccines. HCPs mentioned their need to learn communication skills to convince OA on vaccines (FR, IT, HU).

Conclusions:

HCPs encounter various obstacles in communicating with OA about vaccines. Lack of time and not recognizing the opportunity to discuss vaccines are important barriers for initiating vaccine conversations.

Key messages:

- Providing HCPs with communication strategies is important to support HCPs in discussing vaccines with OA.
- Reminder systems are important to help HCPs remember address vaccination.

Abstract citation ID: ckac131.408
Integrated monitoring of AMR and enterotoxins genes of S. aureus isolated in Lombardy

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Background:

S. aureus is a widespread pathogen responsible for mild to severe human and animals' infections. The abuse of antimicrobials provides the potential for selection of resistant strains in livestock, which represents a public health concern. S. aureus can carry several virulence factors of which staphylococcal enterotoxins (SEs) play a key role during food poisoning in human populations. The aim of this study is to monitor the prevalence of antimicrobial resistance factors in S. aureus isolates and their ability to produce enterotoxins.

Methods:

Within an ongoing monitoring plan for the assessment of antimicrobial resistance in S. aureus strains, a total of 83 isolates collected from food, and swine and dairy farms, between 2020-2022, were characterized using MLST and then screened for the presence of methicillin resistance and SEs genes. The isolates were tested for susceptibility to a panel of 14 antimicrobial agents using the disc agar diffusion method on Mueller-Hinton agar.

Results:

Among 83 S. aureus isolates, 53% carried at least one SEs gene. Eighteen isolates were methicillin-resistant of which 17 were no-enterotoxigenic strains belonging to ST398, and one was a food origin ST8 strain and harbored SEs genes. Among the ST398 isolates, only one was a food origin strain, while the others were from swine farms. The antibiogram showed that a few isolates were susceptible to nalidixic acid, and 42% resulted multidrug-resistant.

Conclusions:

Our results showed that more than half of S. aureus isolates were enterotoxigenic, the majority belonging to food industries. Numerous tested isolates resulted multidrug-resistant, confirming that antimicrobial resistance is a critical public health threat in a food safety perspective.

Key messages:

- The antimicrobial resistance profiles of S. aureus isolates underlines the importance of monitoring plans with a One Health perspective.
- The prevalence of enterotoxins genes in S. aureus strains in Lombardy confirms the relevance of the microorganism as a foodborne pathogen.

Abstract citation ID: ckac131.409
International Health Regulations core capacities monitoring in 2020-2021 at Italian Points of Entry

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Under the International Health Regulations (IHR) 2005 States Parties (SP) are required to develop and maintain core public health capacities and report related progress to World Health Organization (WHO) annually,including those related to Points of Entry (PoEs).Using an appropriate tool,provided by WHO, Italian PoEs assessments in 2020 and 2021 were conducted to have the status quo,describe any differences among years and promote corrective actions if required. The tool was designed in 2009 to support SP in ascertaining prior capacities in PoEs and monitoring their progress in order to designate PoEs under IHR.The tool was translated in Italian.Coordination and communication among authorities involved in each PoE (C1),core capacity at all times (C2) and at PHEIC (Public Health Emergency of International Concern) (C3) were assessed by cross border health Authorities for 2020 and 2021.For each of these sections the maximum score is 100%. For each year,a descriptive analysis was conducted and any differences in scores between the two years were noted.The presence of a contingency and vectors' control plans was also investigated.The assessment was completed respectively for 2020 and 2021 by 24 and 25 airports, 53 and 52 ports. C1 in 2020 resulted on average 89% for airports and 95% for ports, in 2021 respectively 90% and 95%; C2 in 2020 resulted on average 64% for airports and 63% for ports, in 2021 respectively 63% and 64%; C3 in 2020 resulted on average 68% for airports and 61% for ports,in 2021 respectively 63% and 58%.Few differences in scores between 2020 and 2021 were noted in some PoEs. 4 PoEs declared the presence of a contingency plan only in 2021.Few PoEs stated to not have a vectors' control plan in both years.The assessment pointed out a good level of coordination and communication among all the stakeholders involved, including the Italian Red Cross,but it revealed lower scores for the other IHR core capacities. Improvement actions have to be pursued surely.

Key messages:

- The specified tool helps cross border and national Authorities to understand strengths and weaknesses in each PoE and leads to develop a specific plan of action to overcome potential gaps.
- Maintaining a good level of core capacities at points of entry is fundamental to protect national public health.

Abstract citation ID: ckac131.410
Social differences in COVID-19 vaccination rates–Findings from a German nationwide study

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Background:

The COVID-19 vaccination aims to prevent the transmission of the novel coronavirus (SARS-CoV-2) as well as to reduce severe courses of the disease and deaths. But various studies indicate social differences in willingness to be vaccinated. This study aims to examine the influence of different social determinants on COVID-19 vaccination in Germany.

Methods:

The analyses are based on data from the sixth follow-up survey of the German Health Update (GEDA 2021), a nationwide cross-sectional telephone survey of the adult population living in Germany. COVID-19 vaccination rates are analyzed considering age, education, income, urban-rural residence and migration background. Poisson regressions were used to examine associations of each social determinant with COVID-19 vaccination rates. Adjustments were made for age, sex, (education) and date of participation.

Results:

Overall, the rate of COVID-19 vaccination for the survey period was 86.7%, with significant differences in vaccination rate by social determinants. The vaccination rate increases significantly with age (94.2% for over 60-year-olds), higher level of education (91.5%) or income (93.0%). In addition, people living in rural areas in Germany (83.5%) and people with an own migration experience (79.1%) had a significantly lower vaccination rate. An age-differentiated analysis also showed the social differences in COVID-19 vaccination rate are significantly lower among those over 60-years old.

Conclusions:

The results suggest social differences in COVID-19 vaccination especially in younger age groups. This should be considered when designing targeted measures to overcome potential barriers to vaccination. However, a large number of other factors affecting vaccination behavior must be taken into account like structural barriers, confidence in decision-makers, the safety of vaccination, and a sense of responsibility towards the community.

Key messages:

- Sociodemographic and socioeconomic determinants affect COVID-19 vaccination rates.
- The social differences in COVID-19 vaccination are lower among those over 60-years old.

Abstract citation ID: ckac131.411
Seroprevalence and SARS-CoV-2 antibodies distribution in Portugal following mass vaccination campaign

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Introduction:

Information on post-infection and vaccine-induced SARS-CoV-2 seroprevalence is important for public health policies. A 3rd wave of National Serological Survey (ISN3COVID-19) was conducted to measure SARS-CoV-2 seroprevalence and characterize specific antibodies distribution in Portuguese population in September - November 2021, following a mass vaccination campaign.

Methods:

ISN3COVID-19 was a cross-sectional epidemiological study that collected serum samples and questionnaire data on a sample of Portuguese residents aged 1 year or older (n = 4545). SARS-CoV-2 IgG anti-nucleoprotein and anti-spike antibody levels were measured using Abbott Chemiluminescent Microparticle Immunoassays. Seroprevalence was estimated for the overall sample and stratified by age group, sex, region and self-reported chronic conditions. Medians and respective 95% confidence intervals (95%CI) were used to describe the distribution of SARS-CoV-2 antibodies in specific population subgroups.

Results:

The overall seroprevalence of SARS-CoV-2 (post-infection or vaccine-induced) was 86.4% (95%CI: 85.2 to 87.6%), post-infection seroprevalence was 7.5% (95%CI: 6.6 to 8.5). Higher seroprevalence was observed among 50-59 years-old (96.5%), women (88.3%), and those with two or more self-reported chronic conditions (90.8%). Higher IgG (anti-Spike) levels were estimated for individuals vaccinated with the booster dose (median = 12601.3 AU/ml; 95%CI: 4127.5 to 19089.1) and for those vaccinated with two doses of Spikevax® vaccine (median = 7012.7 AU/ml, 95%CI: 5568.8 to 8456.6).

Conclusions:

The SARS-CoV-2 seroprevalence was high and consistent with vaccine coverage in Portugal. Seropositivity was associated with sex, age and previous chronic conditions. The anti-SARS-CoV-2 anti-spike IgG levels varied according to vaccine brand and number of doses. These results show that monitoring seroprevalence and SARS-CoV-2 antibody distribution is of paramount importance to guide public health policies.

Key messages:

- Significant increase in SARS-CoV-2 seroprevalence following the mass vaccination campaign consistent with the high vaccine coverage achieved in Portugal.
- Continuous monitoring of the population-level IgG response after vaccination remains important to guide further public health measures.

Abstract citation ID: ckac131.412
Not just anti covid vaccine in hub! Local Health Authority Rome 4, Lazio, Italy experience

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Issue:

At the end of December 2020 in Italy was started anti-covid vaccination campaign. For this purpose in the territory of Local Health Authority Rome 4, vaccination Hubs have been set up, one per each of four territory districts. The Hubs were large, never available previously, with routes suitable for welcoming and vaccinating a large number of people. Vaccination Service (SV) has organized anti-covid vaccinations with every day open Hubs, for 12 hours a day and more, without stopping, reaching very high vaccination coverage, but adherence to vaccinations into the calendar for 0-16 years further decreased during the pandemic period, particularly in adolescence.

Description of the problem:

At the end of January covid vaccination requests decreased and SV realized a vaccination line dedicated to other vaccinations in each Hub so SV decided to invite the cohort of those born in 2010 that defaulted with the vaccination against human papilloma virus (HPV) and other mandatory/recommended vaccines.

Results:

There were 2629 non-compliant adolescents (83% of resident population in 28 company territory municipalities). 2,353 phone calls were made and 232 smart-sms were sent (very recent method). They booked 598 children, who were vaccinated in just 3 days from 8.30 to 12.30 between February and March 2022. Total vaccines performed were 678: HPV9 389; meningococcal (ACWY and B) 278; 11 other. About 38 teenagers vaccinated every hour

Lessons:

The way we used to contact resident population was innovative, easy and quick, necessary features to complete the intervention in a short time. This confirmed the importance in recruiting and adhering to vaccinations and leds to a driving effect also in the following days. Hubs as capacious and familiar places for the population, have allowed an excellent organization with a fast vaccination course, facilitated reception, resources optimization of health personnel.

Key messages:

- To achieve vaccine prevention goals it is important to take advantage of available opportunities.
- It is very important to apply the experience gained with the Covid vaccination to non covid vaccinations as well.

Abstract citation ID: ckac131.413
Impact of COVID-19 on flu vaccination among pregnant women in a Teaching Hospital in Rome

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Background:

According to WHO, UNICEF, GAVI and the Sabin Vaccine Institute data, the COVID-19 pandemic caused the disruption of routine vaccinations in at least 68 countries. In March ‘20, the WHO published a guide to help countries continuing their provision safely to prevent unnecessary visits and hospitalizations: especially flu vaccination is paramount to reduce respiratory illnesses and their burden on healthcare systems. For the flu season 2021-22, the Italian Ministry of Health recommended prioritizing flu vaccination for pregnant women. This study aims at comparing flu vaccination rates between pre-pandemic and pandemic periods in pregnant women attending a birthing preparation course at the Fondazione Policlinico Universitario A.Gemelli IRCCS (FPG) in Rome.

Methods:

A repeated cross-sectional study was carried out in FPG during two flu epidemic seasons (October ‘19-January ‘20 and September ‘20-January ‘21), when two different cycles of birthing preparation courses were held (face-to-face and online, respectively). Pregnant women and their partners attending them were offered flu vaccination at FPG. A $\chi 2$ test was performed to compare vaccination rates, with statistical significance set at $p = 0.05$.

Results:

In 2019-20, 48 out of 119 women and 39 men out of 119 attending the course accepted flu vaccination, while in 2020-21 they were respectively 88 out of 317 and 89 out of 317. Overall vaccination compliance among pregnant women was significantly higher in 2019-20 than in 2020-21 (40.3% and 27.8% respectively, $p = 0.012$), while the difference was not significant among their partners (32.8% and 28.1% respectively, $p = 0.337$).

Conclusions:

The COVID-19 pandemic negatively affected flu vaccination adherence among the pregnant women involved. Fear of contagion and access to facilities closer to their home could be potential key drivers. These results represent an important warning on flu vaccination attitudes during the pandemic: more actions are needed to improve compliance.

Key messages:

- COVID-19 might have hindered access to immunization services for at-risk populations, such as that of pregnant women.
- From a Public Health point of view, more actions are needed to harmonize interactions between hospitals and local national health services to improve vaccination compliance.

Abstract citation ID: ckac131.414
Qualitative research for improving Access to Vaccination for Newly Arrived Migrants (AcToVx4NAM)

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Background:

Increasing vaccination uptake among vulnerable groups constitutes a high priority across Europe. Access to Vaccination for Newly Arrived Migrants (AcToVx4NAM) is a 3-year project (Grant n 101018349, 3rd EU Health Programme) with a mission to increase vaccination uptake in Newly Arrived Migrants (NAM) regardless of legal status. AcToVx4NAM will improve health system Vaccination Literacy (VL) and vaccination access, by making access conditions more equitable and guaranteed.

Methods:

Across 8 countries research took place to identify barriers, enablers and solutions to system level problems. Qualitative analysis through focus groups and interviews took place with professionals who work with NAMs including administrative personnel, cultural mediators, policy officers as well as physicians, nurses, social and mental health care professionals. Research examined barriers across the different dimensions that constitute the ActoVax4NAM General Conceptual Framework namely Entitlement, Reachability - Adherence (vs. hesitancy), Achievement of vaccination (execution and completion) and Evaluation.

Results:

A number of common system level barriers were identified related to gaps in the registration process and problems in reaching people eligible for vaccinations. Not all NAMs face the same problems in terms of accessing the health system (i.e asylum seekers vs economic migrants). Communication breaks exist between the various services involved with delivering care and vaccination to NAMs while the lack of appropriate culturally sensitive and appropriate informative material still remains. The role of non-medical personnel in promoting vaccinations was emphasized as well as the importance of evaluating and disseminating best practice.

Conclusions:

Findings direct to specific evidence based solutions with an emphasis on tailored made to specific needs activities.

Key messages:

- Shift focus from individual level barriers to system level barriers considering all hubs of the vaccination process.
- Address vaccination needs of NAM early to stress the importance of prevention in the health integration process.

Abstract citation ID: ckac131.415
The impact of Covid-19 vaccines on fertility-A systematic review and metanalysis

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Introduction:

Despite literature’s proofs about their safety, concerns arose regarding adverse events due to Covid-19 vaccines, including the possible impact on fertility, accentuated by misinformation and anti-vaccine campaigns. The aim of this study was to evaluate the Covid-19 vaccines’ impact on male and female fertility.

Methods:

PubMed, Scopus, Web of Science, Cochrane and Embase databases were searched for eligible studies until March 7th,

2022. Primary studies investigating the Covid-19 vaccines impact on male and female fertility, were included. Studies' quality was assessed by the Newcastle-Ottawa and the Before and After Quality Assessment scales for cohort and pre-post studies, respectively. Random-effect meta-analyses were performed for parameters considered in ≥ 2 studies, calculating means, p-values and 95% Confidence Intervals (CIs). I^2 statistics was used to assess statistical heterogeneity.

Results:

Out of 1406 studies screened, 20 studies were included in the systematic review. These studies, conducted in Israel (35%), USA (30%), Russia (25%), China (5%) and Italy (5%), were of poor (15%), moderate (75%) and good (10%) quality. Meta-analyses among five studies considering several vaccines were performed for pre- and post-vaccination sperm progressive motility ((49%, 95% CI 36-67% vs 49%, 95% CI 39-61%; $p = 0.963$) and concentration (64.39 mln/ml, 95% CI 47.51-87.28 and 72.00 mln/ml, 95% CI 51.22-101.21; $p = 0.03$). Subgroup meta-analyses based on the type of vaccine showed no significant difference: between vaccinated with mRNA vaccines and non-vaccinated regarding biochemical pregnancy rates; pre- and post-vaccination with Gam-COVID-Vac regarding testosterone, FSH and LH levels; pre- and post-vaccination with BNT162b2 vaccines regarding sperm volumes.

Discussion:

There is no scientific proof of any association between Covid-19 vaccines and infertility in men or women. Misinformation and doubts about vaccines should be properly addressed.

Key messages:

- The doubts regarding Covid-19 vaccines' impact on both male and female fertility resulted to be unfounded. Covid-19 vaccines remain the most important weapon to fight the pandemic.
- It is important to keep providing to public opinion and health care providers evidence-based scientific information, in order to effectively combat misinformation and anti-vaccines campaigns.

DR Injury prevention

Abstract citation ID: ckac131.416
Prevalence of injected drug use and access to OAT in prison: survey in 7 EU countries, 2014-2018

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Background:

People in prison report high rates of drug use and drug-related problems and people who use or inject drugs (PWUD) have higher rates of offending and an increased likelihood of spending part of their lives in prison. They represent a vulnerable population with high burden of diseases, socio-economic disadvantages and limited access to healthcare. In this study, we aimed to describe the lifetime prevalence (LTP) of heroin use, injected drug use and opioid agonist therapy (OAT) among people living in prison.

Methods:

Individual data collection was carried out in seven European countries (Czech Republic, Latvia, Lithuania, Poland, Portugal, Slovenia, Spain) between 2014 and 2018 with a model European Questionnaire on Drug use among people in Prison. Risk factors analysis was carried out using multivariate logistic regression model.

Results:

The analysis of EQDP data found that the LTP of heroin use was overall 22.4% (ranged from 7.3% in Poland to 27.5% in Spain). Female, recidivist offenders, individuals aged below 44 and with an history of mental health condition had a higher likelihood of being heroin user (p-value<0.05). The LTP of injected drug use was overall 20.6%(2176/10,587), while the prevalence of injected drug use in prison was 8.1%(745/9273) (with higher prevalence in countries that did not allow OAT initiation in prison: 17.5% in Latvia, 22.1% in Lithuania and 26.7% in Czech Republic). Among those who used heroin, 44.5%(772/1735) had access to OAT and among them 95.8(566/591) had access to OAT in prison.

Conclusions:

Despite the heterogeneity of the results, there is a clear evidence that people in prison have a high prevalence of heroin and injected drug use. Prisons are an important point of access to OAT, and where treatment is available there is a reduction in risk behaviour. It is also important to implement tailored preventive interventions among vulnerable social groups at the community level.

Key messages:

- People in prison in Europe have a high prevalence of heroin and injected drug use. Prisons can represent a point of access to integrated prison-community healthcare and social services for PWUD.
- In order to plan adequate healthcare interventions, there is an urgent need to assess and monitor the prevalence of drug use also in other European countries.

Abstract citation ID: ckac131.417
Integrated system for the proactive analisys of risk infection in patient's surgical route

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Background:

The most common hospital safety incidents are Hospital-Acquired-Infections (HAI) and among these Surgical Site Infections (SSIs). Our study proposes the use of a proactive system to manage risk combining the new Risk Identification Framework by WHO (IPCAF), the Lean method and the hospital's Procedure Analysis. Each of the methods has pros and cons, and there is no existing literature that researches the concurrent use of all three methods. We focused on analysing patients' surgical route to demonstrate that using an integrated system for preventing SSIs delivers enhanced results and significantly contibutes to a reduction in occurence of SSIs.

Methods:

We conducted a retrospective observational study from 18 March 2019 to 20 April 2019 at Azienda Ospedaliera Universitaria Federico II di Napoli, Italia (Europa). The study is structured in 3 phases:

Phase 1- application of proactive risk management tools (18 March- 15 April 2019);

Phase 2-integration of results with the elaboration of a single system for proactive risk management (15-20 April 2019);

Phase 3- collection of epidemiologic data concerning SSI. We used the incidence of surgical site as efficiency indicator (1-10 March 2022).

The endpoints identified were:

Primary Endpoint: a reduction of infection occurrence in surgical sites

Secondary Endpoint: identification of critical points and control points within the surgical process with relevant corrective measures

Results:

The rate of incidence of SSIs was selected as the efficacy indicator for the system. Our study recorded a 2.40% incidence rate for SSIs in 2020, compared to an incidence rate of 3.80% in 2018 and of 3.5% in 2017.

Conclusions:

Considering the economic impact of the infections, along with the increased incidence of mortality and morbidity, employing all available tools to try and reduce SSIs incidence becomes paramount. A small reduction can produce significant cost savings that can be invested in other prevention programs.

Key messages:

- Integrated system in proactively and promptly identifying risks related to patients' surgical routes is effectiveness.
- The system can be adapted to different healthcare settings, to prevent adverse incidents by employing a risk management strategy, and to further enhance existing strategies.

Abstract citation ID: ckac131.418
A 6 years trends in hospitalization: retrospective study of Traumatic Brain Injury

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Introduction:

Traumatic Brain Injury (TBI) is a significant public health issue globally, and the mortality and morbidity burden is particularly high in low- and middle-income counties (LMICs). The WHO predicts a disproportionately large increase of TBI burden in LMICs. The aim of this study was to identify trends in hospitalization associated with TBI in Georgia from 2015-2020.

Methods:

The study was designed in the framework of the project INITIatE: International Collaboration to Increase TBI Surveillance in Europe, funded by the US National Institutes of Health (NIH/NINDS R21NS098850). The surveillance database of National Center for Disease Control and Public Health of Georgia was used for the study.

Results:

During the study period a total 51 147 patients were admitted in hospitals throughout the country. In 2015-2019 the hospitalization increased and highest number of cases was in 2019 (n = 11779; 23,0%), in 2020 hospitalization decreased in comparison with the previous year (n = 9228; 18,0%). The highest number of burn injuries (n = 22963; 45,0%) occurred in the capital of Georgia (Tbilisi). Among hospitalized patients about 61,0% were males (n = 31162) and 39,0% females (n = 19985), retrospectively with ratio 1,6:1. The modal age of hospitalized patients was 25-44 and the highest hospitalization was in the age group of 15-24. 92,5% of cases were unintentional. The leading cause of Traumatic Brain Injury in all years were falls with some variations (57%-71%), followed by road traffic injuries (12%-25%). The average of LOS was 3 days, the highest LOS was 702 days. 1,6% (n = 805) of patients died. The most common mechanism of fatal injuries were falls.

Conclusions:

The study provide important information about trends in hospitalization, size of the TBI problem, which is crucial for elaborating relevant policy and establishing priorities in order to reduce the burden of Traumatic Brain Injury in Georgia, as well to identify directions for further TBI related research.

Key messages:

- Epidemiological data are essential for designing relevant preventive programs.
- Prevention is a key component of public health efforts to reduce TBI burden.

Abstract citation ID: ckac131.419
Falls among elderly: evidence from hospital settings in Georgia

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Introduction:

Falls are one of the major public health problems and a leading cause of injury-related morbidity and mortality globally. Around of 80% of fall deaths occur in low- and middle-income countries. Falls are the most common cause of hospitalization among the population aged 65 years and older. According the data from Global Burden of Disease (GBD) Study in Georgia, DALYs from falls exceed the average in LMICs. The aim of this observational study was to explore epidemiological characteristics of fall-related injury among hospitalized elderly patients in Georgia in 2020.

Methods:

This study was designed in the framework of the project iCREATE: Increasing Capacity for Research in Eastern Europe' funded by the NIH (2D43TW007261). All patients aged 65 and older admitted to hospital settings due fall-related injury in 2020 were identified from the Hospital Registry (included a total of 152 hospitals in the country) of the National Center for Disease Control and Public Health of Georgia.

Results:

A total of 7159 injured patients age 65 and above were admitted to hospitals in Georgia, and among them 4213 were hospitalized due to the falls (60%). Males comprised 30,7% of cases and females - 69,3%. The most common source of hospital arrival was ambulance 2791 (65,0%), followed by private/public transport 1432 (33,3%). The highest number of injuries (43,5%) occurred in Tbilisi (capital of Georgia). The leading cause in fall-related hospitalization was fall on same level. Pelvis and the head were the most common body regions injured accounting for 48,0% and 22,9% of cases, respectively. The highest LOS was 2014 (SD 6,161). 111 patients died due to falls related injury during the study period.

Conclusions:

This study indicates that fall- related injury prevention among elderly population should become a key priority area in Georgia. There is a need for elaborating relevant preventive interventions of falls injuries in population aged 65 years and older.

Key messages:

- Falls are the leading cause of hospitalization of patients 65 years of age and older.
- Fall risk awareness campaigns should be the first step to fall prevention among elderly.

Abstract citation ID: ckac131.420
Cognitive consequences of sport-related traumatic brain injuries in adolescents in Slovakia

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Background:

Many sports are associated with an increased risk of traumatic brain injury (TBI), often in a form of repeated minor trauma. While the pathophysiological changes of the brain after TBI have been relatively well studied, data on cognitive aspects are relatively scarce. The main objective of this study was to measure the cognitive consequences of repeated heading in a controlled set of training exercises in 21 years old football players.

Methods:

The study design is quasi-experiment. Participants consisted of male football players (N = 27) and were tested under 3 conditions: before the sports activity, after the sports activity not involving heading, after the sport activity focused on heading. To monitor the cognitive changes we used neuropsychological methods: the Trail Making Test (TMT), the Verbal reproduction test. Blood samples were taken to analyse the presence of biomarkers (glucose). Linear regression and repeated-measures ANOVA were used for statistical analysis.

Results:

The data showed significant relationships between the glucose level (before and 1-hour after the heading) and the TMT (part B) score /(F(1,22) = 6.03; p = .001; R-square = .223/. Based on TMT (part B) scores, the cognitive flexibility and glucose lowered after the sessions. For both parts of TMT we found significantly worse scores after both training sessions compared to baseline testing (Part A: F(2,46) = 189.354; p<.001; Eta2 = .892; Part B: F(2,46) = 10.191; p<.001; Eta2 = .307). Post-hoc tests revealed slightly worse results in the TMT (part A) after non-heading than after the heading training which means, that the focused attention was affected. In the TMT (part B) no difference was found between the results after non-heading and heading training.

Conclusions:

This study has a unique potential to highlight the relations between biomarkers and psychological abilities and their possible changes caused by heading, which may have beneficial as well as damaging impact on the body and cognitive functioning.

Key messages:

- The findings of this study suggest a potential relationship between repeated minor head trauma and cognitive performance in young adults.
- Besides physiological changes, cognitive impact on cognitive performance may be a consequence of repeated minor head trauma; further study is required to elucidate these associations.

DS Maternal, child and adolescent public health

Abstract citation ID: ckac131.421
The association between Chorionic Villus Sampling and preterm birth: A systematic review

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Background:

Preterm birth is defined as a syndrome that can be initiated via various mechanisms. During the past few decades, it has been an emerging health issue worldwide and thus, several actions to benefit public health have been undertaken to reduce its rate. Chorionic Villus Sampling (CVS) is one of the methods that are performed prognostically for prenatal diagnosis. However, several complications can occur after this invasive method is performed. The aim of this review is to identify whether CVS may result in preterm birth as a complication, compared to other invasive or non-invasive methods.

Methods:

A systematic literature review was conducted in PubMed and Scopus from inception until December 2021, to identify studies examining the above association. The research strategy included a combination of search and MESH terms related to CVS and preterm birth, Inclusion and exclusion criteria were set. The research was conducted by two researchers that thoroughly screened the articles and extracted the data.

Results:

37 studies met the inclusion criteria. Comparisons were performed between CVS and amniocentesis or control group or between the different weeks that CVS was performed. No significant difference was observed in most of the studies when CVS was compared to amniocentesis, control groups, or between different weeks of gestation that was performed.

Conclusions:

The risk of preterm birth of women undergoing CVS was relatively lower or had no difference compared to the other methods or controls investigated. Therefore, CVS is considered as a safe prenatal diagnostic procedure with minimum rates of preterm birth as a complication.

Key messages:

- The risk of preterm birth of women undergoing CVS was found to be relatively lower with no significant differences compared to the other methods or controls.
- Future studies should be performed recruiting a large sample with women of different age and compare it with a control group that will not undergo any invasive method.

Abstract citation ID: ckac131.422
Predicting low cognitive ability at age 5 using machine learning methods and birth cohort data

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Background:

Early intervention is essential to address disparities in cognitive development. Current developmental screening will not detect the vast majority of children who go on to have below average cognitive ability at school age. In this study, we applied the random forest (RF) algorithm, a highly interpretable machine learning method, to birth-cohort data to train a model to predict low cognitive ability at 5 years of age using perinatal features.

Methods:

Data was from 1,070 participants in the Irish population-based BASELINE birth cohort. A RF model was trained to predict an intelligence quotient (IQ) score <90 at age 5 years using a broad selection of maternal, infant, birth, and sociodemographic features, all of which could be easily measured at a population level in the perinatal period. Feature importance was examined using mean decrease in Gini impurity, mean decrease in accuracy, and mean minimal depth. Recursive feature elimination was used to develop a parsimonious model. Internal validation was performed using 10-fold cross validation repeated 5 times.

Results:

The most predictive features for low cognitive ability at 5 years of age were the total years of maternal schooling, infant Apgar score at 1 minute, socioeconomic index, maternal BMI, and units of alcohol consumed in the first trimester. A parsimonious RF model based on 11 features showed excellent predictive ability, with a sensitivity of 0.89 and a specificity of 0.98, providing a foundation suitable for external validation in an unseen cohort.

Conclusions:

Machine learning approaches to large existing datasets can provide accurate feature selection to improve risk prediction. Further validation of this model is required in additional cohorts, representative of the general population. Accurate risk prediction can facilitate targeted screening and intervention.

Key messages:

- The application of machine learning to large population-based data can improve feature selection and accuracy in risk prediction models.
- Accurate risk prediction may enable early intervention to address disparities in cognitive development. Individual interventions must occur in conjunction with population level policy changes.

Abstract citation ID: ckac131.423
Factors promoting or limiting self-determined childbirth: midwives' perspectives in Germany

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Background:

Claims for self-determined childbirth (SDC) have gained increasing scientific, political and societal attention. However, research on SDC is limited. This study analyzes and compares midwives' experiences and perspectives on factors that promote or limit SDC in hospitals, birthing centers and during home births in Germany. We argue that these insights are essential in order to foster self-determination and to avoid its violation.

Methods:

A qualitative case study was conducted based on semi-structured face-to-face interviews with midwives working in hospitals, birthing centers, and offering home births in Germany. In total, nine interviews were conducted in 2021 and have been audiotaped, transcribed, anonymized and analyzed by use of Thematic Analysis.

Results:

The results indicate eight inter-related categories, each of which imply promoting and limiting factors: 1) Structural/legal conditions; 2) Perception of birth (e. g. as natural or medical process; required competence and control); 3) Trust and atmosphere; 4) Getting acquainted/relationship building; 5) Birthing person's socioeconomic position; 6) Birthing person's preparation/ education; 7) Birthing person's capability of decision making and expression; and 8) Behavior of accompanying persons. Moreover, we identified midwives' strategies to extend possibilities of choice. Several factors clearly differ depending on the birth setting.

Conclusions:

The opportunities for SDC seem to differ according to the setting (e.g. institutional routines), inter-personal relations (e.g. getting acquainted, trust), and individual factors (e.g. socioeconomic position, capabilities). Hence, political, institutional and individual strategies may support SDC in consideration of the above factors. Measures may, among others, include the improvement of information processes, the reduction of economic barriers, relationship building before and during birth as well as respective structural adjustments.

Key messages:

- Self-determination (SD) in childbirth is influenced by several factors at individual, inter-personal, institutional and macro level.
- Individual, institutional and political strategies may support SD.

Abstract citation ID: ckac131.424
Factors associated with the closure of German obstetric units and its effects on accessibility

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Background:

An increase in regionalization of obstetric services is being observed worldwide. This study investigated factors associated with the closure of obstetric units in hospitals in Germany and aimed to examine the effect of obstetric unit closure on accessibility of obstetric care.

Methods:

Secondary data of all German hospital sites with an obstetrics department were analyzed for 2014 and 2019. Multivariate logistic regression was performed to identify factors associated with obstetrics department closure. Subsequently, the driving times to a hospital site with an obstetrics department were mapped, and different scenarios resulting from further regionalization were modelled.

Results:

Of 747 hospital sites with an obstetrics department in 2014, 85 obstetrics departments closed down by 2019. Only the annual number of live births was observed to be a factor significantly associated with the closure of obstetrics departments (odds ratio: 0·995; confidence interval: 0.993-0.997). Areas in which driving times to the next hospital site with an obstetrics department exceeded the 30 and 40 min threshold increased from 2014 to 2019. Scenarios in which only hospital sites with a pediatrics department or hospital sites with an annual birth volume of ≥ 600 were considered resulted in large areas in which the driving times would exceed the 30 and 40 min threshold.

Conclusions:

The annual number of live births is a factor significantly associated with the closure of obstetrics departments. Despite the closure, good accessibility is maintained for most areas in Germany. Although further regionalization may ensure high-quality care and efficiency, it will have an impact on accessibility.

Key messages:

- Despite the closure of many obstetric departments, regional accessibility to obstetric care remains good for most areas in Germany.
- Further regionalization may ensure high-quality care and efficiency but will have an impact on accessibility.

Abstract citation ID: ckac131.425
Childhood obesity prevention in schools and municipalities – the digital planning tool WEPI

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Background:
The development of theory-based prevention efforts is complex and often not feasible in the daily work of project planners. Planning tools such as the Intervention Mapping Approach (IMA), which is a gold standard for project planning, cannot be used in practice without preconditions. How can prevention planning be evidence-based but also practical? Against this background, the research project WEPI was developed, funded by the Federal Ministry of Health, Germany. WEPI is a digital planning tool based on the IMA, that guides municipalities and schools in planning childhood obesity prevention efforts.

Methods:
From April 2019 to October 2020, the planning tool was developed. In October 2020 and February 2021, WEPI was tested for the first time by selected municipalities (n = 4) in Bavaria and schools (n = 4) in Lower Saxony. Based on this, the modified planning tool was tested for a second time throughout Germany (05-11/2021). Handling and acceptance were evaluated in a questionnaire survey.

Results:
The first test showed that content and technical aspects needed to be optimised in order to bring scientific demands and practical feasibility together. Six municipalities and eight educational institutions participated in the second test phase. The respondents (n = 14) indicated that WEPI facilitates structured project planning (86%) and supports collaboration with colleagues (64%). 93% would use the planning tool again. WEPI offers evidence-based methods for practical implementation as well as a download area, including a template for a project application or a project summary. This service was also evaluated as very helpful (64%).

Conclusions:
Through step-by-step guidance, WEPI facilitates evidence-based project planning and ensures planning quality. Effort and benefit are in good proportion. Further optimisations are needed to improve the user-friendliness.

Key messages:

- WEPI provides a comprehensive roadmap, helping practitioners to approach a structured project planning.
- Practitioners' participation promotes acceptance and provides a user-friendly development.

Abstract citation ID: ckac131.426
Information-seeking on the internet during the transition to motherhood: descriptive survey, Cyprus

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Background:
Internet use in pregnancy is very prevalent. However, there are issues with information quality as well as acceptance by healthcare providers which can add to the frustration.

Methods:
An online anonymous survey, shared via Baby Buddy Cyprus, addressed women who are pregnant or recently gave birth in Cyprus. Adapting previously used questionnaires, the survey covered reasons and patterns of internet use, perceptions of trustworthiness, appraisal means and usefulness in decision-making.

Results:
Among 357 responses so far in this ongoing survey (38% pregnant, 62% new mums, 66% primiparas, 42% C/S, 78% private sector), searching online seems very frequent, even though 70% report coming across wrong or misleading information often. Checking for consistency across sites and/ or with information by healthcare provider (HP) is the most common technique for assessing trustworthiness. While the majority discuss information with HP, only half characterize their reception as positive and welcoming. As many as 89% believe that HP should recommend sites, but only 6.5% report their HP made recommendations. The role of the internet in assisting decision-making is rated as moderate (M = 3.0, SD = 1.0 on 5-point scale averaged across 11 items); yet more than half search online to be prepared and have control over decisions. Among reasons cited for using the internet is insufficient time with HP and/or is unclear or unsatisfactory information. While only 11.6% prepare material for the next appointment, 54.5 % use the internet to verify information given by HP or for a second opinion.

Conclusions:
While a prevalent source of information, the flow is problematic as it appears that women are more likely to search online to verify information rather than discuss this information with their providers. Insights about characteristics and attributes of internet use in pregnancy suggest that health services need to engage with, rather than ignore, this reality and offer appropriate guidance.

Key messages:

- Pregnant women in Cyprus search for information online, due to insufficient time or information by healthcare providers, even though they recognize there are issues with quality and expect guidance.
- In a landscape of unguided information-seeking, searching for consistency and verification, a shift in current practices is needed whereby healthcare providers and services engage with this reality.

Abstract citation ID: ckac131.427
Parental Knowledge on Prevention of SUID

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Background:
According to the 2018 America's Health Ranking Annual Report, the U.S. infant mortality rate (IMR) was 5.9 deaths per 1,000 live infant births, which placed the U.S. at No. 33 out of 36 countries with the world's largest economies in 2018. The IMR in Georgia has been on the rise since 2014. Even though there was a sharp decline in sudden unexpected/unexplained causes of death (SUID) beginning in 1990, the decrease has considerably slowed down since 1999. In 2017, the top ten leading causes of infant death were responsible for 67.8% of all infant deaths in the United States. Sudden Infant Death Syndrome (SIDS) and death from unintentional injuries were

in third and fourth place. Therefore, the purpose of this research is to utilize qualitative research guided by the Socio-Ecological model to understand better how prepared first-time mothers are to take care of their infant upon hospital release.

Methods:

An intensity sampling was utilized to recruit participants. The inclusion criteria for the participants included first-time mothers with children under one year of age, women, Georgia residents over 18 years of age, and English speaking. A semi-structured guide was based on research queries and the ideological concepts of the Socio-Ecological Model. For the qualitative data examination, the thematic analysis was performed. All the interviews were transcribed verbatim and coded by using the program NVivo 11.

Results:

A total of 25 women participated in the study. We will finish the data analysis by the end of May, 2022. The results of this qualitative study will help to fully understand the knowledge, perceptions, skills, and confidence of mothers about infant care.

Conclusions:

The study's results will help develop an information guide on primary infant care. Besides, health professionals and community organizations can utilize the study results to determine the information and support needed for new mothers.

Key messages:

- The results of this qualitative study will help to fully understand the knowledge, perceptions, skills, and confidence of mothers about infant care.
- This study's results will help develop an information guide (electronic or/and printed) on primary infant care based on first-time mothers' needs.

Abstract citation ID: ckac131.428
A preliminary study of bullying on University of Nursing in Taiwan

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Background:

According to the COVID-19 pandemic progress, the increase in online learning and communication, the survey shows that 36.3% of children have been bullied online (Children's Welfare Alliance, 2021). However, campus bullying has long-term effects on students' physiology and psychology, and will also extend to society in the future to form a social problem.

Aims:

It is generally believed that university students are relatively mature and have more freedom in taking courses. They believe that there are few bullying incidents that need attention on university campuses. Therefore, to understand the patterns of bullying on university campuses of nursing in Taiwan through this study.

Methods:

Referring to the definition and selecting the published within good reliability and validity of 'University Students' Campus Life Experience and Interpersonal Interaction Experience Survey', the subjects in domestic university campuses choose the closest answer according to their own situation.

Results:

In a total of 2570 valid questionnaires, the highest incidence of verbal bullying (38%), and those who don't want to answer gender ''experienced bullying in person'' (42.9%). Gender was shown to be statistically significant in bullying experience (p = .017). It shows that university students of nursing in Taiwan have obvious room for improvement in gender issues.

Conclusions:

Through this study, it is known that campus bullying exists in different types of experiences on university campuses of nursing in Taiwan. The bullying impact is often not only in school, and the impact will even extend to enter social work. Faculties must also be the gatekeepers of bullying prevention, but in fact, even senior faculties may not be very clear about what bullying is, how to properly handle bullying incidents, and how to prevent bullying, so every faculty should have the ability to take appropriate, fast and effective treatment when bullying occurs.

Key messages:

- Campus bullying has long-term effects on students' physiology and psychology, and will also extend to society in the future to form a social problem.
- Verbal bullying (38%) had the highest incidence, those who don't want to answer gender ''experienced bullying in person'' (42.9%).

Abstract citation ID: ckac131.429
Timing and social patterning of weaning practices in Cyprus: BrEaST start in life longitudinal study

Mary Economou

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Background:

Introduction of solids in the infant diet, according to WHO recommendations, should initiate onwards of sixth months. Evidence, however, suggests that solids introduction occurs earlier even if breastfeeding continues. With low breastfeeding rates, Cyprus is ranking last in Europe and little is known about the timing and socio-demographic pattern of solid introduction.

Methods:

Using the retrospective event calendar method at the 4th and 6th month after birth, the timing of initiation of solids was estimated among a consecutive sample of 350 mother-baby dyads from all public (N = 5) and 29 (of 35) private maternity clinics. The likelihood of early introduction according to socio-demographic characteristics and breastfeeding self-efficacy (measured at birth and 1st month) was estimated in logistic regression models.

Results:

Three out of ten women (30.8%) had initiated solids before the 4th month and only 20% hadn't by the 6th month. Almost half of non-Cypriot mothers (47.1%) initiated solids earlier than the 5th month, twice more likely compared to 25.1% of Cypriot mothers (OR: 2.45 95% CI: 1.30-4.57). There was a stepwise association with educational attainment with mothers with tertiary education more likely to initiate solids later (OR: 2.76 95% CI: 1.33-5.71) compared to those with at most secondary education. A similar social gradient was observed with income but was not statistically significant in multivariable models, while no association was observed with mode of birth (55.9% by C/S). Even though low breastfeeding self-efficacy at first month was predictive of earlier initiation, surprisingly, primiparous or multiparous mothers without previous breastfeeding experience were more likely to initiate solids later.

Conclusions:

Early introduction of solids with a clear social gradient suggests the need for strengthening the currently weak community-based interventions to improve weaning practices, including screening for breastfeeding self-efficacy.

Key messages:

- Four in five mums in Cyprus introduce solids before the 6th month with one in three introducing solids in the infant's diet before the 4th month, with a clear social gradient in the patterning.

- Community-based intervention programmes are needed to improve weaning practices, including screening for low breastfeeding self-efficacy in a country with low breastfeeding rates.

Abstract citation ID: ckac131.430
Associations between breastfeeding and the ''10 Steps for Successful Breastfeeding''

Mary Economou

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Background:

The Baby-Friendly Hospital Initiative's (BFHI) ''Ten Steps for Successful Breastfeeding'' has been the cornerstone of national and international strategies for decades; however, adherence is suboptimal. Despite successive National Strategies, breastfeeding rates remain low in Cyprus.

Methods:

The overall experience of a consecutive sample of 568 mother-baby dyads (response: 70.8%) across all public (N = 5) and 29 (of 35) private maternity clinics was operationalized as the sum score of full, partial or no implementation of each WHO/UNICEF BFHI self-assessment questionnaire item, with the exclusion of Step 6 (exclusivity). Associations with initiation and continuation of any (BF) and exclusive breastfeeding (EBF) up to the 6th month were explored in logistic regression after adjusting for potential confounders, including breastfeeding self-efficacy.

Results:

At mean score 5.6 (SD = 2.4), the overall 10 steps experience was low (theoretical range 0-14), even among those who breastfed exclusively (M = 6.9, SD = 2.1; $p < 0.001$). EBF and BF initiation and continuation showed a stepwise association with self-reported experience of the 10 steps. Across quartiles of increasing scores, the prevalence of EBF was 7.1%, 15.1%, 17.0% and 35.6%. The quartile of mothers who assessed their experience more favourably were 8- (adjOR: 8.4, 95% CI 1.5-48.0; p = 0.017) and 4-times (adjOR: 4.1; 95% CI 1.7-9.8, p = 0.002) more likely to initiate BF and EBF, even though only 6.5% continued EBF by the 6th month. Step 7 (rooming-in) and step 9 (no pacifiers) were least practiced but more strongly associated with EBF initiation.

Conclusions:

While breastfeed intention may determine the actual experience of the 10 steps, implementation across maternity clinics appeared fragmented, despite clear association with successful initiation and continuation of BF, at the same time that the Cyprus National Committee for Breastfeeding is embarking on the first BFHI accreditation of maternity clinics.

Key messages:

- Despite successive National Strategies identifying breastfeeding as Public Health priority, adherence to the WHO/UNICEF's 10 Steps appears fragmented across Cypriot maternity clinics.
- Despite low overall adherence, mothers reporting experiencing more of the 10 steps were more likely to initiate and continue breastfeeding.

Abstract citation ID: ckac131.431
Supply-side contribution to the lack of PBF impact on unmet need for family planning in Burkina Faso

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Background:

In 2020, about one in four women in Burkina Faso faced an unmet need for family planning (FP). Between 2013 and 2017, Burkina Faso implemented a performance-based financing (PBF) program to improve primary health care service provision (including FP) at rural health centers. Our prior work revealed that PBF did not lead to a reduction in unmet need for FP, in spite of FP being an explicitly targeted service. Our current study assesses supply-side factors that have likely contributed towards this lack of effect at population level, by examining changes in facility-based indicators relevant to the provision of FP induced by PBF.

Methods:

We used facility-based survey data from 406 PBF and 117 control facilities collected before and after the PBF implementation. To compare changes in FP service provision, we examined changes in a number of relevant indicators including: a. the types of FP methods offered by facilities; b. trainings received by different FP providers; and c. available stocks of modern contraceptives. We relied on a difference-in-differences (DID) regression model to estimate the impact of PBF on these indicators.

Results:

We observed a significant positive impact on the number of staff qualified to provide injectables, implants and IUDs (effect size 0.47, p 0.003) as well as the number of facilities offering IUDs (effect size 0.28, p 0.016) and a significant reduction in the number of facilities experiencing stock-outs of female condoms (effect size -0.09, p 0.007) and implants (effect size -0.03, p 0.042).

Conclusions:

Given the significant positive impacts on the number of qualified staff, facilities providing IUDs and a reduction in stock-outs of female condoms and implants attributable to the PBF intervention without showing signs of negative effects on the indicators measured supply-side factors might not have been the main reason for the lack of effect of the PBF program on unmet need for FP.

Key messages:

- Supply-side factors might not have been the main reason for the lack of effect of the PBF program on unmet need for FP.
- Further research is needed to explore other potential underlying reasons.

Abstract citation ID: ckac131.432
Parental Perception of childhood obesity

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Background and aims:

Childhood obesity rate continues to grow in the UK with children from deprived backgrounds being at greater risk. While a large part of the literature focuses on the determinants of child obesity less is known about the factors that can lead a parent to misclassify their child's weight status. The aim of this study was to investigate parental perception of their child's weight status, compared to their measured weight.

Methods:

Height, weight, and waist circumference were measured for 232 school children enrolled in Year 2 and Year 5 during the academic year 2019-2020 from ten schools in Barnet Council, London, UK. In addition, data were collected from parents on their child's weight status and perception, health beliefs, eating habits, exercise habits, family anthropometric and health information. Information from 110 mothers and 17 fathers was retrieved. The WHO growth charts were used to classify the children's BAZ scores.

Results:

Results show that 46% of the parents classified their child's weight status incorrectly, they either overestimated or underestimated their child's body weight and/or shape. Specifically, 52% of parents of overweight/obese children reported their children as normal weight. Factors associated with parents' child weight status misclassification child's age (p = .771), ethnicity (p = .445), parents' education (p = .227), and marital status (p = 0.07).

Conclusions:

Parental perception of child's weight status has important implications in terms of changes in household eating behaviours and attitudes. Understanding the key factors affecting parental perception is of paramount importance when developing interventions and policies aimed at tackling child obesity.

Key messages:

- Parents classify their children's weight status incorrectly, making it hard for policy change to be effective.
- Policy change can only happen if parents play an active role in understanding and perceiving if their child is overweight or obese.

Abstract citation ID: ckac131.433
Self-reported physical and emotional health among left behind children in Lithuania. A pilot study

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Background:

Left behind children (LBC) are children living with caregivers, while their parents work abroad. In recent decades Lithuania had lost ¼ of its population due to emigration, but the prevalence of LBC and their health needs are not sufficiently studied. The aim of study was to evaluate the association between self-reported health, emotional and behavioural difficulties between LBC and non-LBC.

Methods:

The cross-sectional study was approved by the Biomedical Research Ethics Committee, No. 2021/11-1378-861. In March 2022, this pilot study collected data from adolescents aged 12-17 years at three randomly selected schools from the migration affected regions. Parents and children provided informed consent to participate in pilot study. Self-reported measures collected from the participants: Strengths, and Difficulties Questionnaire (Goodman, 2005) and a questionnaire on demographics and on the health situation. Chi^2 tests and logistic regression were calculated by using Stata (version 15.1).

Results:

The sample consisted of 127 children (mean age 15.2, SD 1.27; 54 boys, 72 girls) including 39 LBC. Mostly fathers left to work abroad (n = 36), but majority of children (n = 36) regularly communicated remotely with their migrated parents. Binary logistic regression results show that LBC children tend to evaluate their health as 'poor, 'bad', or 'very bad' (OR 2,33; 95CI [1,02-5,33]). There were no differences for emotional and behavioural problems. Preliminary results from multiple regression model showed that children with self-reported emotional/behavioural difficulties (OR 3,06; 95CI [1,12-7,84]), females (OR 4,99;95CI [1,55-16,13]) and LBC (OR 2,44; 95CI 0,95-6,25]) more likely evaluate their health as 'poor', 'bad' or 'very bad' (likelihood-ratio test = 23,72; model $p < 0.001$).

Conclusions:

This pilot study found negative association between parental migration and children's self-reported health. However, a more comprehensive study with a larger sample size is needed.

Key messages:

- Pilot study suggests negative association between parents migration and children's self-reported health.
- More comprehensive study in bigger sample for the emotional/behavioural/communication difficulties between left behind children needs to be done.

Abstract citation ID: ckac131.434
Performance evaluation drives organizational change: a case-study from Tuscan Teaching Hospitals

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The 1985 WHO recommendation on caesarean-section (CS) stated that CS rates over 10-15% might be clinically unnecessary. The Performance Evaluation System of Sant'Anna School of Advanced Studies systematically monitors the regional health performance of Tuscany, ITALY. CS rates in Pisa Teaching Hospital (TH) were the highest in Tuscany before 2018 (almost 30%), but then started to decrease, reaching the lowest values in Tuscany, around the WHO threshold (15%). We aimed to assess and demonstrate such performance improvement in Pisa TH, taking the other two THs of Tuscany as comparators. Our outcomes were NTSV CS rates (nulliparous, term pregnancy, singleton, vertex), total CS rates, Robson Class 1 CS rates, NTSV episiotomy rates, and operative delivery rates, computed annually from 2016 to 2020 in the three THs of Tuscany. We obtained data from regional administrative databases. We performed difference-in-differences to compare the average change from the pre- (2016-2017) to the post-period (2018-2020) in the outcomes between Pisa TH and the other two THs, assuming that Pisa TH implemented organizational changes at the end of 2017 to improve the hospital performance on CS. Comparing Pisa TH with the other two THs, we found a significant pre-to-post reduction in NTSV CS rates ($p < 0.001$), total CS rates (p = 0.016), Robson Class 1 CS rates (p = 0.039), and episiotomy rates (p = 0.059), while no significant change emerged for operative deliveries. As a result, after 2017, Pisa TH reached significantly lower NTSV CS rates ($p < 0.001$) and Robson Class 1 CS rates (p = 0.027) and non-significantly higher total CS rates and episiotomy rates compared to the other two THs. This case study proved beyond a mere descriptive assessment that a statistically significant performance improvement in CS and episiotomy rates occurred in Pisa TH after 2017 following organizational changes. Comparison with the pre-period trend and the other two THs of Tuscany made these findings robust and reliable.

Key messages:

- The Performance Evaluation System allowed to benchmark the performance of Tuscan THs, revealing the worst practice of Pisa TH on CS, and fostering organizational changes to be explored qualitatively.
- Such organizational changes improved hospital performance on CS rates and on the maternity pathway in general, eventually making Pisa TH the best performer on CS in Tuscany.

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Women's preferences in the low-risk pregnancy management: Discrete Choice Experiments from Tuscany

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During the last years, organizational models to assist women during pregnancy have changed. The physiological management of low-risk pregnancy is gaining momentum thanks to increased available evidence. Therefore, a need to assess women's acceptance of these new proposals is emerging. This study aims to explore women's preferences during pregnancy and childbirth. We enrolled women from the continuously active survey on the maternity pathway in Tuscany, Italy. We designed Two Discrete Choice Experiments (DCE) and administered them through web-based surveys. We sought to catch women's preferences on health professionals to be involved, team-based or exclusive assistance, the physical proximity of healthcare services, and cost per service. We also explored women's decision-making autonomy and pain management during labour and childbirth. Additionally, we investigated women's information needs on the physiological model of low-risk pregnancy management through qualitative methods. Mixed logit models on the DCEs results show that women prefer being assisted during pregnancy and childbirth by healthcare services that are free of charge, easily accessible from a geographic point of view, and provided by a gynaecologist. The interaction effects reveal statistically significant differences for some sociodemographic variables of respondents and maternity pathway attributes. Besides, qualitative analyses highlight that women are interested in the physiological management of low-risk pregnancy according to their level of knowledge, confidence and safety feelings, and beliefs concerning non-medicalization and autonomy. The main findings of this study point out several implications for policy and managerial practice to effectively implement the physiological model of low-risk pregnancy management.

Key messages:

- This study proves that costs, travel distance, and type of health professional are the main determinants of women's elicited preferences during pregnancy and childbirth.
- Policymakers and healthcare managers should consider these findings in organizing and providing maternal and childbirth health services to foster the physiological management of low-risk pregnancies.

Abstract citation ID: ckac131.436
Support perceived by foreign-origin women in Finnish maternity care: a comparison of two surveys

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Background:

Evidence suggests that foreign-origin women are at risk of poorer pregnancy outcomes, both worldwide and in Finland. This study examined if foreign-origin women felt adequately supported by healthcare providers during their perinatal care in Finland.

Methods:

Foreign-origin women who gave birth in Finland within the last 3 years were recruited via snowball method as part of the MOM Survey (MS). Data were also extracted from birthing parents' responses to the 2020 national FinChildren Survey (FC), which consisted of data from parents in Finland with 3-6-month-old babies. Only responses submitted to MS from women born outside of Finland (n = 291) and responses submitted to FC by women born in Finland (n = 7984) were analyzed. Reported levels of adequate support from each group were compared using an independent sample proportion t-test. Data were then pooled and analyzed via binomial logistic regression.

Results:

MS respondents were older, more highly educated, and reported a higher proportion of single parenthood. 70.9% of MS respondents reported receiving adequate support regarding general well-being during pregnancy, compared to 90.2% of FC respondents ($p < 0.001$). Statistically significant differences ($p < 0.001$) were also seen in levels of support for parenthood (MS 74.3%, FC 92.8%), depression (MS 68.1%, FC 94.7%), fear of childbirth (MS 81.5%, FC 91.7%), and preparing for childbirth (MS 65.0%, FC 80.6%). After adjusting for age, education, and relationship status, FC mothers were still 4 to 9 times more likely to report receiving adequate support in these areas as compared to their MS counterparts.

Conclusions:

Women born outside of Finland were significantly more likely to report receiving inadequate support in multiple aspects of their perinatal care when compared to Finnish-born women. This held true even after adjusting for demographic differences. More research is needed to better understand this phenomenon and to ensure equitable care in the future.

Key messages:

- Minority populations continue to grow in Finland, a country often seen as a global leader in maternal care. Supporting these populations is imperative to ensure quality maternal healthcare for all.
- Our observation that foreign-origin women felt less supported during pregnancy suggests that new care models or strategies may be needed to address their unique needs in peripartum care.

Abstract citation ID: ckac131.437
Parents' perceptions of barriers & facilitators for adhering to advice from community health nurses

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Background:

Childhood obesity is a global health problem and infancy is an important window of opportunity for promoting healthy weight development. In Denmark, community health nurses cover most families with a new-born child leaving a huge potential for promoting healthy weight development. This study examines parents' perceptions of barriers and facilitators for adhering to advice from the health nurse regarding healthy weight development of their child.

Methods:

Sixteen interviews with parents (children aged 0- 2 years) living in Denmark were conducted. Parents were strategically sampled representing variations across child age, family socioeconomic position, ethnicity, and geography. All interviews were based on a semi-structured interview guide, recorded, and transcribed verbatim and analysed using a thematic analysis.

Findings:

Parents generally experience visits from their health nurse positively. Health nurses are emphasized as a confident and trustful relation and the key informant about children's' health. Variations in how parents adhere to advice favouring healthy weight development of their child were found.

Generally, parents adopted a positive attitude towards the health nurse, also when she addressed behaviour or practice of the parents, but parents expressed the importance of doing so in a non-stigmatising or finger pointing manner. The degree to which parents follow the advice from their health nurse depend on cultural background, advice from family and friends, and use of online information.

Conclusions:

Parents generally have a confident and trustful relation to the health nurse, and she constitutes the key informant on child health. This leaves a potential for the structure of Danish health nurses for future interventions promoting healthy weight development. Adaptation of the future intervention program to the needs of parents will increase the chances of developing a relevant, successful, and sustainable intervention.

Key messages:

- Health nurses are emphasized as a trustful relation and the key informant about children's' health, but parents expressed the importance of addressing behaviours in a non-stigmatising manner.
- Adapting information gained from parents in development of the trial will increase the chances of a relevant, successful, and sustainable intervention promoting healthy child weight development.

Abstract citation ID: ckac131.438

Barriers to prevent second-hand smoke (SHS) exposure among pregnant women and children in Egypt

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Background:

The prevalence of daily second-hand smoke (SHS) exposure among pregnant non-smoking women and children in Egypt is estimated to be about 50% and 55%, respectively. This study aimed to explore barriers to preventing SHS exposure among pregnant women/children and smoking behavior at home in Egypt.

Methods:

Focus group discussions (FGDs) with pregnant women/mothers of children residing in urban/rural areas (n = 61). Data were coded and analyzed thematically.

Results:

61 participants were recruited, aged 18-49. They reported being never smokers and SHS exposure for themselves and their children was mainly at home. Pregnant women/mothers had some general knowledge of the dangers of SHS, but their knowledge appeared incomplete. The most commonly reported barriers to preventing SHS exposure/adopting a smoke free home or workplace were having men who smoke in the household, doctors not being supportive regarding smoking cessation, SHS exposure is socially accepted and fear among women of damaging a relationship; being nervous about asking smokers to stop, and being worried about disputes and arguments with husband. The majority of interviewees' families were reported to allow smoking anywhere in the home; others implemented some measures to prevent SHS, however, these tended to be inconsistently implemented and unlikely to be effective.

Conclusions:

This study increases our knowledge of the barriers of non-smoking Egyptian pregnant women/mother of children in creating and maintaining smoke free environment for themselves and their children. There is a need to denormalise SHS exposure and better enforcement of smoke free policies.

Key messages:

- Better enforcement of smoke free policies, and more support for smoking cession services are needed in Egypt.
- SHS policy, practice, and research should focus on male family members to increase their effectiveness.

Abstract citation ID: ckac131.439

Co-creating an intervention promoting healthy weight development during infancy

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Background:

Childhood obesity is a major public health challenge, and it is recommended to promote healthy weight development already during infancy. It is important to co-create interventions to maximize the feasibility and thus improve the chances of successful implementation. This paper describes the co-creation process of the Danish Bloom Trial - an early intervention to promote healthy weight development among children of first-time parents.

Methods:

Development of the trial is inspired by co-creation frameworks and the Intervention Mapping protocol. The co-creation process comprises three stages: 1) Evidence review, qualitative research with community health nurses (CHNs) and parents, and stakeholder consultations; 2) co-creation of the intervention content including workshops and group meetings with CHNs and other stakeholders and focus group discussions with parents; and 3) prototyping, feasibility- and pilot-testing. Currently, we are in stage 2 and have conducted four workshops with CHNs and one parent group discussion.

Results:

During stage 1, we identified the intervention setting; the unique system of CHNs in Danish municipalities. Furthermore, we identified the need for developing intervention content focusing on nutrition, physical activity, sleep, screen time and sense of security to promote healthy child weight development. The main intervention components are a course for CHNs and guidelines on how to talk to parents about behavioral risk factors. The main components for parents are eight home visits and six telephone consultations from CHNs during pregnancy and until the child is 2½ years old and a video library.

Conclusions:

The description of the development of the Bloom Trial provides an example of how to co-create an intervention balancing evidence, the practical work of the implementers and the needs of the families. Co-creation with relevant stakeholders increases the chances of producing a relevant, successful, and sustainable intervention.

Key messages:

- The co-creation process resulted in development of intervention content focusing on nutrition, physical activity, sleep, screen time and sense of security from pregnancy to child age 2½ years.
- Involving parents and stakeholders in the development of an intervention increases the chances of producing a relevant, successful, and sustainable intervention.

Abstract citation ID: ckac131.440

Associations between social support and physical activity among postpartum women: a cohort study

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Background:

Moderate-to-vigorous physical activity (MVPA) enhances postpartum women's health, and social support is associated with higher self-reported physical activity (PA) postpartum. It is unknown if this association exist across ethnic groups. Our research questions are: are overall family or friends' support associated with objectively recorded MVPA postpartum, 2) are specific types of family or friends' support associated with MVPA and 3) does the association differ across ethnic groups?

Methods:

We used data from 662 women participating in the STORK Groruddalen cohort study (2008-2010). MVPA in bouts ≥ 10 minutes was recorded by SenseWear ArmbandTM Pro3 14 weeks postpartum. Family and friends' support was measured by the Social Support for Exercise Scale. We used single items and mean score for family (6 items) and friends' (6-items) support in separate linear regression models, and adjusted for age, ethnicity, education, parity, weeks since birth and body mass index. We tested for interactions between social support and ethnicity. Analyses were performed on complete cases and imputed data due to missing MVPA data.

Results:

Based on imputed data we observed an association between family support and MVPA ($\beta = 4.0$, 95% CI, 0.18 to 7.74, $p = 0.040$). Women reporting high family support on two specific items spent 9 MVPA minutes/day more than women reporting low support ('discuss PA': $\beta = 8.6$, 95% CI: 0.37 to 16.87 and 'co-participation': $\beta = 8.8$, 95% CI: 1.79 to 15.86). Associations were not modified by ethnicity. No statistically significant association between friends' support and MVPA was observed. Similar results were found in complete case analyses, with few exceptions.

Conclusions:

Overall family support and specific form of family support (i.e., PA discussion and co-participation) were associated with MVPA postpartum across ethnic groups. Friends' support was not associated with MVPA.

Key messages:

- Postpartum health may be improved across ethnic groups through increased PA facilitated through overall family support for PA and specifically through PA discussions and co-participation from family.
- Friends' support for PA was not associated with PA.

Abstract citation ID: ckac131.441
Sexual education in the school setting: an overview of the Italian situation

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Background:

There is an important interaction between sexuality and many life factors. A good sexual education at school can improve knowledge and behaviour in young people giving them a healthy sexual life. Unlike most European countries, sexual education in Italy is not compulsory in the school curriculum, so this study explored the Italian regional initiatives realised over a span of 15 years.

Methods:

A review of grey literature was conducted on Public Health Administrations/Regions websites of each Italian region, focusing on official documents containing training catalogues for schools. The search was conducted in December 2021, including documents produced between 2006 and 2021. We used the topics recommended by UNESCO as quality markers for the projects found.

Results:

Among the 20 Italian regions, 12 had at least one programme. A total of 39 projects were found. All UNESCO topics were covered, with notable differences between north, centre and south of Italy, which had the lowest number of projects. Most of the projects (23) were carried out only once, the others were repeated at least for two years in a row. Contraception, along with love, marriage, partnerships, and family, were the main topics discussed during sexual education programs in schools (92%), followed by biological aspects, body awareness, and anatomy (83%); birth, disability, human rights, and online media were less common (33%). Regarding the target, disability, human rights, and mutual consent were deepened only for middle and high school students.

Conclusions:

Considering the fundamental importance of sexual education, there is an important lack in promotion and planning in Italy. There is a large discrepancy between the northern and southern regions and it is necessary to implement and standardize the offer of sexual education programs in schools.

Key messages:

- Unlike the European average, In Italy there is an important lack on sexual education, whit large discrepancies between the northern and southern regions, putting the latter at disadvantage.
- Contraception, marriage, couples, and family were the main topics discussed during sexual education programs in schools; birth, disability, human rights, and online media the least.

Abstract citation ID: ckac131.442
Empowering pregnant women to improve diet quality: a RCT among pregnant women in the Netherlands

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Objective:

A healthy diet during pregnancy is crucial for the health of both mother and child, but pregnant women often do not meet the nutritional requirements. Empowering pregnant women to improve their diet quality could play a significant role in improving maternal nutrition and health. However, empowerment has been rarely used in nutritional interventions. Based on research and input from stakeholders, we developed Power 4 a Healthy Pregnancy (P4HP). P4HP consists of four additional consults by the midwife or dietician to discuss nutrition with the pregnant women from an empowerment perspective. This study aims to evaluate the effectiveness of P4HP on diet quality, empowerment, and health of pregnant women.

Methods:

A cluster randomized controlled trial started in January 2022 in 14 Dutch midwifery practices, with a total of 175 pregnant women in both the control and intervention groups ($N = 350$). Women in the intervention group follow P4HP in addition to their usual birth care. Measurements are carried out at the beginning and end of pregnancy. Diet quality is measured using the Dutch Healthy Diet index 2015, specifically adapted for pregnancy. Empowerment is assessed using the Pregnancy-Related Empowerment Scale, Sense of Coherence (SOC) using the SOC-3 scale, Self-Rated Health using a General Self-Rated Health question, and Quality of Life using a Visual Analogue Scale. Results will be analyzed using Linear Mixed Models to analyze the treatment effect of clustered data.

Results:

Baseline results of 100 pregnant women indicate that they do not meet the Dutch dietary guidelines. We hypothesize that P4HP will lead to improvements in diet quality, empowerment, and health among the intervention group compared to the control group.

Conclusions:

Our findings will show the effect of P4HP on pregnant women's diet quality, empowerment, and health. We expect to present our preliminary results during the congress.

Key messages:

- Our findings will show the effect of four additional nutritional consultations from an empowerment perspective on pregnant women's diet quality, empowerment and health.
- Empowering pregnant women to improve their diet quality could play a significant role in improving maternal nutrition and health.

Abstract citation ID: ckac131.443
Implementing the Bloom Trial: Community health nurses' perceptions of potential barriers

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Background:

The overall aim of the Bloom Trial is to develop and test a program promoting healthy weight development during infancy within the community health nurse setting in Denmark. Many interventions are poorly implemented, and to ensure adequate implementation support, previous studies have suggested to assess barriers and organizational readiness before intervention start. The aim of the present study is to assess barriers for implementing and sustaining the Bloom Trial among program adopters and implementers.

Methods:

Telephone interviews with managing health nurses (adopters) and health nurses (implementors) from twenty Danish municipalities were carried out (n = 22) in 2017. Moreover, two workshops with health nurses, and continuously meetings with implementation science experts were conducted in 2021-2022.

Results:

Barriers were identified on different levels. Organizational barriers within the work of health nurses included lack of time, economic resources, project fatigue, and political priority. Furthermore, health nurses lacked relevant tools to guide parents about promoting healthy weight development. Interpersonal barriers between health nurses and parents were identified as the difficulties of having conversations about healthy weight development, especially if the parents or health nurses were overweight themselves. Cultural differences including language barriers and different perceptions of for example healthy food choices were also found.

Conclusions:

The findings are central for ensuring that the Bloom Trial is relevant and applicable to the setting of health nurses in Danish municipalities. This is crucial for ensuring successful adoption, implementation, and prolonged sustainability.

Key messages:

- The study pinpoints key barriers (e.g. lack of time, project fatigue and cultural factors) of implementing an intervention promoting healthy weight in the community health nurse setting in Denmark.
- Involving community health nurses' perceptions aim at increasing the chances of producing a relevant and successful implementation strategy.

Abstract citation ID: ckac131.444
Inflammatory bowel disease at a young age – implications for achieving upper secondary education

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Background:

The incidence of inflammatory bowel disease (IBD) among children and adolescence is increasing worldwide. Having a chronic condition at a young age may affect educational achievement and later employment and self-support. The study aims to examine the impact of being diagnosed with IBD before 18 years of age on achieving an upper secondary education before 25 years of age.

Methods:

Using the Danish National Patient Register (1980-2018) all patients (born 1970-1994) diagnosed with IBD at a young age (<18 years) were identified. The IBD-patients were matched on age and sex with 10 references without IBD at the index date (date of diagnosis of IBD). The outcome was achieving an upper secondary education using data from Danish Education Registers. The association between IBD diagnosis and achieving an upper secondary education was analyzed using Cox regression with robust variance estimation adjusting for parents' highest educational level. Furthermore, stratified analyses were performed on parental socioeconomic status (education and income).

Results:

We identified 3,178 patients with IBD: Crohn's disease (CD) n = 1,344, Ulcerative colitis (UC) n = 1,834. Reference n = 28,220. The median age at diagnosis was 15.3 years (IQR: [13.0;16.9]). At the age of 25 74.0% (CI: 71.6-76.4) for CD, 75.8% (CI: 73.8-77.8) for UC, and 69.7% (CI: 69.2-70.3) for references had achieved an upper secondary education. The adjusted Hazard ratio (HR) of achieving an upper secondary education was 1.05 (CI: 1.00 -1.11) for CD and 1.09 (CI: 1.04 - 1.15) for UC. When stratifying the IBD-patient with the lowest socioeconomic status performed better than their peers.

Conclusions:

Being diagnosed with IBD before 18 years of age did not reduce the chance of achieving an upper secondary education. Patients with low socioeconomic status performed better than their peers, however the study gives no explanation of this.

Key messages:

- Children diagnosed with IBD before 18 years of age had at least the same chance of achieving an upper secondary education compared to references.
- IBD patients with low social economic status performed better than their peers.

Abstract citation ID: ckac131.445
Forced migrant women's Mental Health in the perinatal period in Germany- A mixed-method study

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Background:

After forced migration, pregnant women and new mothers face specific challenges in the host country. Little research focuses on the impact these challenges have on forced migrant (FM) women's mental health (MH). The study's aim shed light on FM women's mental wellbeing in the perinatal period.

Methods:

For this mixed-method study 15 individual problem-centered interviews were carried out in Arabic with FM mothers living in Germany within the postnatal period to one year postpartum. The transcripts were analysed using the Framework Analysis. In addition, structured quantitative interviews with 3070 new mothers were conducted on 3 obstetric wards in Berlin over a period of 23 months using an adapted version of the MFMCQ and the PHQ4. FM women (n = 187) were compared with immigrant (n = 1192) and non-immigrant women (n = 1673). A Kruskal-Wallis-Test was performed to compare the three groups.

Results:

In the qualitative interviews mothers stated having depression and varied emotions (e.g. unavoidable sadness, relief). Most FM mothers indicated contextual factors (e.g. bad housing conditions) and structural barriers in perinatal healthcare as negatively impacting their MH. The preliminary quantitative analysis of the interviews conducted in birth clinics directly after birth showed no significant differences in the mean scores of the PHQ-4 within the compared groups (mFMW = 2.83; mimmi = 2.61; mnonimmi = 2.5; p = .72).

Conclusions:

While the quantitative study part indicates that PHQ-4 scores are independent of FM experience, the qualitative part shows that FM new mothers face particular burdens in their living conditions that make them vulnerable to MH issues. Inconsistent results could be attributed to the different timing in which the structured questionnaires and qualitative interviews were conducted.

Key messages:

- To promote Mental health of new mothers, we advocate for a diversity oriented, responsive healthcare system.
- Effective approaches must be provided to include FM mothers in existing Early Childhood Intervention programs.

Abstract citation ID: ckac131.446
Feeding preterm infants with breast milk – the role of maternal pressure

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Background:

Mother's own milk (MOM) is the best nutrition for preterm infants because of its preventive effects. Nevertheless, current research shows that mothers have problems getting into continuous lactation, especially after preterm birth. Breastfeeding-related pressure after prematurity has not been measured yet. It's relevance for the lactation is thus unclear, as well as the role of the NICU staff's attitudes. The aim of this study is to gain more knowledge about breastfeeding-related pressure in order to enable mothers to have a positive breastfeeding experience and to sensitise NICU staff about this topic.

Methods:

The written survey included mothers of preterm infants with a birth weight under 1500g and an age from 6 to 24 months at the time of the survey. Descriptive and bivariate testing was used for analyses.

Results:

Data of 506 mothers was included (32% response rate). One third totally agreed to perceive pressure regarding breastfeeding their child with MOM (36%). A milk volume over 500ml/day 14 days post-partum was reported in 60%. That the nutrition with MOM was promoted by the physicians in the NICU was totally agreed by 44% of the mothers. To the promotion by nurses, 50% totally agreed. Pearson Chi^2-Test showed a significant correlation between milk volume and breastfeeding-related pressure (p = 0.005). Spearman's correlation test showed a significant correlation between a high promotion of MOM by physicians (Spearman's rho: -0.1150, p = 0.0109) and nurses (Spearman's rho: -0.0949, p = 0.0362) and lower breastfeeding-related pressure.

Conclusions:

Our findings indicate that breastfeeding-related pressure seems to affect most of the mothers of preterm infants and correlates with lactation, even if no direction of effect can be stated. A more breastfeeding promoting NICU staff is related to lower breastfeeding-related pressure. Therefore, NICU staff should be sensitised to breastfeeding-related pressure with regard to communication with mothers.

Key messages:

- Noticing breastfeeding-related pressure as an important factor for mothers within their lactation process may have the potential to enhance mothers to achieve their breastfeeding goals.
- NICU staff should be aware of breastfeeding-related pressure to enable more mothers to have a positive breastfeeding experience.

Abstract citation ID: ckac131.447
Germany vs. Austria: country-specific differences in becoming parents during the COVID-19 pandemic

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Background:

Becoming parents can be a big challenge, but how is this experience affected by the COVID-19 pandemic and its measures?

Methods:

Between 18.05.2021 and 01.07.2021, we conducted an online-survey to gain insight into becoming parents during the COVID-19 pandemic in Germany and Austria. The sample mentioned in this report consists of biological mothers living in Austria (n = 952) and Germany (n = 1012) who gave birth between the 16th of March 2020 (the beginning of the first lockdown in Austria) and the time of completion of the study. The mothers' current stress levels were assessed with the Perceived Stress Scale (PSS), and postnatal depression symptoms were quantified with the Edinburgh Postnatal Depression Scale (EPDS). Furthermore, we included questions to measure perceived social support and pandemic-related stress.

Results:

Current stress levels (U = 555677.50, z = 5.90, p < .001) and postnatal depression symptoms (U = 546354.00, z = 5.15, p < .001) were significantly higher in the German sample as compared to the Austrian sample. Yet, Austrian mothers reported higher social support as compared to the German mothers (U = 387834.00, z = -7.48, p < .001). Furthermore, we found higher levels of perceived social support to be associated with lower current stress levels (rs = -.40, p < .001). On average, perceived stress was moderately high in both samples (MGermany = 18.58, SDGermany = 6.60; MAustria = 16.76, SDAustria = 6.57).

Conclusions:

Stress levels and depression symptoms seem to be high and prevalent due to the pandemic and it is highly indicated to take action such as supporting families in need and emphasising social support in order to reduce mental health problems of parents as well as their children in the aftermath of the pandemic.

Key messages:

- Findings underpin the protective role of social support against psychological distress in new parents and show the high strain at current.
- Action needs to be taken in order to support parents and children at risk.

Abstract citation ID: ckac131.448
Designing active breaks in secondary school, results from focus group with teachers: the brave study

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Background:
Many adolescents are unable to accomplish the daily 60 minutes of moderate to vigorous physical activity (PA) recommended by WHO. Secondary school is a critical period for developing healthy habits and PA interventions have the potential to promote healthy development. Active Breaks (ABs) are a school-based intervention consisting of short bursts (5-15 minutes) of PA made part of the academic routine. Primary school has been ABs main setting, while secondary school interventions received less attention. The aim of the BRAVE Study is to investigate teachers' opinion about the feasibility of ABs in Italian secondary school.

Methods:
In November 2020 20 teachers from two secondary schools located in Bologna province (Italy) were enrolled in two focus groups (FGs). FGs were held online, recorded, and transcribed. Questions were asked about the role of PA in the school routine and related experiences, perceived barriers and facilitators of the intervention, suggestions regarding the intervention design. Final expectations were then discussed.

Results:
Despite limited experience with PA interventions, participants felt ABs would improve psycho-physical well-being for both students and teachers. Lack of time and space and a wary attitude towards ABs were listed as barriers. Program flexibility regarding content, administration time frames and implementation mode was listed as a great facilitator: program should be adaptable to participants' needs, favoring easy and quick exercises. Overall, expectations emphasized improving classroom behavior and promoting healthy habits.

Conclusions:
Teachers felt that inclusion of ABs in secondary school was promising and could lead to many health benefits. ABs were deemed feasible given their short duration and adaptability, since the program can be implemented with current personnel resources and space configurations. Co-design is essential to overcome personal barriers and create an effective and sustainable intervention.

Key messages:

- According to secondary school teachers, PA interventions have the potential to improve psycho-physical well-being and classroom environment, promoting healthy habits among students.
- ABs are deemed as a feasible and sustainable PA intervention thanks to program flexibility regarding contents, administration time frames and implementation mode.

Abstract citation ID: ckac131.449
Evaluation of an integrated physical activity program for pregnant women: WELL-DONE! Study

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Background:
Regular practice of physical activity (PA) during pregnancy has benefits for maternal and fetal health. Therefore, pregnant women (PW) should practice at least 150 minutes of moderate PA per week following the WHO guidelines. The aim of the study is to evaluate the effect of an adapted physical activity (APA) intervention for PW, to be included in childbirth preparation classes (CPCs) in terms of levels of PA, quality of life, physical performance, self-efficacy, sleep quality and anxious-depressive states.

Methods:
The WELL-DONE! Study is a quasi-experimental study conducted with pregnant women at St. Orsola hospital, Bologna. We compared an experimental group (EG) with a control group (CG). EG attended 1hour/week session of APA during the usual CPCs for a 6 weeks period, while the CG received a one hour lesson about PA recommendation in pregnancy. The pre-post evaluation was carried out through questionnaires and motor tests, to which PW were subjected at baseline (T0), after the intervention (T1) and 3 months after delivery (T2). We used the Pregnancy Physical Activity Questionnaire (PPAQ) to collect data regarding PA levels and sedentary behavior.

Results:
A sample of 50 pregnant women aged between 29-46 (mean age = 35.44±3.99) was involved in the study (39 CG, 11 EG). After the intervention, PPAQ sedentary activity score was reduced in the EG group (-10.20±24.12) while remaining similar in the CG (0.58±22.65) without statistically significant differences between groups.

Conclusions:
Preliminary results of the study show a reduced sedentary time in PW, highlighting a positive trend in the EG. This data underlines that incorporating APA in the CPCs can be an effective and safe strategy. Nevertheless, further analysis must be needed to find out if this trend can be observed in light PA, in the moderate and vigorous one.

Key messages:

- Physical activity during pregnancy is a valuable tool for improving both mother and child well-being.
- Physical activity interventions, implemented in CPCs, seem useful in order to raise awareness about PA importance and reduce sedentarism in PW.

Abstract citation ID: ckac131.450
Potential association between working memory and physical fitness status: the BRAVE study

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Introduction:
The World Health Organization launched a global action plan targeted to obtain a 15% relative reduction in the global prevalence of physical inactivity in adolescents by 2030 also

promoting school-based PA interventions and programs in school. Active Breaks (ABs) are a school-based intervention consisting of short bursts (5-15 minutes) of Pa led by teachers or peer. Many researches investigated the implementation of ABs into primary school setting as a strategy to reduce sedentary behaviour, improve cognitive and physical function. However, this kind of intervention has not extended to secondary school, especially in Italian context. For this reason we started the BRAVE study to evaluate the potential effect of implementing ABs in secondary school. The study is currently in the administration phase of ABs to adolescents The preliminary analysis aims to underline a potential association between working memory performance (WM) and physical fitness status among secondary school students at baseline.

Methods:

In March 2022 we conducted baseline assessment in a secondary school in Valsamoggia (Bologna, Italy). Working memory was evaluated using backward digit span while physical fitness status was assessed using three different fitness test: standing long-jump (SLJ), six minute Cooper Test (6MCT) and Shuttle run test (SR).

Results:

A total of n = 125 adolescent, mean age 12.79±0.89, were enrolled in the study. After performing a regression analysis we found that WM is significantly associated only with age of student (b = 0.2, 95%CI 0.25, 0.11 p = 0.02). A trend also emerged between WM performance and SLJ but with no statistically significant differences (b = 0.160, 95%CI 0.03, 0.02, p = 0.09). The 6MCT and HT have no relevant associations with WM score.

Conclusions:

These preliminary results suggest that age is associated with cognitive performance but no positive association were found between WM score and physical fitness status excepted for a small trend with SLJ test.

Key messages:

- Age is related to WM in adolescent students.
- ABs interventions could represent a valid strategy to encourage movement, improve cognitive and physical fitness performance.

Abstract citation ID: ckac131.451
Invisible mother-daughter heredity

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Background:

The type of maternal caregiving impacts children's growth and can lead to heritable changes in gene expression. When women become mothers, they adopt parents' behaviours similar to those received in the family of origin. The study investigates if a birth's social and cultural content can be seen as heredity transmitted from mother to daughter.

Materials and methods:

A retrospective study was conducted on a group of mothers recruited across Italy through the social network Facebook. The study was carried out using a questionnaire administered from July to September 2021. The survey consisted of 21 questions. The analysis was carried out using STATA 14.

Results:

Our sample consisted of 6051 mothers; the mean age was 37.7 years. Womens born by spontaneous birth has 2.1 times higher risk of having a spontaneous birth for their first child. Those born by operative labour have 2.7 times higher risk of having an operative delivery for their first child. Finally, those born by caesarean section are 2.3 times more likely to have a caesarean section for their first child. On the other hand, those born by preterm labour have 1.8 times higher risk of delivering their first child preterm. Those who were breastfed have 2 times higher risk of breastfeeding their first child. Women who have been told their birth is an extraordinary event are 2 times more likely to consider the birth of their first child as a problematic but still extraordinary event. Those who received a description of childbirth from their mother as a problematic event are twice as likely to consider the birth of their first child as a traumatic event overall.

Conclusions:

The results show that transmission, written in the psyche, in preverbal and in internalisations derived from the relationship with one's mother, is true and strongly present. Also, the ways of one's own birth are so strong as to have repercussions on the daughter's own and subsequently also on her children.

Key messages:

- The unconscious objects, which are projected onto the children, can also take the form of both physical and psychic somatisations, which are repeated cyclically between generations.
- The way in which birth is cared for and the quality of care provided at this unique time in a woman's life will leave an imprint not only on the woman herself, but also on future generations.

Abstract citation ID: ckac131.452
Enablers and barriers to effective parenting within the first 1000 days of life

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Background:

The first 1000 days is the period between conception and a child's second birthday. Globally, research on parenting is in an advanced stage, but parenting research focusing specifically on parenting in this developmental phase is limited in South Africa. Therefore, this study explores the enablers and barriers to effective parenting within the first 1000 days through the lens of parents and caregivers in low socio-economic communities.

Methods:

This study was conducted in low socio-economic communities of South Africa. An exploratory qualitative research design explored the enablers and barriers to effective parenting within the first 1000 days of life. Thirty participants were purposively selected and interviewed in this study. A semi-structured interview schedule was used for all interviews. The data were analysed using inductive thematic analysis.

Results:

Two main categories emerged (effective parenting enablers and effective parenting barriers) during the data analysis. The main enablers of effective parenting within the first 1000 days of life include a support system, healthy behaviours/environment, job opportunities, religion, information/knowledge, and professional assistance. On the other hand, the main barriers to effective parenting were low socio-economic circumstances, environmental circumstances, lack of partner's support, the negative impact of technology, and lack of access to services.

Conclusions:

Enablers that need to be promoted for effective parenting range from support systems to professional assistance for parents. Also, barriers that need to be removed for effective parenting range from low socio-economic circumstances to a lack of partner's support for parents. This is because effective parenting is vital in improving developmental outcomes for children within the first 1000 days of life. Therefore, there is a need to develop policies and interventions to promote effective parenting within the first 1000 days in the communities.

Key messages:

- Effective parenting is vital in improving developmental outcomes for children within the first 1000 days of life.
- There is a need to develop policies and interventions to promote effective parenting within the first 1000 days in low socio-economic communities.

Abstract citation ID: ckac131.453
Maternal dietary adherence during pregnancy to recommendations: a cross-sectional study in Modena

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Background:

Unbalanced nutrients intake and incorrect weight gain can lead to immediate and future adverse health consequences for both mother and child. The Italian Society of Gynaecology and Obstetrics (SIGO), has drawn up a series of nutritional recommendations with the aim of promoting a correct food intake for future mothers. The purpose of our study was to assess adherence to good dietary indications during pregnancy and to evaluate if voluptuary habits could play a role.

Methods:

This cross-sectional study investigated dietary habits during the last trimester of pregnancy. We evaluated the adherence to dietary SIGO recommendations of a sample of pregnant women representative of physiologic full-term pregnancies (n = 572, mean age 33.4±5.2) living in Modena (Italy), recruited between 2016 and 2020. Maternal diet during pregnancy was assessed by a self-administered questionnaire fill in at the hospital after childbirth, evaluating lifestyle habits and usual food intake. Descriptive statistics and bivariate associations (Chi-square tests) were performed.

Results:

More than 50% of women did not comply with SIGO dietary recommendations. Overall, adherence was very low, ranging between 8.4% (sweets) and 38.8% (seafood), for all food categories, excluding coffee and tea (89%), alcohol (76.2%), red wine (99.1%) and seasoning (olive oil 93.4%). Preliminary results suggest that several factors and behaviours, including BMI before pregnancy, age, smoking habits, education, are associated with levels of adherence to different food categories.

Conclusions:

Poor adherence to a proper dietary regimen during pregnancy is a missed opportunity for prevention and demonstrates the importance of promoting public health interventions to improve dietary recommendations adherence. Several initiatives, such as courses, information campaigns, use of social media and counselling can be useful for a nutrition education in pregnancy, raising awareness of the related benefits for both mother and child.

Key messages:

- Nowadays pregnant women's compliance to diet recommendations is still low.
- There is still a lot to do in terms of education and awareness of future mothers.

Abstract citation ID: ckac131.454
The Brave study: promoting active breaks in secondary school from students' point of view

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Background:

According to the WHO recommendations, children and adolescents should perform at least 60 minutes per day of moderate to vigorous physical activity (PA). Active Breaks (ABs) interventions, short physical activity breaks of 5-15 minutes during school hours, have been examined in primary school children as a potential strategy to counteract a sedentary lifestyle, with minimal disruption to school learning activities. The aim of the BRAVE STUDY is to investigate the feasibility of ABs in a secondary school setting from the students' point of view.

Methods:

In December 2020, 10 students (age 12-13, 6 females and 4 males) attending the second and third grade of secondary schools located in Bologna province (Italy) were involved in a focus group (FG). The FG was conducted online because of COVID-19 and the answers transcribed for a later analysis. Students' opinions were probed on the role of PA in school and possible facilitators/barriers to implementation of ABs in the school.

Results:

Students reported they wanted to be more active as a consequence of time spent in class sitting at a desk. Students also reported that an organized activity like ABs conducted in the classroom setting provides an excellent opportunity to improve social relations with classmates. Students also highlighted the possible psycho-physical well-being benefits arising from PA. Among the potentially negative aspects reported, students underlined the possible confusion that would be created in classroom and the time subtracted from academic learning activities.

Conclusions:

The FG represents an ideal mean to obtain in-depth information on how people feel about a pending program or a change in their routine. The current FG reinforces positive outcomes from exposure to a PA program that can be intertwined with their daily classroom activities. ABs programs can help to reconcile the needs of students that arise during the day with the PA objectives recommended by the WHO.

Key messages:

- ABs can be a zero-cost intervention strategy to achieve WHO recommendations and would create conditions for a greater psycho-physical benefits in classrooms.
- A qualitative approach, such as FGs, provides a mean to collect information not obtainable with quantitative methods, that could be useful to co-design interventions for children and adolescents.

Abstract citation ID: ckac131.455
Removing barriers to utilisation of support services for abused female adolescents in Nigeria slums

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Background:

Female adolescents in urban slums experience a plethora of violence. The inherent health inequalities in the urban slums also present barriers to adolescents' access to support services that can alleviate the impact of violence and bring perpetrators to justice. Health facilities can play key proactive roles in facilitating effective responses to address the problems of violence. This research sought to answer the questions: what support services are available to female adolescents in the event of violence; what are the barriers to accessing these services; and what roles can health workers play in removing these barriers?

Methods:

The study used an ethnographic approach involving 40 in-depth interviews and 9 focus group discussions with female adolescents, 17 in-depth interviews were conducted with health providers and community leaders. The study setting comprised intentionally sampled slum communities in Lagos and Oyo states, southwest Nigeria. Thematic data analysis was conducted to address the study questions.

Results:

Potential support services available to female adolescents in the study setting included the Community Development Association, police, family members, and health facilities. Identified barriers to utilizing available support services included stigmatization, non-formalization of police reports of violence, ambiguous attitudes of health workers to abused adolescents, and unfamiliarity on the part of adolescents. Although resources are available to adolescents in the event of violence, the lack of coordination of services has led to gross inefficiency for intervening.

Conclusions:

To address the inefficiency of services, the health sector is best positioned to ensure synergy among the key stakeholders to reduce stigma and stop abuse experience among adolescent girls. Beyond a reactionary, curative approach, health providers need to play a preventive role through education, advocacy, and coordination of interventions at the community level.

Key messages:

- Health workers at primary health facilities need to support adolescents who experience violence, especially those who using their services.
- In addition, health workers are best positioned to create synergy among available support services to alleviate and mitigate the impact of violence on female adolescents in the community.

Abstract citation ID: ckac131.456
Strengthening antenatal care providers' role to address HIV: experiences of pregnant women in Russia

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Background:

Significant gaps in HIV treatment remain in Russia. Women are often diagnosed during pregnancy, which is important for prevention of mother-to-child transmission and mothers' longer-term treatment. We aimed to learn the needs of HIV-positive pregnant and postpartum women and to identify opportunities for antenatal care (ANC) providers to better address these needs.

Methods:

We conducted in-depth interviews with Russian women who were diagnosed with HIV during pregnancy in July-November 2021. We conducted thematic analysis using team-based deductive and inductive coding of the interview transcripts.

Results:

The Russian healthcare system operates in silos, which means that while pregnant women are tested in ANC services, they must visit a specialized AIDS Center for their HIV care. Our respondents mostly appreciated the specialized care, but they recognized that it presented difficulties in discussing their HIV-related needs with ANC providers. Respondents noted a lack of coordination and collaboration between the AIDS Centers and the ANC services. Respondents described how ANC providers were often ill-equipped to answer questions, offer information, or provide extensive counseling upon diagnosis. However, some respondents shared the positive impact a supportive and trustworthy ANC provider had on their engagement in HIV care. This included psychological, informational, and instrumental support. Respondents were receptive to the empathy and openness of ANC providers as long as they did not exhibit incompetence or judgement. The stigma and discrimination that many respondents encountered in the healthcare setting served as significant barriers to openly discussing HIV with ANC providers.

Conclusions:

Issues of trust, knowledge, support, compassion, de-stigmatization, and coordination of services are important considerations in strengthening the role that ANC providers can have in improving HIV-positive pregnant women's engagement in HIV treatment.

Key messages:

- Pregnant women who are diagnosed with HIV require more comprehensive psychosocial support from the healthcare system. This could have a positive impact on longer-term engagement in HIV treatment.
- Antenatal care providers need better preparation and empathy to address the concerns of HIV-positive pregnant women and to support these women through the process of accessing HIV treatment and care.

Abstract citation ID: ckac131.457
Parents' knowledge about their children's congenital heart disease: an observational study

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Introduction:

Congenital heart diseases (CHD) represent abnormalities of cardiovascular structure or function present at birth. The degree of knowledge of parents of children with CHD determines the quality of care and the quality of life of their children. Several studies have shown that parents' knowledge is still lacking.

Objectives:

This study aims to translate and validate in Italian the Leuven Knowledge Questionnaire for Congenital Heart Disease (LKQCHD) and to assess the knowledge of parents of children with CHD about heart defect, treatments, preventive measures, opportunities for physical activity and reproductive problems of their children.

Methods:

Translation and validation of the questionnaire were performed using a multistep method: forward translation, backward translation, and pilot testing. Five experts in CHD were included for the validation of the questionnaire. The sample consisted of fifty-four pairs of parents of children with CHD. Parents were contacted by telephone; knowledge was assessed using an electronic questionnaire.

Results:
Five items were found to have an Item Content Validity Index (I-CVI) of 0.6, 2 of 0.5, and 2 of 0.2. The Scale ContentValidity Index (S-CVI) was found to be 0.80. Regarding parental knowledge, the results show that almost all parents are able to correctly state the name of the diagnosis and the description and location of the heart defect. However, parental knowledge has important gaps; in particular, parents are less informed about the most characteristic sign of endocarditis, the possibility of contracting endocarditis more than once in a lifetime, and risk factors. Parental knowledge also seems to be lacking regarding symptoms suggesting worsening health status in their children.

Conclusions:
The Italian version of the LKQCHD has proved to be a valid tool to measure the level of knowledge of parents of children with CHD, allowing to identify in which areas it is necessary to improve the education addressed to parents.

Key messages:

- Assessing the knowledge of parents of children with CHD allows to improve their education.
- The Italian version of the LKQCHD is a valid tool to measure the level of knowledge of parents of children with CHD.

Abstract citation ID: ckac131.458
Importance of communication between health care professionals and forced migrant women during birth

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Background:
Communication and information are part of the Sexual and Reproductive Health and Rights (SRHR). Various studies show that successful communication between birthing person and health care professionals (HCP) has a positive impact on birth and lowers risk of traumatic birth experience for women. Since information and communication is a major challenge for both forced migrant women (FMW) and health workers during birth, we investigated experiences of both sides in qualitative study.

Methods:
Qualitative interviews were conducted with 7 maternal HCPs (midwifes, physicians, social workers) and with 7 FMW 1-9 months after the birth of their child in 3 regions in Germany. The refugee sample included new mothers from 6 countries of origins, 14 languages, and an average of three years living in Germany. The interviews were analyzed via framework analysis.

Results:
The majority of the interviewed FMW had no or little knowledge about SRHR. Good communication is one of the main factors allowing a safe and trustful environment with the birthing women. If verbal communication is not possible nonverbal communication helps to create and maintain a care relationship with the women is given. However, due to lack of staff, time and interpreters FMW with little German language proficiencies receive hardly any relevant information and had a poorer accompaniment during birth.

Conclusions:
To provide for equity and SRHRs in maternal health and care there is an urgent need for reliable professional interpretation and easily accessible information in relevant languages material about giving birth, medical possibilities, procedures and interventions. Additionally, further training on heterogeneous needs and life contexts is necessary, to improve professional care during birth in maternity wards. HCPs 1:1 support is strongly recommended.

Key messages:

- Information on SRHR and communication are a fundamental part of birth work and should be made possible for all women including FMW to prevent discrimination and traumatic birth experiences.
- If given, 1:1 support by HCPs during birth can comensate missing communication.

Abstract citation ID: ckac131.459
Trends of risk behaviors in adolescents: a 10-year study in a representative sample of Tuscany, Italy

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Background:
The aim of the study was to evaluate the trends of prevalence of several health risk behaviors (HRBs) and health conditions over a 10-years period in a representative sample of adolescents of Tuscany Region, Italy.

Methods:
The study had a repeated cross-sectional design, data from the last four survey waves of EDIT surveillance (2008-2018) were used. EDIT surveillance investigates HRBs in a representative sample of students attending the upper secondary schools of Tuscany. Prevalence of 17 HRBs and health conditions were considered and analyzed by age, sex, and socioeconomic status (SES).

Results:
A total of 21.943 students were surveyed from 2008 to 2018. Declining trends in the participation in smoking, cocaine use, driving under the influence of alcohol and drugs, and problem gambling were observed, while alcohol abuse and at-risk sexual behaviors remained unchanged or increased during the study period. During the most recent survey males resulted more frequently involved in most of the HRBs, while females more frequently reported physical inactivity, regular smoking and not using a condom. Female participation in smoking and alcohol abuse behaviors, fruit and vegetables consumption, and bullying worsened over the study period. Smoking, poor dietary habits, physical inactivity, high distress level, and obesity were more frequently observed in low SES students than in high SES students.

Conclusions:
In conclusion findings showed various different tendencies in adolescent participation in HRBs over the course of the last decade; concerning trends in at-risk sexual behaviors and alcohol consumption and females' risk-taking behavior on the rise require careful monitoring and intervention.

Key messages:

- Distinct tendencies according to sex, socio-economic condition and specific health risk behavior were observed in adolescent participation in health risk behaviors over the course of the last decade.
- Health promotion and prevention interventions tailored on specific health risk behaviors and population groups are needed.

Abstract citation ID: ckac131.460
Multisectoral approach to address Female Genital Mutilation: a case study from Portugal

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Issue:

Female genital mutilation (FGM) comprises all procedures that injury female genital organs for non-medical reasons, with several health impacts. Due to global migration, FGM has been increasingly recognised as a healthcare issue in Europe, affecting nearly 1 million women. In Portugal it is estimated that 5483 migrant women have undergone FGM in the Lisbon region. Intervention is required to tackle this issue.

Description:

Portugal launched the ''Healthy Practices: End of FGM'', a multiagency project targeting Lisbon and Tagus Valley region. Project implementation started in Nov 2018 at 5 local public health units (PHU) and was scaled-up to 5 more in Feb 2020. Project comprises 3 main axes: 1) inclusion in public policy instruments; 2) professionals' education and awareness; and 3) community intervention. We describe inclusion of FGM in public policy, professionals training and changes in FGM recording before and after intervention.

Results:

Between 2018-2022, inclusion of FGM in municipalities' migration policies doubled. Between 2019-2021, 110 training sessions (n = 1722 professionals) were promoted. During pandemic years, only 344 (2020) and 202 (2021) were trained. Raising awareness and empowerment to risk communities happened mainly through local/online open sessions, workshops, flyer distribution, video projections. These occurred in all 10 PHU, mostly through partnerships with Non-Governmental Organizations and municipalities. According to the Portuguese Health Records, until 2018 there were only 300 women registered with FGM. Between 2019-2021, 363 more were added.

Lessons:

The multisectoral approach allowed PHU professionals to collaborate directly with external organizations from different society sectors. COVID-19 pandemic posed a challenge to implementation, especially in the community intervention axis. Notification numbers increased after interventions, though causality could not be established and impact evaluation is yet to be performed.

Key messages:

- Multisectoral projects for FGM intervention have specific implementation challenges, including how to justify and evaluate them, that must be considered in each setting.
- Training health professionals might increase identification and notification of FGM, but the impact in preventing FGM in the Portuguese reality is still largely unknown.

Abstract citation ID: ckac131.461
Comparing perspectives on research needs from stakeholders vs. researchers in an exposome project

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Background:

Exposome research looks into how combined exposures affect human health. The EU-funded Equal-Life project focuses on physical and social exposures in a child's environment and its effects on children's mental health and cognitive development in the life course. Perspectives and priorities on what to study in particular might differ between practitioners and researchers. Therefore, collaboration with external stakeholders from various fields is encouraged to integrate practical experience and link it to the researchers' aims.

Methods:

Two Delphi studies were conducted collecting and evaluating research questions to be studied in the project among a) the researchers within the project and b) among external stakeholders from various European countries. The exercise was to evaluate the research questions for group a) based on relevance and testability and for b) e.g. regarding practitioners' work and options for policies. Involved stakeholders work in health care, and urban planning, among others. Prioritised questions are collated.

Findings:

Within the researchers' group, top-rated questions were mainly mechanism-directed in terms of how and to what extent certain factors affect children's mental health and cognitive development, cumulative effects in different settings, among others. Stakeholders most value research questions on practical issues, e.g. effects of early experiences of discrimination, critical windows in children's lives that are most sensitive regarding the impact of exposures on mental health and cognitive development, or impact of exposures in early stages of life.

Discussion:

In comparing approaches of stakeholders and researchers, stakeholders' input from the practical field can shape the approach of the research process. The second benefit is to derive implications for creating effective interventions and policies to prevent adverse effects of environmental exposures and to foster positive health in children and later on in life.

Key messages:

- Bi-directional exchange between researchers and external stakeholders can make gaps visible.
- Engaging stakeholders into a research process can help sharpening the aim and outcome of a project.

Abstract citation ID: ckac131.462
Prospective prediction of alcohol consumption among a Tunisian sample of adolescents

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Background:

During adolescence, alcohol consumption represents a new experience with the advantage of facilitating the integration of a peer group. The global overall prevalence of this risk behavior among the 15-19 years old was over 25% in 2018. However, this prevalence varies between countries.

Objectives:

To determine the incidence and the predictors of alcohol consumption among high school students in Sousse, Tunisia between 2017/2018 and 2018/2019.

Methods:

A prospective longitudinal study was conducted in four high schools in the governorate of Sousse during the 2018-2019 school year. Pre-trained medical doctors used an anonymous self-administered questionnaire to collect data about socio-demographic and educational features, alcohol consumption, tobacco use, illicit substances use and emotional disorders.

Results:

Participants accounted for 404. Their average age was 16.4 (±1.1) years. Females represented 68%. The prevalence of alcohol consumption in 2017/2018 was 5.9% while the cumulative incidence during the 2018/2019 school year was 3.5%. Among males, this incidence was of 11.9%. Among females, it was of 3% ($p = 0.020$). Illicit substance use among friends was the main predictor of becoming alcohol consumer with an adjusted odds ratio of 6.4 (95% CI: 1.9-21.3) on the other hand, having an anxiety trouble predicted less this risk behavior (adjusted odds ratio =0.2 95% CI: 0.1-0.8).

Conclusions:

Alcohol consumption is becoming more and more common among the adolescents of Sousse especially among males. The current national strategy against substances use in schools should be reinforced. Implementation of a social skills training among adolescents to improve assertiveness is essential.

Key messages:

- Alcohol consumption has an upword trend among the adolescents of Sousse.
- The current prevention programs targetting adolescents in Tunisia should be revised and integrate a comprehensive and multisectoral program.

Abstract citation ID: ckac131.463
Erasmus+sport let's move Europa: learning units for health promotion among children and adolescents

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Background:

School years are crucial for acquiring life-lasting healthy habits. However, an increasing rate of children and adolescents fail to maintain a healthy lifestyle. European Union has financed the Erasmus+ Sport Let's Move Europa project to design an innovative digital tool for promoting healthy lifestyles among those age groups. University of Bologna, partner of the project, has developed 30 Learning Units (LUs) about Physical Activity, Sleep and Nutrition to be integrated in the school program by teachers.

Methods:

A group of 17 teachers (15 females and 2 males, mean SD age 49,5 ±11,6) from primary and secondary schools located in Bologna province (Italy) took part in semi-structured focus groups (FGs). The investigation focused on facilitators/barriers of the intervention and possible solutions, identifying time frames and locations, suggestions for engaging the different stakeholders (teachers, students and families). All FGs were recorded, transcribed, anonymized, and analyzed through inductive thematic analysis.

Results:

30 LUs were created based on the latest scientific evidence and the FGs output. Each LU addresses a specific topic and is tailored differently for primary and secondary school. The layout includes an investigation on the topic, classroom activities, and a section about "healthy homework" or "challenges" to be accomplished at home, engaging families in the construction of a healthy routine. All the activities were designed to be feasible and sustainable. Each LU includes a discussion phase to understand students' feedback about proposed homework and learning content.

Conclusions:

FGs have proven crucial to tailoring LUs on the needs of different stakeholders and co-designing an effective intervention. "Healthy homework" and "Challenges" encourage students to pursue healthy habits also outside the school setting, involving families. Feedback on the activity provides an insight into the progression and effectiveness of the intervention.

Key messages:

- The EUmove project integrates knowledge about sleeping, nutritional and physical activity habits into the school curriculum to promote healthy lifestyles among students and their families.
- Thanks to the FGs, LUs are designed to suit the target audience. LUs integration into school curricula is therefore a feasible intervention, not requiring specialized personnel to be implemented.

Abstract citation ID: ckac131.464
Self-reported strengths and difficulties among Swedish adolescents: presence, continuity and change

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Background:

The Strengths and Difficulties Questionnaire (SDQ) is a screening instrument for emotional and behavioural problems. Swedish reference values based on large-scale national data are lacking for mid- and late adolescents. Also, there is a scarcity of longitudinal studies about the development of strengths and difficulties from middle to late adolescence. The study aims were 1) to report on Swedish adolescents' assessment of their strengths and difficulties and to present joint and gender-specific reference values for identifying risk groups; 2) to examine the continuity and change of strengths and difficulties and to what extent this differs by gender.

Methods:

Data was based on a national Swedish sample of adolescents aged 15-16 years in 2017 ($n = 5338$) who were surveyed again in 2019 ($n = 3973$). Mean values and reference values for "close to average" (0th-80th percentile), "slightly raised" (>80th-90th percentile) and "high" (>90th percentile) SDQ scores were calculated. Comparison in SDQ scores by gender and across time was approached using inferential statistics.

Results:

Girls reported higher levels of emotional problems ($p = <0.001$), whereas boys showed higher levels of conduct problems ($p = <0.001$) at t1 and t2. Hyperactivity slightly prevailed in girls (p = 0.007), and peer problems were slightly higher in boys (p = 0.027) at t2. Prosocial behaviour was higher in girls than boys (p = <0.001) at t1 and t2. Changes in SDQ scores across time were in general small. Yet, analyses focusing on risk groups showed that among those who scored >80th or > 90th percentile at t1 about half scored above the same threshold at t2.

Conclusions:

This study provided joint and gender-specific reference values for mid- and late adolescents in Sweden, and found some gender differences in SDQ scores and degree of change. Reported national gender-specific reference values may facilitate identifying adolescents at risk and potentially increasing timely mental health intervention measures.

Key messages:

- Among the subscales indicating difficulties, the highest was level of emotional problems in girls and hyperactivity in boys; the largest increase over time was in emotional problems for both genders.
- Analyses of changes in SDQ mean scores showed only minor changes between t1 and t2, while analyses of movement between categories defined by cutoffs presented a more noticeable degree of change.

Abstract citation ID: ckac131.465
Consequences of Housing Conditions on Maternal Health of Forced Migrant Women

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Background:

Housing is a major social determinant and contextual factor of health. Forced migrants are restricted in their freedom of choosing and shaping their housing conditions. This qualitative study highlights the impact of housing restrictions on reproductive and maternal health from the lived experience of forced migrant women who recently gave birth to a child.

Methods:

Qualitative problem-centered interviews were conducted with 33 refugee mothers (Mage = 31 years) 1-9 month postpartum. Interviewees came from 19 countries of origins, spoke 22 languages, and had lived in Germany for an average of three years. The mothers' perspectives were complemented by 75 qualitative interviews with maternal health care professionals, (HCPs: midwives, gynecologists, social workers). Interview transcripts were analyzed via framework method regarding (1) type of housing: shared accommodation vs. private apartment, (2) region: rural vs. urban, (3) exhausting and supporting conditions as well as (4) consequences on maternal health.

Results:

Interviewees living in shared accommodations reported exhausting conditions hindering self-determined upbringing of their newborn, e.g., confined living spaces, racism of staff, shared kitchen and bathrooms, lack of privacy, mobility, access to medical care, hygiene. Reported consequences on maternal health ranged from physical stress to social stress and mental stress (e.g., sleeping problems, depression, fear, worrying about health of the newborn). Interviewees living in private apartments showed higher autonomy and contentment. HCPs reported missing time and staff to provide adequate support.

Conclusions:

Both refugee women and HCPs reported housing as main stressor during pregnancy and childbed, resulting in higher physical, social, and mental stress. Strategic social support for finding suitable private apartments for new families is needed as well as comprehensive visiting midwifery care in accommodations.

Key messages:

- Living conditions in shared accommodations are unacceptable from a public health and human rights perspective, especially for women during pregnancy and childbed.
- Negative effects on maternal health and self-determination of families were shown.

Abstract citation ID: ckac131.466
Prospective prediction of substances use among a cohort of Tunisian adolescents

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Background:

The risk of substances use increases during adolescence. In Sousse (Tunisia), an upward trend of these risk behaviors has been observed during the last years among young adolescents. Among older adolescents, the trend of their use is unknown.

Objectives:

To determine the incidences and the most influencing factors on substances use among high school students in Sousse between 2018 and 2019.

Methods:

A prospective longitudinal study was conducted among a cohort of high school students from Sousse. The same pretested questionnaire served to collect data in 2018 and 2019 from the same participants in their classes and in the presence of pre-trained investigators.

Results:

A total of 404 high school students have participated in the study. Their median age was of 17 (IIQ: 15.8-17.6) years. Girls represented 66.8% of participants. The incidence rates of lifetime tobacco use, alcohol consumption, lifetime inhalants use and lifetime illicit substances use between 2018 and 2019 were 13%, 3.5%, 1.8% and 2 .9% respectively. Lifetime tobacco use was the main predictor of inhalants experimentation. This latter was the main predictor of becoming a user of e-cigarettes while alcohol consumption was the most influencing factor on cannabis experimentation among high school students. On the other hand, illicit substances use among friends predicted e-cigarette use, alcohol consumption, and cannabis experimentation among participants.

Conclusions:

The existing prevention programs aiming at reducing tobacco use and substances use in the schools of Tunisia should be reinforced and integrate a comprehensive and multi-sectoral prevention program. The implementation of a national observatory of substances use would ensure the continuous improvement of this program.

Key messages:

- There is an upward trend on using substances among the adolescents of Sousse, Tunisia.
- Tobacco experimentation and alcohol consumption are the gateway to later substances experimentation among the adolescents of Sousse, Tunisia.

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It matters what we do: Relationships between forms of media use and life satisfaction of adolescents

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Background:

Electronic media communication is firmly anchored in the leisure time of adolescents. Adolescents use electronic devices (ED) as a means of interpersonal communication with friends, such as text messaging, for entertainment in the form of receptive communication, such as watching movies, in the form of interactive communication, such as playing computer games, and for other purposes, such as homework. We aimed to identify how these communication forms are related to and interact on life satisfaction (LS) of girls and boys.

Methods:

We conducted multivariable linear regression analysis with the dataset of 5,961 adolescents aged 11, 13 and 15 years, obtained from the German Health Behaviour in School-aged Children (HBSC) survey of 2013/2014. Separate statistical analyses were performed for girls and boys, including statistical interactions. We controlled for age, family affluence and family structure.

Results:

Interpersonal communication with friends has a positive relationship with LS in boys ($\beta = 0.12$, $t = 3.19$, $p = 0.001$), but no effect in girls. Whereas other communication forms have a negative main effect on life satisfaction in girls (entertainment $\beta = -0.1$, $t = -3.79$, $p < 0.001$; gaming $\beta = -0.09$, $t = -4.12$, $p < 0.001$; using the ED for other purposes $\beta = -0.04$, $t = -2.26$, $p = 0.024$), we found no association of entertainment with LS for boys. The negative effect of gaming in boys is conditional on the level of using the ED for other purposes: the results show a reinforcing statistical interaction ($\beta = 0.02$, $t = 3.24$, $p = 0.001$).

Conclusions:

The results demonstrate the relevance of considering the differences in associations between single forms of communication and LS for boys and girls separately. This confirms our theoretical focus on a communication-centred approach. Moreover, it is of high relevance to identify potentially enabling and harmful media communication and to understand adolescents' perspectives on these forms of communication.

Key messages:

- When examining associations between media use and life satisfaction among adolescents, form of communication and gender should be taken into account.
- Investigating interactions of different forms of communication can help to better understand their influence on adolescents' life satisfaction.

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Insufficient support and help for adolescents with disabilities during the COVID-19 pandemic

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Background:

The COVID-19 pandemic may have increased the need for help and support for adolescents with disabilities. At the same time, moving to distance learning can reduce access to support services. Despite this, little is known about this issue. Thus, we investigated differences in the unmet need for help and support between adolescents with and without disabilities during the COVID-19 pandemic.

Methods:

We analyzed large population-based data from the Finnish School Health Promotion study obtained during 2019 and 2021 (2019: n = 87,215; 2021: n = 91,560). The target group comprised adolescents from lower secondary schools in Finland (age: M = 15.3, SD = .64). Logistic regression models were applied to investigate differences in the unmet need for help and support between adolescents with and without disabilities.

Results:

During the pandemic, adolescents with disabilities reported insufficient help and support related to their learning and well-being from teachers, school curators and psychologists, and school nurses and doctors more often than other adolescents ($p < .001$). Adolescents with disabilities reported more often than others that distance learning involved insufficient learning support ($p < .001$). Between 2019 and 2021, an increasing proportion of adolescents with disabilities felt that they had received insufficient help and support related to their well-being from nurses, doctors, psychologists, school curators, and teachers. To summarize, the COVID-19 pandemic reduced access to support and assistance for adolescents, particularly those with disabilities.

Conclusions:

Policies in schools should be developed and resources secured so that support and help for adolescents with disabilities can be secured in exceptional circumstances. Insufficient support and assistance for adolescents with disabilities can impair their learning outcomes and health.

Key messages:

- During the COVID-19 pandemic, adolescents with disabilities reported insufficient help and support related to their learning and well-being more often than other adolescents.
- In times of crisis, support and help for adolescents with disabilities must be guaranteed.

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Parents' experiences of an antenatal visit being part of a home visiting program in deprived areas

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Background:

There are considerable health divides between residential areas in many Swedish cities. In more disadvantaged areas children grow up with poorer health outcomes than the country average. To meet the greater needs of children growing up in these areas through proportionate universalism, an extended home visiting program has been delivered. A novel part of this program has been the social worker and nurse later conducting home visits meeting the parents at the maternity care clinic before childbirth. The aim of this study was to explore parents' experiences of that antenatal visit.

Methods:

Semi-structured interviews were carried out with nine mothers and three fathers around 3 months postpartum. Nine of the participants were foreign-born and a translator was used for four of the interviews. The interviews were recorded and transcribed verbatim and the data was analyzed with thematic analysis with an inductive approach.

Results:

The parents' overall experiences are comprised in the main theme: 'A feeling of security and care for the whole family'.

This main theme is derived from the three following themes: 1) 'Staff - a trustworthy source of information'. Parents perceived the staff as experienced and knowledgeable and appreciated obtaining information about practical things and about the Swedish system; 2) 'Access to emotional support'. Several parents expressed the need for emotional support and valued that by meeting the staff they knew they had someone to turn to; 3) 'Becoming familiar with the staff'. It was appreciated to know who will come to your home as this gave parents an increased sense of security.

Conclusions:

Initiating the program through introducing home visiting staff at a scheduled antenatal visit benefited parents, by giving them useful information and social support. The visit also seems to be indirectly beneficial as it contributes to building trust for the staff and the rest of the program.

Key messages:

- Initiating an extended home visiting program at a scheduled antenatal visit benefited parents, by giving them useful information and social support.
- Initiating an extended home visiting program at a scheduled antenatal visit contributed to building parents' sense of trust for the staff and the rest of the program.

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Low birth weight in Angola and its socioeconomic determinants

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Background:

In low-income nations, low birth weight (LBW) is still a major public health concern, which accounts for 96.5 % of global LBW cases. Any newborn weighing less than 2500g is considered LBW, which is associated with a 20-fold increase in the chance of dying during infancy. Despite the severity of the problem, in Sub-Saharan Africa the high rates of LBW have not diminished in the recent decade. The goal of this study is to evaluate the prevalence of LBW and its risk factors in Angola, as there is a pressing need to address LBW and its substantial health and social implications.

Methods:

We used secondary data from the Angola Children's Record Database of Demographic and Health Survey from 2015 to 2016. A binomial logistic regression model was used to investigate the prevalence of LBW and its related risk variables.

Results:

From the 3738 children selected, 9.2% were born with LBW. The complete lack of formal maternal education ($p = 0.011$; adjOR = 4.56, 95%CI 1.41-14.74), the absence of maternal iron supplementation during pregnancy ($p = 0.017$; adjOR = 1.42, 95%CI 1.07-1.89) and women living in rural areas ($p = 0.016$; adjOR = 1.37, 95%CI 1.06-1.78) were associated with LBW.

Conclusions:

Education appears to have a significant impact on LBW, emphasizing the importance of addressing literacy in Public Health policies. Lack of iron supplementation and rural residence can also be used as indicators of poor health-care access. Understanding the factors informs decision-makers and should pave the way for more targeted intervention and more efficient LBW policy.

Key messages:

- Intervention in socioeconomic factors and health access during pregnancy might have a high impact on the LBW problem.
- Addressing literacy as a major health determinant can guide a more efficient policy making and help stakeholders target their interventions.

DT Mental health

Abstract citation ID: ckac131.471
Suicide as a public health concern: Confronting the means, motives, and opportunity

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Issue:

Suicide continues to present a major public health concern in many societies. Suicide prevention efforts have failed to reduce the rate of suicide in most countries. A change of intervention strategy can help to prevent these deaths from despair.

Description of the problem:

Suicide prevention strategies are examined through an integrative review combined with more than 30 years of experience conducting research on suicide attempters and psychological autopsy research on adults who had died by suicide. Journal articles published since 2005 were reviewed for strategies designed to prevent death by suicide.

Results:

Suicide risk is examined by confronting the means, motives and opportunities for suicidal behavior. Prevention strategies that limit access to lethal means can have a beneficial impact if the method is easily accessible and not easily replaced. Unfortunately, some individuals merely shift to a different method for their suicidal act. Prevention strategies that restrict the opportunity for self-injury provide time to confront underlying disorders and initiate treatment. Unfortunately, many patients do not continue treatment beyond the acute crisis, and there is often a resurgence of suicidal behavior after discharge from the hospital. Prevention strategies that aim to confront the person's motivation to die may reduce the underlying cause. It is important to provide interventions to help reduce the desperation and isolation that underlie suicidal urges. These intervention strategies hold potential for making lasting changes that could eliminate, instead of temporarily suppressing, the desire to die.

Lessons:

Restricting access to lethal methods and limiting times when a suicidal person is left alone can temporarily block suicidal urges. However, the motive underlying the suicidal urges remains intact. The motivation to die can be addressed through interventions that focuses on helping clients to build a life worth living.

Key messages:

- Suicide prevention strategies can confront the desire for death by helping to build a life that is worth living.
- Comprehensive interventions aimed at reducing depression, isolation and addiction hold potential for reducing the rate of suicide.

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Assessment of Psychological Impact of Covid Pandemic on Frontline workers at Points of Entry,Pakistan

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Background:

The unprecedented public health crisis of the COVID-19 pandemic has caused heightened levels of stress and fear among health care workers.With the advent of COVID-19 in Pakistan,frontline workers of POEs have been under physical and psychological pressure including a high risk of infection, abnormal levels of workload, prolonged working hours, lack of personal protective equipment for safety from contagion, isolation, exhaustion, and lack of contact with family.The study aims to assess the impact of Covid-19 on the mental health of frontline healthcare workers.

Methods:

A descriptive study was conducted among HCWs across points of entry from 1st October 2020 to 31st December 2020.Data was collected using a structured questionnaire.Depression, anxiety, and stress scale (DASS-21)was used for the assessment of depression, stress, anxiety. Descriptive analysis of socio-demographic and professional factors was done. Multivariable logistic regression analysis (MLRA) was performed using SPSS version 23.0.

Results:

A total of 628 participants (586 males and 42 females) completed questionnaire.The mean age of the participants was 42.6 ± 45.9 years. The majority of the respondents were married (94.3%). The frequency of depression, anxiety, and stress in the HCWs was 12.1%, 42.3%, and 22.1 %, respectively. Multivariable logistic regression analysis found that the depression in HCWs was significantly associated with the profession and age ($P < 0.001$). The anxiety in HCWs was associated with their age and gender ($P < 0.005$). The stress in HCWs was significantly associated with their age ($P < 0.05$).

Conclusions:

The HCWs at the Points of entry across Pakistan showed mild to moderate symptoms of DAS. The COVID-19 pandemic has caused a heavy psychological impact among the frontline healthcare professionals. Timely psychological counseling and early psychological intervention need to be implemented for HCWs to alleviate their anxiety and stress and improve their general mental health.

Key messages:

- The COVID-19 pandemic has caused a heavy psychological impact.
- Timely psychological counseling and early psychological intervention.

Abstract citation ID: ckac131.473
Trajectories of sickness absence among young people with prior depression/anxiety symptoms

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Background:

Depression and anxiety are associated with elevated risks of sickness absence (SA), but less is known about the development of SA over time in young people experiencing these mental health conditions. This study aimed to identify latent trajectories of SA in young people with a history of depression and/or anxiety symptoms, while accounting for sociodemographic factors.

Methods:

This was an observational cohort study of 1,445 twin individuals who had elevated depression/anxiety symptoms in late adolescence or young adulthood (age range: 19-30), as assessed in Swedish surveys completed in 2005. Through linkage to the national registries, the individuals were prospectively followed from 2006 to 2018. The outcome included consecutive annual net days of SA, which were analyzed using group-based trajectory modeling with zero-inflated Poisson regression. Multinomial logistic regression estimating odds ratios (OR) with 95% confidence intervals (CI) was used to examine the influence of age, sex, and educational level on the resulting trajectory groups.

Results:

Four distinct trajectories of SA were identified: 'high-increasing' (6%), 'low-increasing' (12%), 'high-decreasing' (13%), and 'constant-low' (69%). The constant-low was used as the reference in all analyses. Increasing age was found to be associated with higher odds of belonging to the low-increasing trajectory (OR = 1.07, 95% CI = 1.02-1.12). Women had higher odds of belonging to the low-increasing trajectory (OR = 1.67, 95% CI = 1.10-2.53), compared to men. Higher education was associated with lower odds of belonging to the high-increasing (OR = 0.34, 95% CI = 0.22-0.54) and high-decreasing (OR = 0.59, 95% CI = 0.43-0.81) trajectories, compared to lower education.

Conclusions:

Distinct group-based trajectories of SA were identified in young people with early depression/anxiety symptoms. Targeted and timely public health strategies aiming to improve adolescent and young adult mental health may help reduce SA in the long run.

Key messages:

- We identified four trajectories of sickness absence in young people with common mental health problems.
- Public health efforts to improve mental health may reduce sickness absence in vulnerable groups.

Abstract citation ID: ckac131.474
Positive mental health and COVID-19 pandemic in Slovenia

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Background:

The COVID-19 pandemic is having a major impact on mental health. In contrast to studies on mental disorders, our study contributes to the under-researched area of the impact of the pandemic on positive mental health. We compare the prevalence of positive mental health before and during the pandemic and identify factors associated with flourishing and languishing mental health during the pandemic.

Methods:

We used data from two nationally representative cross-sectional surveys of Slovenian adults conducted in 2019 and 2021. Outcome included positive mental health (Mental Health Continuum - Short Form). Cross-sectional prevalence estimates were calculated and logistic regression assessed associations between positive mental health and the COVID-19 specific and other health-related factors.

Results:

In 2021, 38.6% (95% CI, 37.0%-40.2%) had flourishing mental health, compared to 61,5% (95% CI, 60.5%-62.5%) before the pandemic. In contrast, the share of people in languishing mental health during the pandemic (8.0%; 95% CI, 7.1%-8.9%) was nearly two times higher than in 2019 (4,5%; 95% CI, 4.1%-4.9%). Both flourishing and languishing were significantly associated with changes in family relations, social interactions and dietary habits, resilience and COVID-19 literacy.

Conclusions:

Positive mental health in Slovenia worsened drastically during the pandemic compared with before. Results indicate important role of family relationships, social interactions and dietary habits on positive mental health. Both prevention of mental disorders and mental health promotion need to be considered in order to address the full range of public mental health needs, with increased attention to strengthening resilience and health literacy.

Key messages:

- We noted an substantial decline in flourishing and rise in languishing mental health during the pandemic.
- Public health efforts need to address the impact of the pandemic on family relations and social interactions.

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Correlates of mental health in the Swiss Household Panel – a network analysis

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Background:

Firstly, we aim to describe any differences in the mean levels of correlates and indicators of mental health and wellbeing between young (25-39 years) and middle-aged adults (40-55 years). Secondly, we aim to compare the network models depicting interrelations between correlates and indicators of mental health and wellbeing among these age groups.

Methods:

This paper draws on longitudinal data from 6 waves (2013-2018) of the Swiss Household Panel (SHP) study, with a total sample of 5,315 individuals, including 2,044 young (25-39 years) and 3,271 middle-aged (40-55 years) participants. We used network analysis to examine and present complex relationships between the correlates and the indicators of mental health and wellbeing.

Results:

Middle-aged individuals had worse mental health and wellbeing on all indicators but energy and optimism, which did not differ across groups. The effect sizes (according to Cohen's d) were small, reaching the maximum of 0.20 for sadness. Despite higher household income and financial satisfaction, perceived job insecurity and work strain were higher in midlife, with socioeconomic prestige being lower. Moreover, middle-aged individuals had lower social support, relationships satisfaction, and health satisfaction. The network was denser in midlife, with two direct interrelations being stronger in this age group: health satisfaction and energy/optimism as well as accommodation satisfaction and life satisfaction. There were also several other differences in indirect interrelations between correlates and indicators of mental health and wellbeing, including a potentially more important role of self-mastery in midlife in bridging socioeconomic indicators, wellbeing and mental health.

Conclusions:

We suggest further exploring the workplace as an avenue to improving population mental health and wellbeing, with a particular focus on the role of self-mastery.

Key messages:

- Middle-aged individuals appear to have worse mental health and lower wellbeing than young adults.
- Health satisfaction is not only lower in midlife, but it seems of greater importance for mental health and wellbeing.

Abstract citation ID: ckac131.476
Impact of COVID-19 on University Students' Quality of life and mental health in Greece

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COVID-19 has a serious impact on people's physical health and mental health. The COVID-19 pandemic has highlighted an increasing deterioration of university students' quality of life and mental health due to several factors. The COVID-19 pandemic forced university students to take online classes, which may have bad impacts on students' learning. In addition, the students lost many job opportunities during the pandemic. Faced with employment and study pressure and worried about the epidemic, university students were prone to increased overall negative emotion, anxiety and depression. Our study aims to conduct a timely assessment of the impact of the COVID-19 pandemic on the quality of life and mental health of University students. We conducted a cross sectional study using an online interview survey in students at public universities in Greece to better understand the effects of the pandemic on their quality of life and mental health. Three questionnaires were used (WHOQOL-BREF, IES-R and HADS). The data were analyzed with IBM SPSS 26. 1.266 university students from public Greek Universities participated in the study, 73.1% of which were female, 26,3% were male. We observed that 55,8% had a score lower in psychological domain and 52,3% in social domain of WHOQOL-BREF. Also 46.6% of the respondents had a score of 37+ on the IES-R questionnaire, 45% of the respondents had abnormal results regarding anxiety and 33.6% had abnormal results regarding depression. Due to the long-lasting pandemic and onerous measures such as lockdown and stay-at-home orders, the COVID-19 pandemic brings negative impacts on University education and quality of life of students. The findings of our study highlight the urgent need to develop interventions and preventive strategies to address the quality of life and mental health of University students.

Key messages:

- There is a need for preventative measures for university students to ensure that their mental health and quality of life do not suffer.
- Female students reached higher levels of anxiety in the COVID-19 pandemic period.

Abstract citation ID: ckac131.477
Low resilience as risk factor of mental disorders during COVID-19 pandemic: A cohort study

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Background:

To analyze whether people with low resilience are at higher risk of mental health problems during the COVID-19 pandemic in Spanish adults.

Methods:

A longitudinal cohort study was carried out. Resilience was measured pre/post-pandemic with the CD-RISC. Mental health problems assessed were: Major Depressive Episode (MDE), Generalized Anxiety Disorder (GAD), Suicidal Thoughts and Behaviors (STB), and Posttraumatic Stress Disorder (PTSD) symptoms.

Results:

We found statistically significant differences between groups and resilience scores in MDE [F (3;48.40) = 19.55], GAD [F(3;19.63) = 6.45] and STB [F(3;111.74) = 31.94]. Multivariable analyses showed individuals with very low resilience were at a 5-fold risk of Incidence of MDE and a 4-fold risk of STB. Persistent group presented a 21-fold risk of MDE and 54-fold risk of STB, respectively. No evidence of higher risk was found for GAD. Individuals with low resilience and exposed to COVID-19 did not have a significantly higher risk. Individuals with low resilience were at higher risk of PTSD in general population [β(95%CI) = -3.25(-3.969 to -2.54)], but not for individuals with COVID-19.

Conclusions:

In the general population, having low or very low resilience increases the risk of suffering MDE, STB, and PTSD, but not GAD during the COVID-19 pandemic, but not in the population with COVID-19.

Key messages:

- Resilience was a buffer of mental health problems in general population, but not in those exposed to COVID-19.
- Those with low resilience were at 21-fold risk of mental health problems before and during the first year of pandemic.

Abstract citation ID: ckac131.478
Anxiety among students during the pandemic - Results from the C-19 German Student Well-being Study

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Background:

Anxiety is widespread among university students. The COVID-19 pandemic af-fected students' mental health negatively. Given the long duration of the pandemic monitoring mental health remains important. This study aims to determine to which extent anxiety is preva-lent among students (1), what factors are associated with it (2) and which student groups are mostly affected (3).

Methods:

The cross-sectional COVID-19 German Student Well-being Study (C19 GSWS) sur-veyed mental health and well-being of students at five universities in Germany from 27.10.-14.11.21. Anxiety was assessed using the GAD-2. Associations between anxiety and sociodem-ographic, socioeconomic/social support factors as well as health- and COVID-19-related factors were determined using multiple binary logistic regression models.

Results:

The mean age of students was 24.1 years (SD = 4.9), 67% were women and 31% men. The prevalence of anxiety was 32% and diverse gender (OR = 3.98, 95% CI: 1.71-9.23), a com-plicated relationship status (OR = 1.66, 95% CI: 1.06-2.60), the lack of a confidant (OR = 2.50, 95% CI: 1.80-3.46), and financial difficulties (e.g., being able to cover monthly expenses; OR = 1.76, 95% CI: 1.36-2.29) were associated with anxiety. Participants who were worried about (re)infection with COVID-19 had a 1.28-times higher chance (OR, 95% CI: 1.03-1.59) for anxie-ty. Students who were (rather) not worried that a relative would become severely ill with COVID-19 had a lower chance to experience anxiety (OR = 0.72, 95% CI: 0.53-0.98) as well as those who were confident receiving medical care in case of an infection with COVID-19 (OR = 0.80, 95% CI: 0.65-0.98).

Conclusions:

Concepts for prevention and counselling in terms of mental health problems in students should be developed considering specific stressors due to the pandemic.

Key messages:

- This study shows that anxiety is widespread among university students and associated with a variety of stressors.
- The findings can help to develop specific concepts for prevention and counselling.

Abstract citation ID: ckac131.479
Sleep quality in the Croatian adult population during the COVID-19 pandemic

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Background:

The COVID-19 pandemic as a worldwide public health issue is a traumatic event that has affected both the sleep and mental health of the general population. This study aimed to evaluate the quality of sleep in the Croatian adult population during the COVID-19 pandemic.

Methods:

This cross-sectional questionnaire study was conducted from February to June 2021 period. A validated, anonymous questionnaire that contained questions regarding demographic data, as well as Pittsburgh Sleep Quality Index (PSQI) and Coronavirus Anxiety Scale (CAS) was self-administered to a convenient sample of Croatian adults from central and northwestern Croatia.

Results:

The study sample included 939 subjects with, median age of 42 years (interquartile range 35-48), 35.4% males, and 64.6% females. At the PSQI 22.6% of subjects presented sleep disturbances while at the CAS 0.4% of subjects presented dysfunctional anxiety associated with the COVID-19 pandemic. Sleep disturbances were more frequent among females ($p < 0.001$), inhabitants of the Croatian capital Zagreb ($p = 0.001$), subjects who were not infected with COVID-19 virus ($p = 0.042$), subjects who had fear of coronavirus infection in the workplace ($p < 0.001$), subjects who had fear of coronavirus infection during daily life activities ($p < 0.001$), subjects who had fear of coronavirus infection during daily physical activities ($p < 0.001$), subjects who worked with limited social contact ($p = 0.005$), and subjects with dysfunctional anxiety associated with the COVID-19 pandemic ($p = 0.003$).

Conclusions:

Poor sleep quality is common during the COVID-19 pandemic in Croatia. Identifying factors associated with poor sleep would help develop specific intervention programs that enhance mental health and sleep quality during pandemics.

Key messages:

- The COVID-19 pandemic has a significant negative influence on the mental health of the Croatian general population.

- Appropriate supportive programs and interventional approaches directed toward the general population are needed to address mental health problems in Croatia during the COVID-19 pandemic.

Abstract citation ID: ckac131.480
Building capacity for mental health resilience – local impact of the UK Better Mental Health Fund

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Background:
COVID-19 as a public mental health emergency has exacerbated existing mental health inequalities. The UK government invited local authorities with areas of high deprivation to apply for a year of funding, in order to address the mental health impacts of COVID-19 and incentivize investment in prevention and promotion interventions for better mental health. South Tyneside Council in North East England made a successful bid to the Better Mental Health Fund (BMHF), and distributed grants to 7 organisations delivering 13 programs. A qualitative evaluation of these programs aimed to answer the following questions:

1. How were the funded programs implemented?
2. What difference did they make to local beneficiaries?
3. How might these programs and their impacts be sustained into the future?
4. Has the BMHF led to any wider impacts on organisations and local communities?

Methods:
In-depth interviews with individuals, pairs and groups were conducted online or in person with service providers and beneficiaries. Non-verbatim transcripts were made from recordings, checked with verbatim transcripts from Teams and Zoom, and analyzed thematically to generate a coding frame. Throughout the analysis, comparisons were made between organizations and programs.

Results:
Fifteen interviews involving 22 participants lasting up to an hour each were conducted. The main themes identified as impactful were 1) community approaches based on supportive and good relationships between the local authority public health lead and participating organizations (mainly voluntary agencies), enabling 2) capacity-building for mental health resilience and 3) community empowerment. This was despite the short turnaround of the grant application process, limited time to deliver on targets, and anxieties about future sustainability.

Conclusions:
Short-term funding can build capacity in mental health resilience in deprived areas if administered by public health leaders who relate well with provider organizations.

Key messages:

- Public health leaders who relate well with provider organizations are key drivers of community health promotion strategies that include mental health capacity building.
- Qualitative methods used in evaluations can inform public health commissioning by capturing the benefits and challenges of short-term funding for interventions promoting community mental health.

Abstract citation ID: ckac131.481
Gambling disorder symptoms among Slovenian gamblers

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Background:
We are facing a growing popularity of gambling, partly due to the rapid rise of internet related technologies. This growth has been linked to a considerable increase in problem gambling and gambling disorder, which has been an established non-substance addiction. The aim of our study was to assess the prevalence rate of gambling disorder among the Slovenian population.

Methods:
National Survey on the Use of Tobacco, Alcohol and Other Drugs was conducted in 2018 on a nationally representative sample (n = 16,000; age: 15-64 years), using mixed-mode data collection (CAWI and CAPI). Responses were obtained from 9,161 respondents, of those 18.4% (n = 1,686) reported to have gambled in the last 12 months (i.e. gamblers). Gambling disorder symptoms were assessed using Berlin Inventory of Gambling Behavior - Screening, consisting of 14 items with a yes/no response option, which measure 9 gambling disorder criteria (DSM-V). Participants who reported at least 5 out of 9 gambling disorder criteria were classified as disordered.

Results:
Data shows that 4.3% of Slovenian gamblers met the criteria for gambling disorder. Significantly higher shares were observed among men (5.9%; compared to 1.2% of women) and among younger generations (highest shares among 15-19 year olds (19.4%) and 20-24 year olds (14.5%)). The same goes for money spent for gambling. Namely, males (4.4% of men; compared to 0.6% of women) and younger generations (highest shares among 20-24 year olds (9.2%) and 30-34 year-olds (6.9%)) were more likely to spend more than 100 EUR in a day for gambling.

Conclusions:
Data obtained in the present study indicates the extent of gambling disorder symptomatology and highlights key demographic groups with risk for gambling disorder. These findings are consistent with previous comparable studies and provide a basis for tailored public health measures in Slovenia with an emphasis on early intervention.

Key messages:

- 4.3% of Slovenian residents, who engaged in gambling in the last 12 months met the criteria for gambling disorder.
- Males and younger generations were more likely to report gambling disorder symptoms and spent more money on gambling. The data shows the need for tailored public health measures.

Abstract citation ID: ckac131.482
Health-related behaviors during adolescence and subsequent anxiety and depression: the HUNT study

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Background:
Evidence on the predictors of common mental disorders using nationwide health registries are scarce in Norway. Identifying modifiable behaviours affecting mental health across the lifespan is paramount to develop tailored strategies to tackle mental illnesses. The aim of this study was to identify patterns of health-related behaviours in adolescence and their influence on anxiety and/or depression in adulthood.

Methods:
This was a prospective study based on data from the Trøndelag Health Study (HUNT) and health register data (N = 2061). Patterns of health-related behaviours were assessed according to physical activity, consumption of wholegrain bread, fish, fruit, vegetables, and sugar sweetened beverages and insomnia.

Participant's use of healthcare system for anxiety and/or depression was recorded at least once in the health registries. The patterns of health-related behaviors were identified through latent class analysis. Multivariable logistic regression was used to test the association between patterns of health-related behaviors and depression or/and anxiety.

Results:

Four classes of health-related behaviors were identified: class 1 (15.2%), class 2 (36.0%), class 3 (24.2%), class 4 (24.6%). Adolescents with unhealthy behaviors (classes 1, 2 and 3) had 82%, 34% and 84% higher odds of depression and/or anxiety during adolescence and early adulthood than those from the healthy-related behaviors group (class 4).

Conclusions:

Our findings suggest that health-related behaviors are clustered among Norwegian adolescents. There was a meaningful association of the three patterns of unhealthy behaviors during adolescence with anxiety and depression in adulthood. Population strategies and policies aiming to tackle unhealthy behaviors among adolescents can positively impact on adult's mental health.

Key messages:

- Improving healthy behaviors during adolescence may reduce the burden of mental illness in adulthood.
- Population strategies and policies aiming to tackle unhealthy behaviors among adolescents can positively impact on adult's mental health.

Abstract citation ID: ckac131.483
The Werther effect: adherence of Italian newspapers to the ''reporting on suicide'' recommendations

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Background:

Reporting a case of suicide on a newspaper could lead to an emulation effect (Werther effect). It is important to report suicide cases by following specific recommendations implemented by World Health Organization (WHO). This study aimed to analyze articles published on Italian newspapers to quantify the adherence to the WHO recommendations in suicide report.

Methods:

All the articles published in the three most important Italian newspapers from June 2019 to May 2020 that described one or more cases of suicide were included. Two researchers analyzed all the articles through an ad-hoc checklist, constructed on the basis of the WHO recommendations, that included 18 ''negative'' items (e.g. ''presence of suicide-related words in the title'') and nine ''positive'' items (e.g. ''the article reports the contacts of a suicide-prevention hotline''). For each negative item a ''-1'' point, and for each positive item a + 1 point, was assigned. Multivariable linear regressions were performed to identify factors related with a lower adherence to the WHO recommendations and with higher social engagement of the articles.

Results:

A total of 110 articles were analyzed. In the 73% of the cases, the individual was male. The 14.5% of the suicide cases were homicide-suicide, while 9% were femicide-suicide. The median score of the checklist was -6 (IQR 3). Only 5% of the articles had at least one positive item. The word ''suicide'' (or related words) were present in 90% of the titles. Multivariable analyses showed that female suicides were associated with a higher score of the checklist (coeff 0.816, p = 0.039). No correlation was retrieved between the score of the checklist and the social media engagement of the articles included.

Conclusions:

Italian newspapers do not follow WHO recommendations on how to report suicide cases, leading to a potential emulation effect. Public health professionals should raise decision makers' and journalists' awareness about the importance of these recommendations.

Key messages:

- Since Italian newspapers are not compliant with the recommendations of the World Health Organization on how to report a suicide case, there is the risk of a potential emulation effect.
- Specific training for journalists and other professionals in the field of communication should be implemented, to raise the awareness on the importance of the ''reporting on suicide'' recommendation.

Abstract citation ID: ckac131.484
Analysis of suicides in one of the administrative regions of Bulgaria for 10-year period (2009-2018)

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Background:

Suicide is an important medical and social problem responsible for nearly one million deaths per year globally. However, distal and proximal risk factors for suicide, expect being mentally diagnosed, are not enough studied. The aim of the study was to analyze the dynamics, structure, socio-demographic and clinical characteristics of all suicides committed by persons with mental disorder for 10-year period (2009-2018) in Pleven district.

Methods:

Retrospective analysis of medical records of all mentally ill persons who committed suicide was done. Data were extracted from the databases of all in- and outpatient mental health centers in the region. Data processing was performed by IBM SPSS Statistics v.25. Statistical associations between a number of socio-demographic and clinical characteristics and the age of suicide victims was studied by dispersion analysis and Mann-Whitney test. Statistical significance was set at $p \leq 0.05$.

Results:

Among all 281 registered suicide cases during the studied period, 77 (28%) were with mental disorders. The most common were mood disorders (44%), followed by schizophrenia, anxiety disorders, substance abuse disorders and organic mental conditions. The mean age of all suicides was 55.62 years; significantly lower in males than in females (p = 0.042); lower in divorced or never married/single living persons compared to married or who had lived with a partner (F (2.74) = 17.682, $p < 0.001$]; the lowest in patients with schizophrenia (44.62 years), and the highest in organic disorders (66.83 years). Higher educational degree was associated with lower age of suicide (U = 3.713, $p < 0.01$) and the earlier age of onset of the psychiatric disorder (r = 0.754, $p < 0.001$). Most of the suicide cases had occurred in March and September. Tuesdays and Fridays were most suicidal.

Conclusions:

Severe mental disorders are major risk factors for suicide with the additional contribution of certain socio-demographic and disease related characteristics.

Key messages:

- Suicide monitoring should be constant in all patients with chronic and severe mental disorders.
- Suicide registration in Bulgaria needs to be improved in terms of collecting sufficient and reliable information about the mental health of suicide victims.

Abstract citation ID: ckac131.485
Pandemic-related determinants of depression in Czech older persons: Evidence from the HAPIEE cohort

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Background:

A number of studies reported higher levels of mental health issues during the COVID-19 pandemic but only minority of studies focused to assess changes in mental health against measurements taken before the pandemics. We investigated a change in depressive symptoms using repeated measurements and the impact of the pre-existing and COVID-19-related stressors in an ageing cohort in the Czech Republic.

Methods:

We used data on 2853 subjects (mean age 73 years) from the Czech part of the prospective HAPIEE cohort that participated on postal questionnaire surveys before (2017) and during the pandemic (autumn 2020 to early 2021). Participants reported their depressive symptoms using validated CESD-10 report tool. The impact of pre-existing stressors (age, sex, education, living alone, self-rated health, employment status, depression before pandemic), as well as pandemic-related stressors on change in depressive symptoms were tested using multivariable linear regression, after adjustment for age and potential confounders.

Results:

Compared with pre-pandemic period, there was a significant increase in depression score during the COVID-19 pandemic. The mean CESD-10 score increased from 4.92 to 5.37 ($p < 0.001$). Significantly larger increases in depressive score reported older persons ($\beta = 0.073$; $p < 0.001$) and those with poor self-rated health ($\beta = 0.170$; $p < 0.001$) in the fully adjusted model. Moreover, those who experienced social deprivation ($\beta = 0.057$; $p < 0.001$), death or hospitalization of a close person ($\beta = 0.064$; $p < 0.001$), delays in healthcare ($\beta = 0.048$; $p = 0.005$) and those who suffered from COVID-19 ($\beta = 0.045$; $p = 0.008$) also reported worsened depressive symptoms.

Conclusions:

This longitudinal study confirms important increase in depressive symptoms during the COVID-19 pandemic and contributes to identify pandemic-related risk factors. Interventions and future public health policies should address vulnerable individuals and population groups.

Key messages:

- Mental health worsened during the COVID-19 pandemic compared to previous years.
- Social deprivation, delays in healthcare and experiencing COVID-19 infection affected mental health of older people.

Abstract citation ID: ckac131.486
Anxiety and depression disorders in Portugal during the COVID-19 pandemic

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Background:

Mental disorders are a major contributor to the global burden of disease. During the first year of the pandemic by COVID-19, increases of 25% in the prevalence of anxiety and depression were reported globally. In Portugal, studies conducted during lockdown showed an increase in the prevalence of these disorders. However, previous studies have shown that negative life events, such as exposure to disasters or grief, later lead to resilience or recovery. It is therefore necessary to study the evolution of these disorders in order to adapt mental health measures.

Methods:

The number of patients registered with "P76 - Depressive Disorder" and "P74 - Anxiety Disorder/anxiety state", according to ICPC-2 criteria, and the total number of patients registered in the Portuguese Health Centers for the months of January 2019 to 2022 were obtained from the Portuguese NHS Information and Monitoring System (SIM@SNS). We calculated the percentage of patients with each of the disorders, individually and combined. Data by health regions were also obtained in order to compare the evolution within each region (North, Center, Lisbon and Tagus Valley, Alentejo and Algarve).

Results:

Between January 2019 and 2022, the proportion of patients with anxiety disorder increased linearly from 8% to 9%. Similarly, the proportion of patients with depressive disorder increased from 11% to 12%. When considered together, anxiety and depression disorders affected 21% of users in mainland Portugal at the beginning of 2022. The Alentejo and Center regions have the highest prevalence of anxiety and depression (24.9% and 24%, respectively) and the Algarve region has the lowest (16.74%). The increases were consistent across health regions, with the largest increase in the North region (2.6%) and the smallest in the Central region (1.7%).

Conclusions:

Anxiety and depression disorders increased in mainland Portugal during the years of the COVID-19 pandemic.

Key messages:

- Mental health has been an important factor in public health since before the pandemic.
- Monitoring depression and anxiety levels in the general public can guide priorities after the pandemic.

Abstract citation ID: ckac131.487
Mental health surveillance of German adults in the COVID-19 pandemic: trends in depressive symptoms

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Background:

While literature on mental health in the COVID-19 pandemic has grown rapidly, studies reporting on developments beyond the first wave using continuous, population-based data are still scarce. We examined monthly estimates of depressive symptom levels in Germany's adult population covering almost two years of the pandemic and the year prior.

Methods:

We analyzed representative data from two population-based telephone surveys of German adults: "German Health Update (GEDA)" and "COVID-19 vaccination rate monitoring in Germany (COVIMO)." Core symptoms of depression measured using the Patient Health Questionnaire-2 (PHQ-2) were observed in approximately 1,000 randomly sampled participants monthly from April 2019 to December 2021. We estimated three-month moving means and proportions as well as smoothing curves to produce time series graphs. Statistical comparisons between specific time periods were used to verify results of visual inspection. Analyses were stratified by gender, age and level of education to assess potential time trend differences between subgroups.

Results:

Both the mean population depressive symptom score and the proportion of the population with a positive PHQ-2 depression screen first decreased to below 2019 levels between the first wave and summer of the pandemic and then increased from autumn 2020, reaching levels significantly above 2019 in 2021 and remaining elevated. 2021 saw a 2.2% increase in positive screens compared to 2019. Women, the youngest and eldest adults, and those with a high level of education experienced a particular increase in depressive symptoms between 2019 and 2021. However, we found no corresponding changes in symptom level differences between population subgroups.

Conclusions:

Our finding of elevated depressive symptoms among Germany's adults following an increase in the second wave of the pandemic demonstrate the importance of continued surveillance to assess the further development of mental health in the ongoing crisis.

Key messages:

- Monthly data from April 2019 to December 2021 suggests that depressive symptoms decreased at the start of the pandemic and then increased from autumn 2020, reaching levels above 2019 in 2021.
- Continued mental health surveillance is needed to assess the further development of mental health indicators in the ongoing crisis and its aftermath.

Abstract citation ID: ckac131.488
Mental health and well-being of students at TU Dresden

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Background:

University life can be a particularly challenging phase in the development of young adults. Current research shows that mental disorders occur more frequently in students compared to workers of the same age. The coronavirus pandemic has exacerbated the problem. The TUDo! Study, done in cooperation with the FU Berlin, aimed to assess the health status of students at TU Dresden, with a focus on mental health.

Methods:

In 2020/2021 students at TU Dresden (excluding students in the medical school) completed an online-based questionnaire. Validated questionnaires, e.g. the PHQ 4 (depressive disorder and generalized anxiety disorder) and the ERI student (student gratification crisis) were used. We evaluated descriptively and analytically, according to the questionnaire-specific specifications.

Results:

A total of 2,683 students (12.3%) at the TU Dresden took part in the survey. The majority of study participants were female (n = 1,507; 56.7%) and had an average age of 22.9 years (SD = 4.3). 32.8% (n = 856/2,611) of the participating students reported a depressive syndrome and 32.5% (n = 848/2,612) a generalized anxiety disorder. Almost half of participating students (40,0%; n = 515/1,310) indicated an imbalance between effort (E) and reward (R) (ER ratio>1). 51.23% (n = 693/1,50) of respondents reported a decline of mental well-being because of the coronavirus pandemic.

Discussion:

Unlike similar studies, this study shows that TU Dresden students were particularly affected with regards to perceived psychological stress and complaints. The existing differences seem to be partly due to the coronavirus pandemic. These results indicate that universities should regularly check their studying conditions and provide appropriate preventive measures.

Key messages:

- Students are at higher risk than workers of the same age for mental health problems.
- Students reported a decline in mental well-being due to the coronavirus pandemic.

Abstract citation ID: ckac131.489
The effectiveness of interventions to prevent loneliness in the community-dwelling elderly population

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Background:

Loneliness and social isolation have comparable health effects to widely acknowledged and established risk factors. Although the elderly are particularly affected, the effectiveness of interventions to prevent and/or mitigate social isolation and loneliness in the community-dwelling elderly is unclear. The aim of this review of reviews was to pool the findings of systematic reviews addressing the question of effectiveness.

Methods:

Ovid MEDLINE®, Health Evidence, Epistemonikos and Global Health (EBSCO) were searched from January 2017 to November 2021. Two reviewers independently assessed each systematic review in two consecutive steps based on previously defined eligibility criteria and appraised the methodological quality using AMSTAR 2. One author extracted data from both systematic reviews and eligible studies; another checked this. We conducted meta-analyses to pool the study results. We report the results of the random-effects and common-effect models.

Results:

We identified 5 systematic reviews containing a total of 30 eligible studies, 16 with a low or moderate risk of bias. Our random-effects meta-analysis indicates an overall SMD effect of 0.63 [95% CI: -0.10; 1.36] for loneliness and was unable to detect an overall effect of the interventions on social support [SMD: 0.00; 95% CI: -0.11; 0.12].

Discussion:

The results show interventions can potentially reduce loneliness in the non-institutionalised, community-dwelling elderly population living at home. As confidence in the evidence is low, rigorous evaluation is recommended.

Key messages:

- The meta-analysis indicates that psychosocial interventions have the potential to reduce loneliness in the community-dwelling elderly population.
- As confidence in the evidence is low, healthcare providers should only implement interventions that are, firstly, based on a sound theory of change and, secondly, subject to rigorous evaluation.

Abstract citation ID: ckac131.490
Social inequality and change in psychological distress during the Covid-19 pandemic in Norway

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Background:

Emerging research findings suggest that the Covid-19 pandemic may have affected various social groups differently. Using follow-up health data from Norway, the aim of this study was to investigate whether change in psychological distress in adolescents during the Covid-19 pandemic differed across socioeconomic position (SEP).

Methods:

Data consisted of 1254 Norwegian adolescents who participated in Young-HUNT4 (2017-19) and Young-HUNT COVID (spring 2021). Psychological distress (PD) was assessed by the Symptom Checklist-10, using a cut-off point of ≥ 1.85 to identify adolescents with high PD. Based on the adolescents PD score prior to and during the Covid-19 pandemic, four groups were identified: persistent low PD, improved PD, worsened PD, and persistent high PD. Adolescents reported their parents' education level which was used as an indicator for SEP. SEP was dichotomized separating low and high SEP, where having at least one parent with a higher education was defined as high SEP. Multinomial logistic regression models were used to investigate if the likelihood of the outcome groups varied across SEP, adjusted for age and sex.

Results:

Compared to the persistent low PD group, no statistically significant difference was found between low and high SEP in the improved PD and worsened PD group (RR 1.33 95% CI 0.77 - 2.31, RR 1.22 95% CI 0.82 - 1.81, respectively). However, adolescents of low SEP had a higher likelihood to be in the persistent high PD group compared with the high SEP group (RR 1.93 95% CI 1.30 - 2.87).

Conclusions:

These preliminary findings suggest that the pandemic may not have led to greater social inequality in mental health among Norwegian adolescents. However, the results showed that social inequality that existed prior to the pandemic has persisted, as adolescents of lower SEP had a higher likelihood of reporting high PD that persisted from prior to and throughout the Covid-19 pandemic.

Key messages:

- Social inequality in psychological distress among Norwegian adolescents has persisted prior to and during the Covid-19 pandemic.
- The Covid-19 pandemic does not seem to have increased existing social inequalities in psychological distress among Norwegian adolescents.

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This abstract has been withdrawn

Abstract citation ID: ckac131.492
Suicidality among children and adolescents "in the COVID-19 era": a worldwide metanalytic picture

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Background:

The impact of the COVID-19 pandemic on adolescent suicidality is still controversial. The present systematic review and meta analysis aim to summarise findings from emerging literature about prevalences of the main suicidal outcomes among children and adolescents under 19 years old, and to compare them with the pre-pandemic period.

Methods:

Five databases (PubMed, Embase, Scopus, CINAHL and Web of Science) were systematically searched for studies published in English from January 1st, 2020 until November 3rd, 2021, reporting prevalence for suicidal ideation (SI), suicidal behaviors (SB) and suicide (S) in the general population aged <19 during the COVID-19 pandemic. Single-study prevalence data were pooled using random-effects meta-analysis. If studies reported prevalence estimates for both pre- and during-pandemic periods, prevalence ratio (PR) comparing the two periods has been computed and pooled.

Results:

Sixteen observational studies were selected: 10 about SI, 9 about SB and 3 about S. During the pandemic, prevalence of SI among adolescents was 21% (95% CI 12-34%) while prevalence of SB was 3% (95% CI 1-10%). Comparing pre- and during- pandemic prevalences, a significant overall increase in SB was observed (PR 1.35; 95% CI 1.06-1.72) while the prevalence rates of SI remained substantially steady

(PR 0.95; 95% CI 0.64-1.39). A narrative review on the population-based data on suicide rates suggested an escalating trend since Summer 2020, after an initial stability of the phenomenon.

Conclusions:

During the COVID-19 pandemic SB showed a 35% increase and suicides rates escalated after a initial stability. School closures might be involved, representing an initial protective factor for suicidality, while after the reopenings we could have assisted to a suicide rebound, especially among the most vulnerable young people.

Key messages:

- The topic of suicidality among young people is still affected by a cultural stigma that hampers the development of both academic research, early detection and preventive policies.
- The increase in suicidal behaviors among youths after the COVID-19 outbreak highlights a major public health issue that requires adequate supporting policies to control and prevent this phenomenon.

Abstract citation ID: ckac131.493
Project SELfit: training socio-emotional skills in a school environment in Porto

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Issue/Problem:

Mental disorders are the main cause of years lived with disability (YLD) in 5-14-year-old people around the world, in Western Europe, and particularly in Portugal. Young people who experience anxiety during childhood have a 3,5-fold likelihood of suffering from depression or anxiety during adulthood. COVID-19 has aggravated this situation, namely regarding socio-emotional competencies.

Description of the problem:

SELfit, a project based on the Socio-emotional learning (SEL) methodology, aims promoting mental health, by training teachers and community nurses to develop socio-emotional skills in students from primary schools. The project includes a theoretical and a practical/training session, and monthly supervision sessions by a team that includes a psychologist, a public health doctor and public health nurses. The period of implementation is between February to July 2022.

Results:

A total of 8 community nurses and 13 teachers from 3 primary schools in Porto enrolled in this project, which corresponds to a total around 272 students from 5 to 8-year-old. Knowledge of nurses and teachers regarding mental health literacy, and social emotional learning was assessed, before and after the theoretical session. The mean percentage of correct answers before was 49% (54% regarding nurses and 45% teachers) compared to 84% (92% regarding nurses and 78% teachers) after. Concerning socio-emotional skills of the primary school students, possible improvement will be evaluated at the end of the project (July 2022).

Lessons:

Mental health literacy and social emotional learning knowledge increased 35%, which highlights the importance of these theoretical sessions promoting mental health literacy. By the end of this project, it is expected to exist an improvement on socio-emotional skills of the primary school students. This is a very important project, expected to be implement and replicated in other schools in Porto and in Portugal.

Key messages:

- Mental disorders are the main cause of years lost due to disability (YLD) in primary school students in Portugal; hence, it was chosen for this mental health promotion project.
- This is a pioneer project in Porto, involving both community nurses and primary teachers, in which all are involved in training and promoting social-emotional learning in a school context.

Abstract citation ID: ckac131.494
Stress, anxiety, and depression among healthcare workers during the COVID-19 pandemic in Kosovo

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Background:

The COVID-19 pandemic has created a very large workload burden on health systems worldwide, Kosovo is no exception to this trend. A pandemic may have a negative impact on health care workers' (HCWs) mental health. In this cross-sectional study, we assessed the self-reported prevalence of stress, anxiety, and depression and identified their predictive factors among HCWs in Kosovo.

Methods:

Data were collected on sociodemographics (sex, age, occupation, education, workplace) and the presence and severity of depression, anxiety, and stress through the 21-item Depression, Anxiety, and Stress Scale (DASS-21) online questionnaire. Descriptive statistics, t-tests, and linear logistic regression were used to analyze the data.

Results:

Of the 545 respondents, the majority were male (53.0%), under 60 years of age (94.7%), and married (81.7%). Most of them were physicians (78.2%), while the remaining respondents were nurses, midwives, and other health professionals (22%). The prevalence rates for moderate to extremely high levels of stress, anxiety, and depressive symptoms were 21.9%, 13.0%, and 13.9%, respectively. Nurses reported significantly higher mean scores for depression and anxiety than physicians ($P < 0.05$). Being married, having poor health, not exercising, and reporting 'burnout' from work significantly predicted higher levels of depressive, anxiety, and stress symptoms among health workers ($P < 0.05$).

Conclusions:

HCWs require specific national mental health intervention programs that will, among other effects, help raise awareness of the early recognition of symptoms related to stress, anxiety, depression, and burnout due to workload as well as the importance of regular physical exercise. These programs should be part of the national emergency preparedness, emergency response, and health sector strategy, aiming to build and sustain a resilient health system.

Key messages:

- During COVID-19 pandemic, certain factors predicted higher levels of mental health burden among HCWs.
- Addressing these factors require policy recommendations with concrete systemic interventions.

Abstract citation ID: ckac131.495
Development and evaluation of an evidence-based health information on benzodiazepines and z-drugs

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Background:

With approximately 1.1-1.4 million people in Germany taking benzodiazepines (BZDs) and z-drugs in a problematic or dependent manner, this is a relevant public health problem which needs to be adressed. However, it is well known that affected individuals do not receive the counseling or treatment they need. One possible solution is preventive education of affected individuals and medical practioners using evidence-based and target-group-health information (HI).The project EDER-MIA aimed to develop and evaluate evidence-based and target-group-related HI.

Methods:

With the help of three different focus groups (18-40-years; women: 40-60-years; > 60-year-olds), the information needs of affected individuals were assessed. Based on the results, we developed the HI and received feedback from health experts. The HI was implemented online (http://www.psychenet.de) and evaluated with the 'Usefulness Scale of Patient Information' (USE): An assessment was made on 3 subscales with a 10-point scale from '1 = disagree at all' to '10 = agree completely'. By forming a sum score (range: 0-90), an overall assessment was calculated.

Results:

The results of the focus group study revealed the persons taking BZDs or z-drugs were in need about informations about sleep problems, the risk of taking BZDs and z-drugs and a better orientation regarding help services. The evaluation of the health information achieved medium acceptance rates of usefulness for affected persons (N = 192, 68.2% female; mean = 54.3, sd = 15.4). A somewhat higher usefulness was recognised by the medical staff (N = 58, 69.0% female, mean = 64.7, sd = 17.2).

Conclusions:

The development of target group-specific HI with the participation of affected individuals and experts is suitable for topics that are associated with possible experiences of shame and stigma. In addition to providing information about the risks of taking BZDs and z-drugs, screening of problematic BZD and z-drug use is also a matter of concern.

Key messages:

- BZDs and z-drug use is a relevant public health concern which needs to be adressed.
- Target-group specific health information for BZD and z-drug use accompanied by a screening-test can encourage affected individuals to seek medical advice.

Abstract citation ID: ckac131.496
The role of gender in the association between mental health and avoidable hospitalization

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Background:

Hospital discharge records (HDR) can indirectly assess the quality of primary care through algorithms proposed by the Agency for Health Research and Quality (AHRQ). Mental illnesses or substance addictions represent barriers to accessibility to medical care which, can lead to hospitalizations deemed potentially preventable. The aim of this study is to evaluate the gender differences in the association between potentially preventable acute hospitalizations whether mental health or addiction.

Methods:

The study examined HDRs of the Local Health Authority of Pescara, Abruzzo, period 2015-2021. The aggregate Prevention Quality Acute Composite 91 (PQI-91) has been coded according to the indications of the AHRQ. Were selected HDRs with a diagnosis of depression, psychosis, alcohol or substance abuse according to Enhanced ICD-9-CM Elixhauser algorithm. Four univariate logistic regression models were implemented correcting for age.

Results:

In the study period 252,775 HDRs of which 3,459 PQI-91 were analyzed. A diagnosis of depression is positively associated with a PQI-91 hospitalization only in the male gender (aOR 3.16; 95%CI 2.18-4.58) and not in the female one (aOR 1.13; 95%CI 0.75-1.72). The same is true for a diagnosis of psychosis, males (aOR 2.41; 95%CI 1.66-3.48) and females (aOR 1.19; 95%CI 0.67-2.12). In both genders there was an association with substance abuse, males (aOR 3.92; 95%CI 2.65-5.81) and females (aOR 2.68; 95%CI 1.19-6.07), while for the alcohol abuse the female gender is positively associated (aOR 2.52; 95%CI 1.11-5.73) and not the male one (aOR 1.24; 95%CI 0.80-1.92).

Conclusions:

Gender is an innovative approach to health inequalities: women and men respond to a different diagnostic-prescriptive appropriateness, which depends both on biology and on social, cultural, psychological and economic distances. Research efforts must be made to observe the effect healthcare access disparities have on patients who experience mental illness or addiction.

Key messages:

- Mental health can limit access to primary care for other comorbidities or acute diseases; poor-quality primary care can result in preventable hospitalizations that increase the cost of health care.
- The gender differences for the same diagnosis of mental illness/addiction that cause potentially preventable acute hospitalizations impose gender-specific strategies aimed at modifying care pathways.

Abstract citation ID: ckac131.497
Bullying victimization among middle school students in el kef governorate (Tunisia)

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Background and aim:

Bullying is a complex and widespread public health issue that one can be exposed to at any age and at any field, but it is considered particularly frequent during times of transition in children's and adolescents' lives. This study aims to investigate the prevalence and various forms of bullying victimization and explore culture of bullying victimization among students.

Methods:

A cross-sectional study was conducted during the Academic year 2018/2019 among middle school students in the governorate of El Kef, Tunisia. The sampling method adopted for this research was a cluster sampling technique. Data were collected using self-administered questionnaires. The Students' involvement in bullying victimization was assessed using a validated Arabic version of the revised Olweus Bully/Victim Questionnaire.

Results:

A total of 1111 middle school students were enrolled. The prevalence of bullying victimization behavior in this study was 45.8 % [95% CI: 45.5- 46]. Looking at the forms of bullying experienced by students: ''Being called mean names'' was the most prevalent form of being bullied with 26.9% (n = 299), followed by 16.9% reported ''being kicked in some place'', 16.3% reported ''being bullied through false rumors'' and 14.3% experienced bullying through messages, calls or images by means of mobile phones or Internet and 8.1% of the students reported being bullied with sexual gestures or comments. Verbal bullying (29.5%) was the most common type of victimization, followed by physical victimization, relational victimization and cyber victimization with 22.5%, 22.2% and 14.3% respectively. More than half of the students (58.5%) were more likely to inform others about incidents of bullying in their schools, mainly their parents (36.6%) or a friend (32.6%).

Conclusions:

Bullying is serious and major public health issue that have a negative impact on adolescents' well-being, and require special attention at the family, school, and community level

Key messages:

- High prevalence of bullying victimization with predominace of verbal type.
- Culture of bullying victimization and taking care of victims is still weak.

Abstract citation ID: ckac131.498
Mental health promotion in the school environment

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Issue/problem:

The practice took place in a private school with students from 9 to 15 years old. The purpose of the intervention was to promote the mental health of students. The school's goal was to eliminate school bullying incidents. The phenomenon of school bullying has global dimensions.

Description of the problem:

The teachers of the school did not consider that they should be involved in issues of mental health of the students and did not take steps to reduce the phenomena of school bullying. In the meetings with the students, which had duration of six months, concepts such as self-esteem, empathy, emotional intelligence, cooperation, respect, stress, failure were analyzed. The causes and consequences of school bullying were discussed. The aim of the meetings was to raise students' awareness to the above issues, to understand themselves and others and to develop teamwork. In the meetings with the students, three basic principles were developed: Facilitate-Respect-Recognize.

Results:

After the end of the practice in the school context, students, teachers and parents completed an evaluation questionnaire anonymously. It turned out that the meetings at school became a cause for discussion in the classroom by 100% and at home by 65%. The students stated that they would not allow school violence or bullying after the meetings. It is noteworthy that one in three teachers did not consider the promotion of mental health as part of their duties while the parents expected the teachers to fulfill this goal 100%.

Lessons:

It would be especially useful to conduct training seminars for teachers on adult (to enable better communication channels with parents) and child mental health and conflict management. Respectively, the parents should be educated on issues of mental health and psychopedagogy. The innovation of this action was that it involved teachers, parents and students while similar initiatives seldom take place in a Greek school environment.

Key messages:

- Promoting healthy interpersonal relationships at school between students and teachers.
- Recognizing children's emotions promotes their mental health during school life.

Abstract citation ID: ckac131.499
A six-week parenting program for parents of children with learning disabilities in Greece

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Children with learning disabilities have been shown to experience complex emotional and conduct difficulties due to late diagnosis and inappropriate parental management. Parenting support have been deemed necessary for a holistic management of learning disabilities. The current presentation reports on the methodology and initial results of a program offered to parents of children aged 8-12 years with learning difficulties at the region of Crete in Greece, during the school year 2020-2021. The program aimed at improving parenting skills and parent-child interaction, through a short training (four meetings) and a set of seven techniques offered to parents for boosting children's positive response. All children diagnosed with a learning disability by an interdisciplinary team of experts serving a mobile unit, were approached and their parents were offered a personalised intervention plan and a package of counselling services including a six-week program, based on the ''A Six Week Parenting Program For Child Compliance'' (Cipani, 2005). Parents were randomly assigned to an intervention (n = 40, 6-week parenting program) and a control group (n = 29, no intervention). A pre- and post evaluation design, with self-administered questionnaires, was used to assess changes in parental skills and performance as well as the quality of parent-child interaction (Parenting Style Questionnaire; the Family Quality of Life Scale (FQOL)). Most of the participants were mothers (n = 63), of low educational level (n = 26) and low income (n = 49). Statistically significant improvements were evident in the intervention group at post-intervention level in parenting skills as compared to baseline scores. Significant differences were also observed in the parenting skills at post-intervention level, between the intervention and the control group. Findings are expected to highlight new approaches towards improving the parental role, with an impact on the quality of life of families.

Key messages:

- Training on parenting skills should be included in family support services offered to children with learning disabilities.
- Professionals working with learning disabilities should be trained to assess deficits in parenting skills and offer brief counseling to parents.

Abstract citation ID: ckac131.500
Anxiety, depression, and lower quality of life among Danish women with polycystic ovarian syndrome

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Background:

Polycystic Ovarian Syndrome (PCOS) is the most frequent hormonal/endocrine disorder in women of reproductive age and is one of the most common causes of infertility. Approximately 20% of Danish women of reproductive age are diagnosed with PCOS, and yet only a little attention has been paid to the psychological symptoms appearing in women with PCOS. The present study investigated anxiety, depression, and lower quality of life among Danish women of reproductive age who are diagnosed with PCOS.

Methods:

This was a cross-sectional survey study among 326 Danish women who self-reported as being diagnosed with PCOS. The Hospital Anxiety and Depression Scale (HADS) was used to measure anxiety and depression, and the PCOS-QOL scale was used to measure the quality of life. Chi-square tests and logistic regression analyses were used for analyzing data.

Results:

Sixty-six percent of women were found to have anxiety (n = 216), 41% of women had depression and 70% of women had low quality of life The most frequently reported symptoms were irregular menstrual cycle (86%), overweight (73%), and mood swings (65%), and irregular menstrual cycle, overweight and infertility were the were perceived of having higher severity. After adjusting for age, ethnicity, education, and income, the severity of symptoms, namely irregular menstrual cycle, infertility, overweight, and hirsutism, were independently and positively associated with depression, and severity of symptoms, namely irregular menstrual cycle, mood swings, and hirsutism, was independently and positively associated with anxiety. Lower quality of life was independently associated with both anxiety and depression.

Conclusions:

Women with PCOS are at higher risk of anxiety, depression, and consequently, lower quality of life. Clinicians and other healthcare professionals should pay attention to the importance of mental health support in women with PCOS and work towards promoting it.

Key messages:

- Women with PCOS are at higher risk of anxiety and depression, and lower quality of life.
- Health care professionals working with women with PCOS should be aware of this and be prepared to offer necessary support.

Abstract citation ID: ckac131.501
Mental health of migrants during the COVID-19 pandemic: additional stressors, increased inequalities

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The COVID-19 pandemic has resulted in an unprecedent range of negative mental health outcomes across populations worldwide. Such effects are increasingly being documented, however an evidence gap persists on the consequences on most vulnerable groups, as certain subgroups of migrants. These populations already suffer from increased psychological burden, and the pandemic effects may potentially exacerbate adverse experiences and outcomes. This study aims to uncover the perceived impact of the COVID-19 pandemic on the mental health of migrants in Portugal and the associated sociodemographic aspects. A survey was conducted with a community-based sample of 1126 adult migrants in Portugal, assessing sociodemographics, migration-related characteristics and the perceived impact of the pandemic on mental health. Association between sociodemographics and mental health indicators was measured through bivariable analysis. In total, 1126 adult migrants were surveyed: 53.4% female, mean age of 35.8 years (range 18-77), 48.9% from African countries, 29.5% from Middle East/Asian countries, 21.6% from Brazil. Most participants (80%) reported feelings of agitation, anxiety or sadness during the pandemic period with 26.4% experiencing these feelings most days. The pandemic had a disproportionate impact on women (86.9% reported negative impact compared to 72.5% of men, $p < 0.05$), those undocumented (83.3% vs 75.4%, $p < 0.05$), those whose financial situation got worse since the pandemic (82.8% vs. 77.3%, $p < 0.05$) and those who had increased food shortages (84.4% vs 79%, $p < 0.05$). Migrants perceived an elevated deterioration of their mental health during the COVID-19 pandemic. In addition, particular groups such as women and those with a more insecure income or residence status are particularly susceptible to experiencing negative mental health outcomes.

Key messages:

- There is a need to recognize the detrimental mental health impact of the COVID-19 pandemic on particular migrant groups and to develop interventions that target their unique needs.
- Investigating sociodemographic and migration aspects could help identifying migrants at a higher risk of experiencing mental health distress.

Abstract citation ID: ckac131.502
Distribution of Suicides in India: A Decadal Data Analysis (2011-2020)

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Background:

India accounts for a significant proportion of suicide deaths globally. As per the Global Burden of Disease Study, India's share of global suicides from 1990 to 2016 increased from 25·3% to 36·6% among women and 18·7% to 24·3% among men. However, medical factors are not the sole contributors to the suicide burden.

Methods:

I analyze decadal data (2011-2020) on suicides in India provided by National Crime Records Bureau. This data contains the distribution of suicidal deaths based on age groups, causes, professions, gender, and residence zones.

Results:

The analysis suggests that individuals aged '15-29 years' were most affected (35.05%) by suicides, followed by those aged '30-44 years' (32.61%). Family problems contribute to the highest burden of suicides among both these age groups. Such deaths can be attributed to personal reasons. Suicides due to dowry disputes are exclusive to women. Also, women report the highest instances of suicides due to marriage-related issues. While suicides due to drug abuse, bankruptcy, unemployment, poverty, and property disputes were mainly reported among males. In 2020, the rise in annual suicide rate was found to be highest among business persons (29.43%), especially tradesmen (49.9%) and vendors (26.11%) against other businesses

(12.13%). Other professions which witnessed a steep rise in annual suicide rates in 2020 were agricultural laborers (17.90%) and daily wage earners (15.76%). This increase in suicide rates may be linked to economic reasons post lockdown imposition during the Covid-19 outbreak in 2020.

Conclusions:

Women commit suicide mainly due to marriage-related causes, while men are more vulnerable to suicide due to economic factors. Not all suicides can be traced back to diagnosed mental illnesses. A significant proportion of suicides are attributed to personal, economic, and social problems. The insights generated from this analysis can help identify the vulnerable groups and target the much-needed interventions.

Key messages:

- Suicide is a multifaceted problem involving various personal, economic, cultural, and social factors, besides medical reasons.
- Multidimensional strategies targeted at vulnerable groups could be potentially effective in curbing suicide rate.

DU Migration, LGBTI and minorities health

Abstract citation ID: ckac131.503

Good health information for people with a migration background

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Background:

Studies show that people with a migration background are often uncertain concerning the kinds of health services that are offered and where to turn to with which health concerns. Some factors, like fears or obstacles (e.g. deductibles), lead to the health system not being used (on time). This is particularly true for those who are socioeconomically or socially disadvantaged. The aim of the project was to get an insight into the information needs of this population group as a basis for producing and disseminating good health information in the future.

Methods:

In this qualitative study co-researchers conducted guided focus groups (separated by sex) or interviews in their first languages. In total, more than 100 people from 16 different countries of origin were involved in the survey.

Results:

In general, a substantial need for multilingual health information prepared in easy-to-understand language was expressed. Some health topics (e.g. the Austrian health system, mental health and available support) were mentioned by many participants. Other issues were relevant for few groups only (e.g. TCM). Gender differences can be seen in some groups but not in all. Besides acquaintances/relatives, general practitioners were named as main source of information. Indications can be derived on how health information should be prepared, designed and distributed. Besides multilingual health information, translation services are needed during appointments but also for the medical reports.

Conclusions:

When searching for health information, but also when trying to understand it, language barriers are a major obstacle. Multilingual and culture-sensitive explainer videos on selected topics are an appropriate medium for reaching a broad group of people. Low-threshold multilingual regional contact points could provide an important contribution to health equity, as a guide in the health system, providing information and translation services, and setting health promotion offers.

Key messages:

- Language barriers represent a major obstacle for vulnerable population groups with migration background in all stages of the health care process.
- There is a substantial need for adequately prepared multilingual health information.

Abstract citation ID: ckac131.504

The influence of social support on subjective health among people with selected citizenships

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Background:

Social support as a psychosocial resource has a significant impact on health. However, data on the association between social support and subjective health among people with a migration history is scarce. The aim of this analysis was to examine this association among a sample of people with selected citizenships in consideration of socio-demographic and migration-related factors.

Methods:

Data from the project ‘‘Improving Health Monitoring in Migrant Populations (IMIRA)’’ was used, including people with Croatian, Polish, Romanian, Syrian, and Turkish citizenship. Descriptive and logistic regression analyses were conducted to analyse the effect of socio-demographic (gender, age, socio-economic status (SES)) and migration-related factors (length of residence, residence status, German language proficiency) on the association between social support and subjective health (very good/good).

Results:

A total of 60.8% of participants with a low level of social support, indicated good subjective health in comparison to 78.8% among those who reported strong support. Participants with a length of residence of over 20 years (aOR = 0,29) and (very) poor German language proficiency (aOR = 0,39) were less likely to report good health. A high SES had the strongest impact on good subjective health (aOR = 5,42).

Conclusions:

Overall, the results confirm the findings for the general population in a sample of people with selected citizenships. The fact that people with a migration history more often face structural and health related barriers and that the existence of resources is helpful in overcoming these, a differentiated consideration of the relationship between social support and subjective health seems necessary in order to establish targeted prevention measures.

Key messages:

- Among people with selected citizenships, good social support has a positive impact on subjective health.
- Results remain consistent when considering socio-economic and migration-related factors.

Abstract citation ID: ckac131.505
Psychiatric Comorbidity Among Sexual and Gender Minority Youth and Young Adults at Risk for Suicide

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Background:

Compared with peers, young sexual and gender minorities (SGM) are at a four to seven-fold increased risk of attempting suicide. Prior epidemiological studies, mainly focusing on monomorbid inequalities and without conducting diagnostic clinical interviews, have been unable to report robust data on psychiatric comorbidities among those who attempted suicide. The purpose of this presentation is to describe the presence of current psychiatric comorbidities among SGM youth and young adults at elevated risk for repeat suicide attempts.

Methods:

A diverse convenience sample of SGM youth and young adults with a lifetime history of suicide attempts and current suicidal ideation was recruited for an open-phase suicide prevention trial in San Diego, CA. At baseline, participants underwent a 15-module DIAMOND interview for adults or computerized K-SADS for minors, and a battery of self-report questionnaires.

Results:

Among the 31 participants (Mage = 22 years [Range: 16, 29]; 100% sexual, 52% gender, and 61% racial/ethnic minority), 27 (87%) participants met criteria for any mood disorder, 24 (77%) for any anxiety disorder, 16 (52%) for any trauma or stress disorder, and 2 (6%) for any psychotic disorder. One (3%) participant did not meet criteria for any psychiatric diagnoses, while five (16%) met criteria for a single and 25 (81%) for multiple diagnoses. The average number of diagnoses was 3.2 (Range: 0, 7). Additionally, 20 (65%) participants met the cut-off for likely ADHD, 20 (65%) for possible borderline personality disorder, and 21 (68%) for likely body dysmorphic disorder, with 11 (35%) within the 90th percentile for reference eating disorder severity.

Conclusions:

The degree of psychiatric comorbidities in the sample of SGM youth and young adults at elevated risk for suicide was high. Beside direct suicide risk mitigation efforts, suicide prevention programs that target young SGM with a history of attempts should screen for untreated psychiatric disorders.

Key messages:

- LGBTQ+ youth and young adults at elevated risk for repeat suicide attempts experience a high degree of psychiatric comorbity.
- Beyond suicide risk mitigation, LGBTQ+ youth suicide prevention programs should focus on untreated psychiatric comorbidities.

Abstract citation ID: ckac131.506
Up to the TASG: a participatory study on sexual health of trans and non-binary persons in Germany

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Problem:

Comprehensive data on the sexual health of trans and non-binary people are not available due to lacking focus on these groups and inappropriate study designs that often fail to capture the lived realities of these communities.

Description of the practice:

A participatory study was developed with trans and non-binary representatives with a qualitative part involving single and group interviews as well as the development and roll-out of a quantitative online questionnaire. After securing funding, we started the study in 2020 ensuring community involvement in as many parts as possible.

Results:

A crucial component is the advisory board including people representing a broad spectrum of trans and non-binary communities, organizations, who are also representing a variety of intersectional perspectives, e.g. BIPoC and neurodiverse people. The advisory board provides crucial input to the design and conduct of the study components. For the qualitative part, a unique study design was developed using sexual health & empowerment workshops for trans and non-binary people in a trustful peer setting combined with qualitative data collection. This way, participants of the study truly benefit from participation and the data quality is improved. The quantitative study was created together with >20 community representatives. Items on gender identity, transition, and experiences of discrimination were developed using online workshops and written feedback. The questionnaire was checked by community members to ensure appropriate language. Through diverse community channels and social media, we recruited 58 participants for the qualitative part and more than 2000 participants for the online questionnaire. The results are expected in late 2022.

Lessons:

Involvement of community representatives and the participatory study design ensured strong community support. This enables the capture of meaningful information on the sexual health of trans and non-binary people.

Key messages:

- Using a participatory study design was crucial to the success of this study.
- We were able to conduct a study capturing meaningful data on the sexual health of trans and non-binary communities.

Abstract citation ID: ckac131.507
Factors associated with SARS-CoV-2 infections among migrants in Germany

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Background:

International research shows increased risks for SARS-CoV-2 infection and severe disease progression in people with migration history. In Germany, data on this topic is scarce. Aim of this contribution is to examine the association between migrant status and risk of SARS-CoV-2 infection and discuss potential explanatory mechanisms.

Methods:

We analysed data from the German COVID-19 Snapshot Monitoring online-survey and performed hierarchical multiple regression models to calculate probabilities for a self-reported SARS-CoV-2 infection. Main predictor variable was the migrant status; besides, the association with gender, age, education, household size, household language (German vs. other), and occupation in the health sector was analysed.

Results:
Of 45,858 participants, 3.5% reported a current or previous infection with SARS-CoV-2, 16% reported own or parental history of migration. The probability of reporting an infection was 3.95 percentage points higher among migrants. The effect of different characteristics on self-reported SARS-CoV-2 infection varied. Higher probabilities were shown for individuals living in bigger households and those not speaking German at home. Stepwise integration decreased the observed association with migrant status. When adding an interaction term of migrant status and occupation in the health sector, the probability to report an infection was 11.5 percentage points higher for migrants working in the health sector.

Conclusions:
People with migration history, health sector employees and particular migrant health workers are at a higher risk of SARS-CoV-2 infection. However, the migrant status itself does not determine the risk of infection, but the living and working conditions. Therefore, targeted and multilingual prevention measures are needed that consider living and working conditions.

Key messages:

- Higher SARS-CoV-2 infection risks are not solely determined by migrant status, but were shown for health care workers, people living in bigger households and those not speaking German at home.
- As not the migrant status determines infection risks, multilingual and targeted prevention measures considering the living and working conditions of people are necessary.

Abstract citation ID: ckac131.508
eHealth solutions for trans* persons: a systematic literature review of research from 2000 till 2021

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Though familiarity with trans* persons ́ needs has increased in the new millennium, still, addressing their specific health issues is challenging. In and outside of complex interdisciplinary settings with trans* persons and health care workers, ICT solutions are used to remind trans* persons of their hormone injection or to conduct voice training. Hence, we reviewed the pertinent literature to shed light on what kind of eHealth solutions are investigated, what diagnosis and treatment are eHealth solutions related to, and how are trans* persons enacted within these eHealth solutions. We conducted a systematic literature review analyzing peer reviewed articles presenting all kind of studies except literature reviews. Using the electronic databases PubMed and Scopus, we analyzed data from 1 January 2000 to 31 December 2021. For screening purposes we used the PRISMA checklist and, data extraction followed the PICO (Population, Intervention, Control, Outcome, and Improvement) model. We also analyzed studies covering aspects of the impact on the COVID-19 pandemic. Overall, we identified 322 records, 187 from Scopus and 135 from PubMed. Removing 117 duplicated and 47 records for other reasons, 158 reports were assessed for eligibility. Our results show that trans* persons were often presented as subsamples in larger samples of non-binary populations. Also, eHealth solutions related to very different technological solutions and to a wide range of treatment models, with the vast majority relating to sexual health. Hence, we could also see that trans* women were the more interesting group in the research included in this review. We found 23 studies relating to COVID-19. eHealth solutions have great potential to contribute to a better healthcare for trans* persons but the needs of different groups during healthcare have to be taken into account in further research. During the COVID-19 pandemic, the need for research on eHealth solutions for trans* persons came into focus.

Key messages:

- Our analyzes showed that research on eHealth solutions for trans* persons takes place in complex interdisciplinary settings which need to be taken into account in further research.
- The COVID-19 pandemic crisis lead to an uptake of eHealth interventions in mental, endocrinological, and sexual health care, especially in younger groups and in the frame of routine clinical care.

Abstract citation ID: ckac131.509
Barriers to primary care access for asylum seekers and refugees in the UK: a systematic review

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Background:
Recent armed conflicts, in addition to the deterioration of humanitarian conditions across the world, has led to the biggest increase in civilian displacement since World War II. Exploration of the barriers and facilitators to primary healthcare access amongst asylum seekers and refugees (ASRs), from the perspective of both service users and service providers, is important for improving policy and practice to ensure more equitable health care.

Methods:
Systematic searches of PubMed, EMBASE, MEDLINE, and CINHL databases were conducted to identify articles until May 2021 using a combination of relevant search terms. Studies were eligible if they were published in English and conducted in ASR populations in primary care settings the UK using qualitative approaches. Literature was thematically analysed using Braun and Clarke's 6-step process. Quality assessment of included studies was conducted using the Mixed Methods Appraisal Tool.

Results:
Nine studies were included in the review. Key themes identified included: accommodation within services; awareness of service navigation, negotiation and eligibility of care; accessibility; availability of appointments; acceptance; complexity within health needs; and cultural appropriateness. Healthcare professionals encounter barriers and facilitators within the healthcare setting, the overall healthcare system, and with regards to their understanding of migration policy. ASRs experience barriers and facilitators with regards to accessing and understanding the health system, cultural appropriateness of care, cost, stigma and prejudice, and availability of specialist services.

Conclusions:
This study highlights the difficulties ASRs and healthcare professionals face in primary care settings, the need for consistent and unambiguous guidance that supports the cultural competence of the heath service, and the need for further research into the efforts made to eliminate health discrimination within primary care.

Key messages:

- Barriers exist to primary healthcare amongst asylum seekers and refugees.
- Specialised and incorporated healthcare and support is needed due to unique social, cultural, and demographical differences of this population.

Abstract citation ID: ckac131.510
Health interventions for migrants and refugees in host Southeast Asian countries: a systematic review

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Background:
Understanding the different types of health interventions that have been conducted for migrants and refugees is crucial for the improvement and implementation of future health interventions for these populations. This systematic review aimed to identify and to look at the scope and outcomes of health interventions focused on migrants and refugees in the main host counties in Southeast Asia which are Thailand, Singapore, and Malaysia.

Methods:
This study was conducted in line with the PRISMA guidelines and its protocol has been submitted to PROSPERO. The following databases were searched until June 2021: PubMed, Web of Science, Science Direct, Cochrane, and Google Scholar. Studies were excluded if: 1) they were conducted outside Thailand, Singapore, and Malaysia; 2) had only had qualitative results; 3) were non-peer reviewed; 4) not written in English.

Results:
The search yielded 8,266 studies, out of which 33 were included in the review. The majority of the studies (79%) were conducted in Thailand of which most were focused on migrants or refugees from Myanmar (85%). Besides two randomized controlled trials (RCTs) of mental health interventions, most Thai studies were observational (81%) and focused on infectious disease-related interventions (33%) or the evaluation of health-related programs (29%). Six studies were conducted in Malaysia (18%) of which 4 assessed mental health interventions in refugees. Three of these studies were RCTs, whereas 1 was an observational study. Only 1 study was situated in Singapore and was an RCT evaluating treatments for COVID-19 in migrant workers. Even in studies with similar interventions, outcomes were too diverse to conduct a meta-analysis.

Conclusions:
The low number of studies highlights the gap in literature on health interventions for migrants and refugees, especially in Malaysia and Singapore. More rigorous and cohesive intervention-related research needs to be conducted in Southeast Asia.

Key messages:
- More intervention-related research for migrant and refugee populations in the main Southeast Asian host countries is needed.
- Interventions for migrant and refugee populations in host countries in Southeast Asia often do not follow the gold standard RCT study design, limiting the knowledge on their effectiveness.

Abstract citation ID: ckac131.511
Health and equity: Venezuela's and Brazil's public health policies aimed at the LGBTQ+ population

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Background:
Public health policies aimed at the LGBTQ+ population within Latin America have been a theme of discussion among policymakers, governments, and society. Latin America's conservative idiosyncrasy has delayed advances in this regard. A common factor has been inequity and difficulty in access to healthcare institutions by LGBTQ+ groups. Despite some improvements in some regions, there are still huge gaps between neighboring countries as in the case of Brazil and Venezuela. The aim of this study is to investigate and compare the existence and implementation of health policies aimed to improve the health equity of the LGBTQ+ population in both countries.

Methods:
Scoping review in international journal databases and grey literature, such as official government websites, and NGOs reports.

Results:
In Brazil, the "National Policy for comprehensive health of lesbians, gays, bisexuals and transgender populations" was created in 2011. Nonetheless, its implementation encounters challenges. The main difficulties are: under budgeting, lack of training of healthcare personnel, and challenges in monitoring and assessing proposed health interventions. In Venezuela, till today there is a lack of institutional protective policies and health policies directed at this population. Some examples include the impossibility to rectify documents to reflect transgender people's identity, adequate protection from the law against civilian violations, same-sex marriage, and legal conditions for children of same-sex parents.

Conclusions:
The points presented above restrain satisfactory access to health care, positioning the LGBTQ+ population in a vulnerable setting, and making it a challenge to achieve health equity. In order to strengthen the health care systems in both countries, breakthrough measures need to be taken to assure fundamental human rights.

Key messages:
- Venezuela lacks basic institutional protective policies aimed towards LGBTQ+ population, while Brazil has a National LGBT Health Policy.
- Achieving health equity and assurance of rights to the LGBTQ+ population remains a challenge in both Brazil and Venezuela.

Abstract citation ID: ckac131.512
Opportunities and Challenges in community-based inclusive science education

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Background:
This research is part of a Horizon2020 funded project named C4S - Community for sciences. The project aims to implement co-created inclusive science activities with children 0-16 years and their families in vulnerable communities. Best practice strategies will be developed to promote the empowerment of children in vulnerable situations. In six European cities, community-based inclusive science activities will be realized and evaluated. What is the impact of inclusive science education on vulnerable communities' health in Europe? Why is community-based inclusive science education an urgent issue to improve health conditions of children and families?

Methods:
Guided by the research questions this method includes an integrative literature review to explore barriers and facilitators to delivering inclusive science in European countries and a questionnaire delivered to 6 Hubs involved in the C4S project. The questionnaire identifies core elements of a community, e.g. "Joint action", "social ties" and "Diversity". Both the literature review and the community questionnaire are performed in co-creation with inclusive science activities.

Results:

Preliminary findings of 214 bibliographical references show the importance and evidence of inclusive science education. When it comes to specific groups of people who are in vulnerable situations, only a few references could be identified. Most results are related to children with disabilities in comparison to children from ethnic minorities. However, ongoing discussions about intersectionality and decolonial theories were identified topics to answer our research questions.

Conclusions:

The literature shows evidence about inclusive science but lack of specific information for specific target groups. Therefore, the questionnaire distributed to the Hubs may offer new perspectives and will lead to specific knowledge about communities' needs and resources to ensure inclusive science with and for children in vulnerable situations.

Key messages:

- Inclusive and community-oriented science education is relevant to empower children in vulnerable situations.
- New perspectives and deeper knowledge about context specific factors that facilitate inclusive science education may contribute to sustainable health.

Abstract citation ID: ckac131.513
National belonging and psychological strain among Finnish migrant populations

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Background:

National identities are socially constructed and imaginary groups with real-life consequences. Migrants are in a heightened risk to be treated as 'others' who do not belong to society. It remains unclear, to what extent national belonging is experienced among Finnish migrants and what consequences on health this has. We study migrants' sense of belonging to Finns, how it's manifested in sociodemographic groups and whether it's associated with psychological strain.

Methods:

We used nationally representative data from the cross-sectional Survey on Well-Being among Foreign-Born Population (FinMonik, n = 6836). National belonging was assessed by the item "Finns" in question "which of the following areas or groups you feel you belong to?". Response options fully and quite a lot were coded to indicate sense of belonging. Logistic regression was used to test the association between belonging, sociodemographic factors and psychological strain (MHI-5). Weights were used to correct the sample.

Results:

51% reported sense of belonging to Finns. 46% of those aged 30-44 reported sense of belonging to Finns, whereas the youngest and oldest age groups yielded highest prevalences (18-29 = 53% and 45-64 = 58%, p<.001). Married persons reported sense of belonging to Finns more than those who weren't (55% vs. 48%, p<.01). Country group accounted for the variation in Finnish identification with a p-value of less than 0.001. Only 27 percent of those born in East Asia reported sense of belonging to Finns, whereas almost 60% of those born in Middle East and North Africa sensed belonging to Finns. Those with sense of belonging to Finns were twice as likely to report lack of psychological strain than those with no sense of belonging to Finns (p<.001).

Conclusions:

Achieving national belonging to the receiving society seems to be more difficult or non-appealing for some migrant populations than others. Lack of national belonging poses risk of deterioration of mental health.

Key messages:

- The socially constructed boundaries of national belonging can be exclusionary and have negative consequences for the health of migrant populations.
- Experiencing a sense of national belonging to the country of residence has positive associations with mental wellbeing.

Abstract citation ID: ckac131.514
Psychiatric and somatic health of homeless individuals in the context of their migration history

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Background:

Descriptions of homeless individuals' somatic and psychiatric health status remain scarce. The heterogenicity of the population is increasing, with more people migrating within the European Union. Migration history has been described as a determinant of health and healthcare access.

Methods:

A multicenter cross-sectional study design included homeless individuals in Germany. Using interview-based questionnaires, the prevalence of mental and somatic illnesses, as well as healthcare use and access, were determined. Multinominal logistic regression analysis was performed to examine the influence of the homeless migration history on health status.

Results:

306/635 (48.2%) of the homeless individuals were born outside Germany; 213/306 (69.6%) came from another EU country. Homeless people from EU countries frequently reported economic reasons for leaving their home country (51.0%) and entering Germany (64.4%). Compared to homeless individuals of German origin and homeless non-EU migrants, they stated to live rough (48.2% p = 0,03), not hold health insurance (62.4% p < 0,0001), and not receive state funds (82.6% p < 0,0001) more often. Prevalences of psychiatric and somatic illnesses among homeless people were high compared to the general German population. There were no differences observed between the prevalence of chronic diseases if stratified by the origin of the homeless individuals.

Conclusions:

Homeless individuals report higher prevalences of psychiatric and somatic illnesses than the general population. Compared to homeless people of other origins, homeless EU migrants may be disadvantaged in their housing situation and integration into the German social security system.

Key messages:

- Programs aiming to integrate homeless people into mainstream health care should focus on homeless EU migrants.
- Our data underline the need for specific care services for homeless individuals.

Abstract citation ID: ckac131.515
Co-production in public health research grant writing: engaging underserved migrant mothers in the UK

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Background:
In the UK, one in three births is to a non-UK born woman, but there is a gap in co-produced research to explore their experiences. The National Institute for Health and Care Research (NIHR) defines co-production as 'an approach in which researchers, practitioners, and members of the public work together, sharing power and responsibility'. This project co-produced a grant proposal to improve maternity care for underserved migrant women in the UK. We reflect on transferrable learning for engaging those whose voices are less often heard in grant writing.

Methods:
An expert by experience, an underserved migrant woman who gave birth in the UK, joined the research team. Four online engagement workshops were conducted; two involved only migrant women, two were multi-disciplinary. 26 underserved migrant women attended. NIHR INVOLVE public involvement guidance was consulted.

Results:
Women said they were often asked about negative experiences which felt disempowering, and rarely asked about solutions. Thus, we shifted the focus of our work to co-designing solutions. Women said that having an expert by experience co-host workshops encouraged engagement, so we integrated this into our methods. Some women were uncomfortable in professional groups. Thus, our proposed steering and focus groups will have an expert by experience subgroup with elected members attending multi-disciplinary groups. We will engage mostly online as women preferred this to enable flexibility with childcare. The lead expert by experience helped form the proposal through brainstorming, co-drafting, and feedback; experts by experience commented on the draft via email and workshops. The lead expert by experience wished to gain further experience of research methods, for which we requested additional funding.

Conclusions:
This project highlights the immense potential for co-production in public health research, and the value of adapting research planning to maximise the voices of the less often heard.

Key messages:
- Engaging experts by experiences in public health research planning is key to ensuring our work addresses the needs of underserved communities.
- Co-Production of research requires determination to involve those whose voices are less often heard from the beginning of the research process, and to commit to joined working throughout.

Abstract citation ID: ckac131.516
Substance use prevention among migrant children in Serbia- challenges and opportunities

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Among almost millions of children asylum seekers registered in the EU in 2015-2017, there were one-fifth unaccompanied children. These children are facing many challenges, including substance use while at the same time the recommendations for prevention are underdeveloped in many countries. To address the issue of substance use among migrant children in Serbia, the Institute of Public Health of Serbia with the support of the UNICEF and in cooperation with other partners developed recommendations for preventive activities in 2022 based on the migrant needs and country-specific situation. In the first phase of development, a desk review of current legislation and available relevant data was done. In the second phase, in order to gain in-depth view of the challenges and opportunities, workshops were conducted in two migrant centers with medical and other staff. Based on the findings and consultation process, feasible, evidence-based interventions were recommended. Several barriers to the implementation of evidence-based prevention activities in migrant centers were identified. To address the knowledge gap on the management of acute intoxication and the current referral system, guidelines were developed. The diversity of professional backgrounds of staff in migrant centers was identified as a barrier and recommendations for further training were made. There are several barriers that need further action and solutions such as short periods of stay in centers that hinder the provision of structured programs, language barriers, and ethical issues for minors, especially unaccompanied children. Prevention activities in migrant centers need to consider the specific needs of migrants, such as language barrier, capacities, and relevant knowledge of available staff and country-specific situations. The development of guidelines and a flowchart for a referral system for migrants at risk for substance abuse and dependence can be a useful tool for staff in migrant centers.

Key messages:
- Substance use prevention among migrants should be evidence-based and in line with migrant needs and country-specific situations.
- Guidelines for prevention should be available to migrant centers' staff.

Abstract citation ID: ckac131.517
COVID-19 among migrants, refugees, and IDPs: a synthesis of the global empirical literature

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Background:
The COVID-19 syndemic reveals social and health inequalities, putting marginalized groups such as migrants at greater risk. Yet health systems fail to routinely monitor the health of migrants, refugees, and internally displaced persons. Our systematic review provides an up-to-date synthesis of the empirical evidence on COVID-19 infection risk, transmission, outcome of disease and risk of severe course of disease among migrant populations. It further aims to compile extant evidence on COVID-19 vaccination coverage among these groups, and on the effects of pandemic control measures on their health.

Methods:
Following PRISMA guidelines, we registered a review protocol, searched 14 scientific databases and 4 pre-print servers using the WHO database of global literature on COVID-19, and hand-searched relevant websites for grey literature. The search period covers the time from 12/2019 to 11/30/2021. Articles in English, German and Spanish and all study designs were included.

Results:
A total of 6966 references were identified for title and abstract screening. 518 records were screened in full-text, out of which 204 articles were included so far (conflict solving at full-text stage and data extraction are ongoing). Our review presents a broad landscape of different study designs, migrant populations and COVID-19 outcomes. Based on previous work, we

expect to find a higher risk of infection in migrants and their disproportionate share among COVID-19 cases, and consolidate the (mental) health impacts of pandemic control measures. Our preliminary findings indicate a vast knowledge gap on vaccination coverage among migrant groups.

Conclusions:

Two years into the syndemic, this review summarizes the global empirical evidence on the impact of the COVID-19 syndemic on migrant populations. With health systems often lacking related data, the review provides an important evidence base for the consideration of migrants in future pandemic preparedness policies.

Key messages:

- The systematic review provides an up-to-date synthesis of the empirical evidence on COVID-19 among diverse migrant populations globally.
- Knowledge on vaccination coverage in migrants remains patchy.

Abstract citation ID: ckac131.518
Cross-sectional nutrition assessment in a refugee camp in Gambella region, Ethiopia

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Minors account for 20 percent of the world's migrants, reaching 33 million in 2019. The prevalence of malnutrition has been reported between 17 and 21% among refugees. However, data about Sub-Saharan African refugees is lacking. The study evaluates the nutritional status of refugees in the Nguenyyiel camp in Gambella (Ethiopia). The retrospective cohort study included all children under five attending the first visit to the refugee camp's health post between 01/06/2021 and 31/08/2021. Sociodemographic data, body weight, and upper arm circumference (MUAC) were recorded. The z-score of weight for age (WFA) and MUAC for age (MUACZ) were estimated using the R 'anthro' package developed by the World Health Organization (WHO). Children with WFA <-2 standard deviations (SD) were considered underweight, those >2SD overweight. A MUACZ <-2SD defined acute malnutrition. Among the 782 patients admitted, 415 (53%) were under five. Females were 195 (47%). The mean age was 2.1 years (SD 1.6). The mean body weight was 11kg (SD 5). Considering the WFA, 200 (48%) children were within +2 SD. Children with WFA <-2SD were 92 (29%), those > 2SD were 28 (9%). The frequency of children with WFA <-2SD was higher in boys (p = 0.049). There were no differences in the frequency of children with WFA >2SD based on sex (p = 0.998). WFA decreased as age increased (p = 0.048). MUAC was recorded for 273 (66%) children. The mean MUAC was 14.2mm (SD 2.4). Children with MUAC z-scores within +2SD were 245 (77%). Children <-2SD were 92 (8%). The frequency of children with MUACZ <-2SD was not significantly different based on sex or age (p = 0.125, p = 0.324). The prevalence of malnutrition was moderate in the Nguenyyiel camp. At the same time, the frequency of underweight children was high, particularly among boys (34%) and with increasing age.

Key messages:

- Nutrition remains a problem in refugee camp settings, especially in children.
- Ensuring the health of refugees, as vulnerable population, should be a priority for both governments and international organizations.

Abstract citation ID: ckac131.519
Digital health information and female adolescents with turkish migration background

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Background:

Youth with Turkish migration background (TRMB) are repeatedly classified as a vulnerable group. Digital health information, which is prepared and made available by various providers in a variety of ways, may represent an opportunity to promote the health of these adolescents. Empirical findings on wheter young people have access to digital health information and what role digital health information plays in their everyday lives are hard to find.

Methods:

In the project ELMi, a project of the HLCA Consortium, funded by the BMBF, female adolescents with TRMB were interviewed. Individual interviews as well as a focus group discussion were conducted and evaluated according to the Qualitative Content Analysis.

Results:

Female adolescents with TRMB have technical access to digital health information. They use New Media to obtain health information. When searching for digital health information, it is important for the adolescents to be able to find factual and comprehensibly formulated information quickly. German-language homepages are preferred by them. Parallel to the digital platform they regard female persons from their own social network as contact persons for health questions. They draw on their health-related knowledge and experience in order to be able to obtain answers to their own questions.

Conclusions:

Digital health information and the health-related knowledge and experience of the female social network are considered as a health related resource. German-language electronic information with low-threshold content can represent an opportunity to reach female adolescents with TRMB

Key messages:

- Female adolescents with TRMB demonstrate technical and content access to digital health information.
- Digital health information represents an opportunity to reach the target group.

Abstract citation ID: ckac131.520
Health in refugees and migrants who self-identify as sexual or gender minority

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Background:

In 2019, 80 million individuals were forcibly displaced. Yet, there is little knowledge on the health of refugees and migrants who self-identify as sexual- or gender minority (SGM). The aim was to examine health and health-related behaviors in refugee and migrant individuals who identify as SGM, and in comparison, to their heterosexual peers.

Methods:

This study included 168,952 persons aged 16-84 who answered the Swedish National Public Health Survey in 2018 and 2020. Participants were grouped into White heterosexual, White

SGM, migrant heterosexual, migrant SGM, refugee heterosexual, and refugee SGM. Outcomes included mental health (f.e. mental ill-health, suicidal ideation), general health, risky behaviors (f.e drug and alcohol use), and experiences of violence. Associations were analyzed using logistic and linear regression adjusting for sex, age, and educational level.

Results:

Being an SGM, regardless of refugee or migrant minority status, was associated with worse general health and mental ill-health compared to heterosexual peers including suicidal ideation in refugee SGM (OR 2.42, 95 % CI 1.44-4.08). Both refugees and migrants had for example lower odds of drug and risk alcohol use compared to heterosexual peers but higher odds of risk gambling (OR 1.88, 1.49-2.37 for refugee SGM). Transgender refugees had high odds for risk gambling (OR 8.62, 1.94-38.40) and exposure to physical violence (OR 7.46, 2.97-18.70).

Conclusions:

In this national population-based study, SGM have worse mental and general health regardless of being refugee or migrant minority. SGM refugees did not have worse health compared to migrant and White SGM and their heterosexual peers. While more research is needed, our study shows the need for public health personnel to be aware of potentially worse health and adverse experiences in SGM individuals, regardless of ethnic origin including refugees.

Key messages:

- Our study provides evidence for poorer health outcomes in diverse SGM-groups.
- Policies tackling health in refugees and SGM are still inadequate.

Abstract citation ID: ckac131.521
Vaccinating The Invisibles, the COVID-19 vaccination of irregular migrants in Rome

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Background:

The death toll of the COVID-19 pandemic has been hugely downsized by the advent of the currently available vaccines, at least in high-income countries. Nevertheless, there is a huge gap between countries and within countries with respect to vaccination access and coverage. In June 2021, several non-governmental non-profit organizations responded to a call issued by Regione Lazio to help organize and enrol for vaccination vulnerable people such as irregular migrants and migrants living in temporary or informal settlements. Through a huge effort, non-profit voluntary organizations Nonna Roma and Intersos enabled the vaccination of thousands of immigrants from different countries, age and residence status.

Methods:

We obtained a dataset regarding part of the people these NGOs facilitated in accessing the vaccination booking. We had information regarding age, sex, country of origin, nationality and type of document.

Results:

These populations were from different ethnic backgrounds, in majority males and below 50 years old on average. We found an association between the continent of origin and holding any document and between age and holding any document, both at a significant level ($p < 0.05$). Coming from Asia, as opposed to coming to any other continent, and being younger, i.e. under 25 years of age, were associated with holding any type of document.

Conclusions:

We reflect on the need of rethinking the services for this population, having in mind article 25 of the Universal Declaration of Human Rights, but also, more practically, that often these people work in our elderly homes as caregivers or as cleaners in our offices. Therefore, making it easier to access health services would be in any country's interest, especially during a pandemic. Policy efforts directed at facilitating migrant access to health services would ultimately help create a safer community for both migrants and residents, for whom migrants often work as strategic employees.

Key messages:

- Irregular migrants have not been included in national vaccination plans everywhere, despite WHO and other entities recommendations.
- An integrated national plan for irregular migrants vaccination would be useful for protecting other vulnerable populations such as elderly.

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Understanding clinician barriers to providing equitable healthcare for ethnic minority populations

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Background:

It has long been recognised that ethnic minority groups have worse health outcomes in the UK. Social determinants of health (SDH) contribute significantly to these inequalities. However, inequalities persist, even after controlling for these determinants. As well as being less likely to engage with healthcare services, ethnic minority groups are more likely to report poor experiences. The majority of healthcare in the UK is delivered through patient: clinician interactions (PCI), therefore a good working relationship with patients is paramount. Recent focus has been placed on ensuring "cultural competence". Whilst this is important, we suggest also examining the culture within healthcare itself. Healthcare professionals are not immune to bias, preconceptions and the stresses of work and this must be taken into account. A seminal piece of work on this is the "culture of medicine" framework proposed by Boutin-Foster et al, which examines the impact of these factors.

Aims and Methodology:

This paper aims to examine barriers within PCI that impact healthcare for ethnic minorities. A formal literature review was conducted and 131 relevant studies were identified. Grounded theory was used for analysis and data was categorised into themes with Boutin-Foster's framework used as a structure.

Results:

The review found that the concept of implicit bias was paramount in PCI. Three major barriers resulting from this bias are suggested: its impact on clinical decision making, the impact on clinician-patient communication and finally the resultant lack of trust in clinicians and poor perceived quality of care by ethnic minority groups.

Conclusions:

Clinician implicit bias is a major barrier to equitable healthcare for ethnic minority populations. A solution we propose is to acknowledge our own preconceptions. Awareness of our own culture, preconceptions and the pressures around us will allow us to find solutions to these barriers, including further research and education.

Key messages:

- Clinician implicit bias within the "Culture of Medicine" is a barrier to equitable healthcare for ethnic minority populations.
- Awareness of our own culture and preconceptions is paramount to addressing these barriers.

Abstract citation ID: ckac131.523
Making blind spots visible: the lack of race-conscious research and data in public and global health

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In Continental Europe, race-conscious research and data (RCRD) is not adequately deployed in support of policy-making and social change to tackle health disparities. One reason is a lack of national data systems based on race in many countries, another is that researchers or policymakers are unaccustomed to taking them into account. One consequence of this for public and global health is the adoption and implementation of policies that are ostensibly race-neutral but which in fact reproduce ''methodological whiteness'' (Bhambra, 2017) and create or exacerbate racial health inequities. Calls to decolonise public health recognize the importance of RCRD, yet race or ethnicity as a variable in research continues to be seen as a contentious issue for a number of reasons. First, while some researchers see it as a valuable tool for addressing health inequalities or the impact of institutionalized and systemic racism on racialized/ethnic minority groups, others oppose its use on the ground that it can lead to stigmatization or racial stereotyping. Second, RCRD is often seen as too difficult to implement in practice, due to challenges of finding appropriate approaches to conceptualisation, operationalisation, data (non)collection, and interpretation. Third, many researchers fear that the use of race and ethnicity in research may be instrumentalized against minorities in ways that are sometimes difficult to anticipate. This project aims to contribute to addressing this, by building expertise for RCRD and creating a knowledge network and community of practice for researchers working in Public and Global Health in Continental Europe. The project begins by examining how RCRD is used at the Institute of Tropical Medicine Antwerp, which is located in Belgium, Europe but has research collaborations on other continents. It then continues with a scoping review on the use of RCRD to address racial and ethnic health disparities more generally across Europe.

Key messages:

- Race-conscious research and data are lacking in public and global health research and policy-making, leading to racial health disparities.
- Need to develop expertise and a network of researchers in race-conscious research and data in Europe.

Abstract citation ID: ckac131.524
Ethnic disparities in clinical severity of coronavirus disease 2019 (COVID-19) upon admission

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Background:

Reports from all over the world have shown great ethnic disparities in COVID-19 morbidity and mortality. Recent European studies have found discrepancies between higher risk of admission and intensive care treatment among ethnic minorities but lower mortality rates compared to the ethnic majority. This study will elucidate the ethnic differences in disease severity upon admission as a possible factor in explaining these discrepancies.

Methods:

A retrospective cohort study of 1442 patients admitted with COVID-19 at three hospitals in Copenhagen, Denmark, between 1st February 2020 and 31st May 2022. Clinical, demographic and ethnicity data were extracted from health care records and collected using REDCap. Severity upon admission (< 24 hours) was assessed as 1) oxygen need, 2) oxygen administration and 3) need for intensive care.

Results:

Ethnicity was registered on 1341 patients (57,0% Danish, 34,8% non-Western). Over all, preliminary descriptive analyses show patients of non-Western origin had symptoms of COVID-19 for a longer period (8,0 vs 6,7 days, $p < 0{,}0001$) and had a higher oxygen need (7,0L vs 5,2L, $p = 0{,}02$) upon admission compared to patients of Danish origin. A higher percentage of patients of non-Western origin needed high flow oxygen administration upon admission (30,2% vs 22,9%, $p = 0{,}006$) and were transferred to the ICU within the first 24 hours (4,9% vs 2,2 %, $p = 0{,}02$) compared to patients of Danish origin. Further analysis will be done, including biochemistry and link to registers in order of obtaining more accurate info on country of birth and migration status. We will do logistic regression regarding ethnic differences in severity of COVID-19 upon admission adjusting for comorbidities, age, sex and BMI.

Conclusions:

Preliminary data on disease severity of COVID-19 upon admission show some ethnic disparities. Language barriers, low health literacy or the fear of stigma might explain this. Further analyses are needed.

Key messages:

- Preliminary data from this cohort study suggest that patients of non-Western origin had symptoms of COVID-19 for a longer period before being admitted compared to patients of Danish origin.
- Preliminary data on disease severity of COVID-19 upon admission show ethnic disparities with regard to oxygen need, oxygen administration and need for intensive care.

Abstract citation ID: ckac131.525
Diverse perspectives on social determinants of multicultural adolescents: A focus group study

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Background:

As Korea transforms into a multicultural society, social vulnerability of the multicultural adolescents (MAs) puts them at risk for poor health and health disparities. However, there is shortage of evidence on social determinants of health (SDH), which refers to the circumstances of people from birth to death, which affects their health outcomes, for MAs. Thus, this study aims to explore the SDH of MAs from diverse stakeholders' perspectives.

Methods:

This qualitative study comprised 17 focus group interviews with 99 participants (MAs, peers, parents, teachers, neighbors, and community leaders), conducted from June to September 2020. The directed content analysis was conducted using the Minority Health and Health Disparities Research Framework with a high rigor level based on the four criteria of Lincoln and Guba's trustworthiness.

Results:

The participants addressed SDH of MAs in five domains: biological (vulnerability and mechanism); behavioral (health behavior, family/school/peer functioning, and policies and laws); physical/built environment (school/community environment); sociocultural environment (MAs'/parental sociodemographic, language proficiency, MAs'/parental acculturation, social network, and response to/interpersonal/local/societal structural discrimination); and health care system (insurance coverage, MAs'/parental health literacy, availability of services, and health care policies). However, limited SDH in biological and physical/built environment domains were identified.

Conclusions:

SDH in sociocultural environment domain and interpersonal influence level were the most commonly addressed. Interpersonal discrimination of both MAs and parents were found to be the most important SDH. These findings suggest that future programs to enhance MAs' health may be targeted toward reducing discrimination and involving their parents.

Key messages:

- Sociocultural environment was found to be the most salient SDH domain to affect MAs' health.
- SDH of MAs are linked to discrimination and their parents' sociocultural aspects such as acculturation.

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Being a refugee in childhood and health in adulthood

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Aim:

To examine whether individuals who migrated to Sweden as refugees in childhood are more likely to experience poor mental and general health and violence in adulthood, compared to individuals born in Sweden, or who were migrants but not refugees.

Methods:

This study included 151,614 individuals who answered the Swedish National Public Health Survey in 2018 or 2020. We grouped the participants into refugees in childhood, migrants in childhood, or non-migrants. Information about outcomes - mental health, general health, and risk behaviors - was collected through questionnaires. We analyzed the associations using logistic regressions.

Results:

Overall, having been a refugee in childhood was generally not associated with poor general health and mental ill-health, risk behaviors, or exposure to violence, compared to those who were migrants or born in Sweden. However, there were some exceptions. For example, young men, who were refugees in childhood, had a higher likelihood of suicide attempts than non-migrants. Interestingly, childhood refugees and childhood migrants were less likely to use drugs and to have risky alcohol use as adults, compared to non-migrants, but were more likely to be risk gamblers.

Conclusions:

Being a refugee in childhood was not, in general, associated with negative health consequences in adulthood with some exceptions, such as gambling, that will be discussed in the presentation.

Key messages:

- In this study, refugee experience in childhood is not, in general, associated with worse health outcomes in adulthood.
- There are certain risk groups that need to be highlighted such as young males with refugee experience in childhood.

Abstract citation ID: ckac131.527
Maternal and perinatal health in undocumented migrants: estimating access and outcomes through HMIS

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Background:

Vulnerability and inequality are exacerbated in undocumented migrants, the most invisible to health systems.

Objectives:

To estimate maternal and perinatal health needs in undocumented migrants and test a methodology for systematic monitoring & evaluation.

Methods:

Population-based retrospective cohort study based on routine data through maternity records and temporary registration code in a sub-national Health Management Information System.

Results:

420924 deliveries including 1524 undocumented migrants having accessed maternity care through the NHS in Lombardy Region (Italy) from 2016 to 2021 were included. Demographics and social determinants: undocumented migrants were born in Europe (non-EU) (36%), Americas (30%), Africa (6%), Western Pacific (3%), South-East Asia (2%), Italy (2%), were stateless (7%); 52% had no/low schooling, 92% were unemployed and 52% non-married, compared to 15%, 20%, and 44% Italians. Obstetric history and antenatal care: 22% undocumented migrants had a previous abortion and 15% a previous cesarean delivery; 58% had $\geq$5 antenatal visits, 67% first ANC visit in trimester 1, 64% $\geq$ 2 ultrasounds incl. first in trimester 1, 6% full laboratory tests, compared to 90%, 97%, 97%, and 66% Italians. Intra-partum and perinatal care: 45% undocumented migrants delivered in a public hospital with neonatal intensive care unit; 69% had a normal delivery, 5% instrumental delivery, 10% and 27% emergency and total cesarean section; 2.6% neonates had emergency resuscitation and 49% were breastfed <2h from birth. Outcomes: 81% physiological pregnancies, 2.3% severe hemorrhage, 4.8% intra-uterine growth retardation, 9.3% pre-term delivery, 17% small for gestational age, 7% low birth weight, 0.6% poor Apgar score, 3% malformations.

Conclusions:

Maternal and perinatal health was poor in undocumented migrants, varying by birthplace. Social determinants, health coverage and outcomes showed vulnerability and inequality compared to the general population.

Key messages:

- Tailored interventions are needed: outreach health promotion on safe motherhood and neonatal care, healthcare provider training, cultural mediation, translation, and functional language learning.
- A systematic monitoring and evaluation system needs to routinely collect, integrate, and analyze data on key indicators.

DW Policy, politics and public health

Abstract citation ID: ckac131.528
Methodological choices in brucellosis burden of disease assessments: A systematic review

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Background:
Foodborne and zoonotic diseases such as brucellosis present many challenges to public health and economic welfare. Increasingly, researchers and public health institutes use disability-adjusted life years (DALYs) to generate a comprehensive comparison of the population health impact of these conditions. DALY calculations entail several methodological choices and assumptions, with data gaps and uncertainties to accommodate. The following review identifies existing brucellosis burden studies and analyses their methodological choices and assumptions.

Methods/Findings:
A systematic search for brucellosis burden calculations was conducted in pre-selected international and grey literature databases. Using a standardized reporting framework, we evaluated each estimate on a variety of key methodological assumptions necessary to compute a DALY. One study reported estimates at the global level, the rest (13) at national or subnational. Most studies retrieved brucellosis epidemiological data from administrative registries. Incidence data were often estimated based on laboratory-confirmed tests. Not all studies included mortality estimates (YLLs) in their assessments due to the lack of data or the assumption that brucellosis is not a fatal disease. Only two studies used a model with variable health states and corresponding disability weights. The rest used a simplified singular health state approach. Wide variation was seen in the duration chosen for brucellosis, ranging from 2 weeks to 4.5 years, irrespective of whether a chronic state was included.

Conclusions:
Available brucellosis burden assessments vary widely in their methodology and assumptions. Further research is needed to characterize better the total clinical course of brucellosis and estimate case-fatality rate. In addition, reporting of methodological choices should be improved to enhance transparency and comparability of estimates. These steps will increase the value of these estimates for policymakers.

Key messages:
- Inconsistencies in reporting methods and assumptions are found, which hinder transparency and understanding of the methodological choices and the reuse of estimates for prioritization purposes.
- Thus, there is a need for a more standardized reporting system for DALY estimates, which could resemble a checklist that reports the methodological choices and assumptions.

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Quality of national cancer control programmes in Europe

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Background:
Cancer remains among the leading causes of death worldwide and the COVID-19 pandemic had a negative impact on its diagnosis and treatment. National Cancer Control Programmes (NCCPs) are key documents in the field of cancer control. As they are directed at reducing cancer morbidity, mortality, and improvement of the quality of life of cancer patients, they can make a significant contribution in tackling the challenges posed by cancer in Europe. The aim of the present study, which is unique of its kind, was to evaluate the situation regarding the presence of NCCPs in Europe in 2016, as well as to analyse the presence and implementation status of the key elements of NCCPs that European Guide for Quality National Cancer Control Programmes (Guide) recommends.

Methods:
In the frame of the Cancer Control Joint Action a policy survey was carried out through 35 countries: EU member states, Iceland, Montenegro, Norway and Turkey, focusing on inclusion of the chapters from the Guide, participation of stakeholders, preparation, implementation and dissemination.

Results:
Thirty countries responded and 28 out of those had a NCCP or a similar cancer document. NCCPs were mostly single documents; 9 documents were defined as programmes, 8 as plans and 6 as strategies. The terminology was mixed in 5 countries. NCCPs were managed by the Ministries of Health and communicated to the public via websites and/or press. Drafting of NCCPs was mostly done through discussions, consensus meetings and negotiations. Only 10 countries included all elements suggested in the Guide in their NCCPs.

Conclusions:
The results of the survey showed that there are still countries without a NCCP. Regarding the content of NCCPs and other cancer documents the results indicated that the quality of the documents should be improved by covering all key elements suggested in the Guide and adding other innovative approaches.

Key messages:
- Instruments for more efficient cancer management are needed; they should encompass the entire pathway of cancer control from health promotion, to survivorship and supportive care.
- The ongoing and quickly developing activities on NCCPs in Europe should be monitored regularly.

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Structural intervention proposals and the delegitimization of the institutions involved

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Improving citizens' nutritional intake is crucial to combat obesity. Especially structural interventions are effective; likely due to bypassing issues of individual agency. However, such restrictive interventions have low public acceptance, and pushback may create a negative feedback loop, adversely impacting the perceived legitimacy of the institutions involved. This may be especially so among less-educated individuals, as they consider health promotion institutions less legitimate.

Recent theorizing argues this may be due to the cultural distance perceived towards those populating the institutions. As structural interventions mainly target behavior more prevalent among less-educated individuals - e.g. sugar-sweetened beverage (SSB) consumption - this perceived distance may be enhanced. With a preregistered survey-experiment among a high-quality representative sample, fielded in February ‘22, we test if proposed structural interventions affect perceived legitimacy of health promotion institutions, and if this differs between educational groups. We used the strategically selected case of interventions to reduce SSB consumption in the Netherlands - currently not tackled by official interventions. This allowed us to confront citizens with a potential - rather than implemented - intervention, singling out its effects more clearly. Respondents were randomized into i) a control group presented with an explanation of the institutions and their information provision approach; or a treatment group with this information, plus ii) a proposed sugar tax or iii) a proposed regulated decrease of sugar content. Results indicate that institutions are perceived as less legitimate when citizens are confronted with structural intervention proposals, but little evidence for a moderating role of education is found. These results can improve awareness among policymakers regarding interventions effects besides health outcomes, and their risk for delegitimizing health institutions.

Key messages:

- Proposals for structural interventions decrease the perceived legitimacy of involved health promotion institutions across society.
- Less-educated citizens perceive health promotion institutions as less legitimate at baseline; structural intervention proposals maintain and occasionally increase this gap.

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The gaps in health-adjusted life Expectancy (HALE) by income and region in Korea

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This study aims to calculate the health-adjusted life expectancy (HALE) by using years lived with disability (YLD) from the national claims data, as well as to identify the differences and inequalities in sex, income level and region. The study was carried out on total population receiving national health insurance and medical benefits. We calculated incidence-based YLD for 260 disease groups, and used it as the number of healthy years lost to calculate HALE. We adopted the insurance premium to calculate the income as a proxy indicator. For the region classification, we chose 250 Korean municipal-level administrative districts. The primary outcome was HALE in the Korean population. The second outcome was the HALE’s gap in terms of sex, income, and region. Our results revealed that HALE increased from 2008 (68.89 years) to 2019 (70.58 years). HALE in males increased faster than that in females. HALE was higher in higher income levels. In 2019, the gap in HALE between Q1 and Q2, the lower income group, was about 5.70 years. The gap in females by income level was smaller than that in males. Moreover, the gap in HALE by region was found to increase. Results suggest that there is an inequality in YLD in terms of income level in Korea. Therefore, we need intensive management for the low-income group to increase HALE at the national level.

Key messages:

- Males’ health level may be more sensitive to the socio-economic level than females’ health level.
- In the 5th National Health Plan (HP2030), it was decided to set a target value for the overall goals based on this result.

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Patients’ migration for orthopaedic intensive rehabilitation among Italian Regions

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Background:

Interregional patients’ migration, according to Italian Law, can be considered an expression of the (inviolable?) right to health and freedom of choice regarding place of care. It contributing, albeit perversely, to guaranteeing equity in the Italian National Health Service allowing citizens to overcome territorial inequalities in the distribution of healthcare services. The aim of our study was to analyze fulfilment of needs for orthopaedic intensive rehabilitation hospital services on site and interregional patients’ migration trends.

Methods:

We conducted an observational cross sectional study on Hospital Discharge Cards provided by the Ministry of Health, upon specific request, from 2011 to 2019. The study of interregional patients’ migration, for orthopaedic intensive rehabilitation, relative to single Italian regions was carried out from data of Residents, Attractions and Escapes, which were graphically developed through Gandy’s Nomogram. Trend analysis (Cuzick’s Test) was performed through STATA. Were considered statistically significant at level of 95% ($p < 0.05$).

Results:

In our studied period, Gandy’s Nomogram showed that only Piedmont, Lombardy, A.P. of Trento, E. Romagna, Umbria and Abruzzo had a good public hospital planning for orthopaedic intensive rehabilitation. Attractions increased significantly for Lombardy, A.P. of Trento, Veneto and Basilicata, while they decreased significantly for A.P. of Bolzano, Veneto, F.V. Giulia, Abruzzo, Calabria and Sicily. Escapes increased significantly for Veneto, F.V. Giulia, E. Romagna, Tuscany, Molise, Puglia and Basilicata, while they decreased significantly for Piedmont, Aosta Valley, A.P. of Trento, Umbria, Abruzzo and Sicily.

Conclusions:

Only six regions (4 in the North, 1 in the Centre and 1 in the South) satisfied care needs of their Residents, with an Attractions minus Escapes positive balance. Only A.P. of Trento appears to have been able to reduce Escapes and increase Attractions at the same time.

Key messages:

- Studying patients’ migration by type of health benefit makes it possible to identify specific situations of lack of supply.
- Patients’ migration is an indirect Index of a region’s health policy.

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Viral hepatitis C – a challenge for the public health

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Background:
Viral hepatitis C (VH C) is a global health problem with overall prevalence in 3-5% of the human population. This study provides the relevance of viral genome characterization in clinical settings.
Methods:
Retrospective study was conducted upon epidemiological, demographic, clinical, laboratory and viral characteristics in fifty cases of VH C confirmed with positive anti-HCV, evaluated by ELISA. Thirty eight of cases were hospitalized in different clinics of the University Hospital "Dr Georgi Stranski" - Pleven (2017-2018) and remainders were blood-donors registered in Regional Center of Transfusion Hematology - Pleven. The viral load and genotype of HCV had been investigated by Real-Time PCR in Laboratory of Virology at Military Medical Academy - Sofia.
Results:
The prevalence of cases was equal and highest in age groups 30-39 years and 60-69 years (24%, respectively). Males were 69.81% ($p < 0.05$). Surgical interventions (26.32%), blood infusions (23.68%) and hemodialysis (15.79%) were at highest risk for VHC ($p > 0.05$). Thirty hospital patients were with chronic VH C (78.95%) ($p < 0.05$). Clinical symptoms suggestive viral hepatitis were adynamia (39.47%; OR 5.25), anorexia (28.95%; OR 2.16), heaviness in the abdomen (21.05%; OR 23.33), and 52.63% of patients were asymptomatic ($p < 0.0005$). Laboratory investigations revealed slightly or moderately elevated total bilirubin (mean 53.27 ± 37.38 μmol/L; 95% CI 18.48-88.06) and transaminases - ASAT (mean 231.36 ± 155.82 IU/L; 95% CI 79.91-382.80) and ALAT (mean 294.48 ± 196.26 IU/L; 95% CI 96.37-492.59) ($p > 0.05$). Investigation of viral load of HCV revealed 22 samples with detectable viral load (range 683-673 720 copies/ml). All isolates of HCV had been proved to be genotype 1b.
Conclusions:
VH C is mostly asymptomatic. Screening for anti-HCV in risk groups and genotyping of HCV will improve surveillance, reduce nosocomial HCV-infections, facilitate therapeutic management and prevent complications of infected individuals.
Key messages:
- Screening for anti-HCV in risk groups and genotyping of HCV improves surveillance and reduces nosocomial HCV-infections.
- Screening for anti-HCV facilitates therapeutic management and prevents complications of infected individuals.

Abstract citation ID: ckac131.534
Alcohol industry's arguments against French pregnancy warning labels: a press coverage analysis
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Background:
Alcohol drinking during pregnancy has harmful consequences. Warnings displayed on alcohol bottles are an effective measure to inform people about these risks and have been put in place in France. However, the alcohol industry (AI) resisted this measure when it was introduced in 2007 and during an expansion project in 2018. This study aims to identify arguments used by the AI against warnings targeting pregnant women.
Methods:
A documentary method was used to analyse these arguments disseminated by the AI and its partners (elected representatives of wine-producing regions, etc.) in the French mainstream press (the national, regional and specialised press) from 2000 to 2020 through the Europresse documentary database. A quantitative analysis (number and evolution of press articles, mapping of the actors of AI who expressed themselves) and an inductive thematic content analysis (analytical framework of the arguments identified) using NVivo Software were carried out.
Results:
Among the 85 articles included in this study, a majority of the arguments used by the AI are against this measure. It argues that this measure (1) is a questionable measure because ineffective in changing behaviours, (2) will have counterproductive effects (on women and on the economy); and (3) there are other preferred alternatives than warnings (targeted prevention programs, etc.). A minority is nevertheless in favour of this measure. Among the actors who expressed themselves, a large majority comes from the winegrowing sector.
Conclusions:
The analysis of these arguments will add new insights about AI lobbying against warnings, by analyzing the arguments over a 20 years period covering a failure and a success of industry lobbying. It will also be useful for public health advocacy to better counter this lobbying influence and these arguments, which are not necessarily evidence based.
Key messages:
- Warnings displayed on alcohol bottles are an effective measure which is challenged by the alcohol industry.
- Analysing the arguments disseminated by the alcohol industry is useful for public health advocacy in order to counter them.

Abstract citation ID: ckac131.535
How does better regulation shape EU health policy? A case study of unhealthy advertising regulation
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Introduction:
Better Regulation is a meta-regulatory tool designed to improve regulatory quality and reduce regulatory burden in the development of EU policy. Despite concerns by civil society that its operation may have a chilling effect on regulatory protections, its impact on health policy has not been researched systematically. Using provisions on high fat, sugar and salt (HFSS) food and alcohol advertising to children within the revision of the audiovisual media services directive (AVMSD) as a case study, we explore how the operation of Better Regulation affects EU health policy processes.
Methods:
We employ a qualitative process tracing approach based on policy documents, Freedom of Information requests, media reporting, and expert interview data.
Results:
After an evaluation in 2016, the revised AVMSD maintained a reliance on self- and co-regulation of alcohol and HFSS food advertising to children, despite significant evidence supportive of statutory measures and pressure from the public health community to strengthen provisions. This result aligns with calls from commercial actors to retain the status quo. Preliminary results indicate that pathways via which Better Regulation guidelines may have contributed to this outcome include, for instance, the structure and approach used in the impact assessment and the related scrutiny process, the design of the consultation strategy, and the evaluation criteria of the AVMSD proposal.
Conclusions:
Considering how policymaking infrastructure - as a key political determinant of health - may shape the processes

and dynamics underlying decision-making can support those working towards a policy environment which protects human and environmental health. In examining EU alcohol and HFSS food advertising provisions within the AVMSD revision through a focus on Better Regulation processes, we contribute a novel perspective towards explaining how measures to improve regulatory quality interact with actors' agency to shape policy outputs.

Key messages:

- The Better Regulation agenda should be understood as a key political determinant of health at the EU level.
- Understanding the ways in which governance tools such as Better Regulation can shape health policy is important for those engaged in promoting effective and evidence-informed public health action.

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Together for better health in Germany. Towards a public health strategy

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In Germany, the responsibility for public health is divided both between federal levels and between sectors, and there is no national or general strategy for public health. However, a strategy is essential for achieving the overarching goal of ensuring the best possible health for all people, including preventing and addressing significant health challenges such as pandemics and climate change.

In 2016, Zukunftsforum Public Health (Future Forum Public Health) was established with the primary goal to enhance coherence and collaboration between public health stakeholders from academia, policy and practice. According to the principle of health in all policies, it also aims to promote collaboration across federal levels and political sectors. Within the platform provided by Future Forum, the public health community agreed that a strategy was necessary for strengthening and uniting the disparate field of German public health even though no official mandate for developing a strategy existed. Thus, Future Forum launched a grassroots process to identify key elements for a strong and resilient public health system, based on the essential public health operations (EPHOs), as defined by WHO Europe. For each of the ten EPHOs, the key issues paper "Towards a Public Health Strategy - Together for Better Health in Germany" presents a description of the current situation and challenges, an introduction to the key players, a definition of the aims and objectives, and concrete proposals on how to achieve these. Through its participative nature, the process of developing the key issues itself was an important factor for strengthening the public health community. This process highlights that even where national public health strategies and structures are missing, grassroots public health movements can be effective in strengthening the public health community as well as producing a visible set of recommendations for a resilient public health system.

Key messages:

- Based on WHO's essential public health operations, Future Forum Public Health developed a key issues paper with guidelines for a resilient public health system.
- The participative process leading to the key issues paper was itself an important factor for networking and strengthening Germany's public health community.

Abstract citation ID: ckac131.537
Problems of communication skills of GPs in Bulgaria

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Problem:

The effective communication between a doctor and a patient is considered to be essential, for providing high-quality medical care. A new model of cooperation and partnership which focuses on the patient is being established in the modern healthcare.

Description of the problem:

Data collected by empirical study on the doctor-patient communication has been presented and analyzed based on an overview analysis of the phenomenon communication. An anonymous survey among respondents was taken in the period September 1st-30th 2018 in the region of Pleven, Bulgaria. The respondents were patients who visited their GPs during that period. The results were processed with Microsoft Office Excel 2007. The quantitative analysis was done with statistical software programs - SPSS 17.0.

Results:

The respondents in the region of Pleven were 1053. It was found that the patients' satisfaction was poor in the matter of two crucial issues: 481 (46 %) of the respondents were dissatisfied with the time that was spent for a conversation with each patient and 470 (45 %) - with the information given by the GP regarding their health condition. According to 345 of the respondents (32,8 %) GPs do not practice informed consent and it is rarely required from patients according to 317 of the respondents (30,3 %).

Lessons:

The analysis shows that there are a number of flaws and unsolved problems in the doctor-patient communication. The verbal communication of the doctor is a serious problem: the ability to ask and to listen. The need of communication training for the doctors in their gradiate study and post-graduate education is evident. It is recommended that a specific training programs for communication in the primary health care should be developed and evaluated.

Key messages:

- At the present time the communication skills of the general practitioner should be acknowledged and regulated as priority criteria for their overall assessment.
- It is necessary that a profound study on the barriers for effective communication between a doctor and a patient is conducted.

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Understanding how organisational culture supports patient involvement in a national research agency

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Background:

The Belgian Health Care Knowledge Centre (KCE) formally involves stakeholders in its researches since 2012. Patients are treated as one stakeholder amongst others, but it is recognized that patient involvement (PI) requires a different approach. The success of implementing PI depends, however, on the organizational culture towards PI.

Objectives:

The objective of this study was to map the PI culture at KCE in the context of the development of organization-wide supported position statements about PI.

Methods:

A nominal group technique was used to measure the PI culture at KCE. Arguments for and against PI and conditions for PI in different phases of the research process were collected. A literature review and interviews fed the draft position statements, for which support was assessed by means of a two-round Delphi process.

Results:

Arguments in favour of PI in research related to the relevance of the scope, expertise with data collection, bringing in fresh ideas for study design, access to survey participants, validation of data analyses, adherence to recommendations. Disadvantages and risks included the lack of scientific knowledge of involved patients, resources requirements, conflicts of interest, and heterogeneity within patient populations. Conditions for meaningful PI referred to measures mitigating the identified disadvantages. Eighteen position statements supported by KCE could be formulated.

Conclusions:

The KCE culture seems predominantly positive towards PI, although attitudes vary between researchers. KCE recognizes the potential value of PI in research, but considers the level of involvement to be contingent on the topic and phase in the research process.

Key messages:

- Organizational culture towards patient involvement is a driver of successful researches.
- 18 position statements supported implementation of patient involvement in a national health agency.

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Citizen engagement in health policymaking: challenges and recommended solutions

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Background:

Involving citizens in health policymaking leads to the development of policies that are tailored to their needs and enables them to exercise their right as citizens. Citizen engagement in health policymaking in low and middle-income countries (LMICs) is rarely practiced and so understanding barriers and facilitators to engagement and the factors that impede effective participation is crucial. This study aims to understand views from policy stakeholders and citizens on citizen participation in health policy making and solicit recommendations on how to improve this process in the context of Lebanon.

Methods:

We conducted 29 individual in-depth interviews with stakeholders who work in fields relevant to health policy and/or have had experience in engaging citizens and four focus groups (average 8 to 10 participants each) with citizens from four municipalities in different governorates across Lebanon. Participants were purposively sampled through local Primary Healthcare Centers and municipality networks.

Results:

Barriers to engagement were seen as a manifestation of a dysfunctional and top-down political system, weak culture of participation, and lack of formal processes and platforms for engagement. Citizens' attributed lack of participation to mistrust with the political system while on the other hand, stakeholders thought that citizens lacked the needed skills for active engagement. Recommendations for improvement focused on the importance of implementing system level changes, developing contextualized citizen engagement processes, and ensuring its adoption and implementation.

Conclusions:

Although participants identified many challenges to engagement, they acknowledged its value and were able to propose concrete solutions and recommendations for change. Those recommendations are useful for other LMICs of similar contexts whose mandates require participation.

Key messages:

- By identifying and understanding barriers to citizen participation in health policymaking, public health professionals can work towards improving engagement.
- Strategies and methods such as implementing system level changes and developing contextualized citizen engagement processes can be applied to improve citizen participation were needed.

Abstract citation ID: ckac131.540
A matter of freedom? Right-wing populist frames of Austria's smoke-free policy

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Background:

Even though right-wing populist parties (RWPP) are increasingly influential in Europe, their position on public health has hardly been researched. I aimed to fill this research gap by focusing on the case of the FPÖ (Freiheitliche Partei Österreichs) and its opposition to Austriás smoke-free policy. Understanding RWWP positions on health policy can help to prevent detrimental influences on health policy making. Therefore, this project aimed to investigate how the FPÖ framed Austria's smoke-free policy and whether newspaper articles reflect these frames.

Methods:

Online archives of the three most-read Austrian newspapers (Standard, Kurier, Kronenzeitung) were searched for articles on the policy published in November 2019, when the policy was implemented. Furthermore, speeches by FPÖ politicians in the parliamentary debate on the policy in June 2019 were identified via the parliamentary archive. Drawing on 4 speeches by FPÖ politicians and 29 newspaper articles, I used frame analysis to answer the research question.

Results:

The analysis yielded that FPÖ politicians used authoritarian, populist, and libertarian frames to argue against the implementation of the smoke-free policy. Thus, the policy was portrayed as not being in the interest of the people, restricting personal and economic freedom, and as elitist. These frames were not reflected in newspaper reports that mainly focused on the practical aspects of the policy implementation. However, in contrast to politicians supporting the policy, FPÖ politicians were overrepresented in newspaper reports representing 47% of political actors cited in newspaper articles.

Conclusions:

Authoritarian, populist, and libertarian frames were used by the FPÖ in opposition to the smoke-free policy. While these frames were not replicated by Austrian newspapers, RWP politicians were overrepresented in articles on the policy. These findings illustrate the importance of effective counter-framing by health advocates.

Key messages:

- RWPP used authoritarian, populist, and libertarian frames to oppose Austria's smoke-free policy.
- Even though RWPP frames were not replicated in newspaper articles, RWPP politicians were overrepresented in reports on the policy.

Abstract citation ID: ckac131.541
Strengthening National Public Health: first steps towards the Spanish Public Health Agency

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Issue/Problem:

The social, ecological, health and economic crisis exacerbated by COVID-19 is a challenge of extraordinary magnitude and complexity for global public health. Part of the response to these challenges requires strong public health institutions.

Description of the problem:

Component 18 of the Government of Spain's Recovery, Transformation and Resilience Plan proposes the creation of a Spanish Agency of Public Health (SAPH), a centre of excellence to perform surveillance and health system preparedness functions in the face of new or emerging public health threats. The government has opened the debate on what design and functions it should have.

Results:

SESPAS, the Spanish Society of Public Health and Public Administration, set out a proposal for the design and organization of the future Spanish Agency for Public Health [SAPH]. A large working group, made up of experts from various fields of public health and from its ten federated scientific societies, has designed the SAPH proposal. The scope of the public health functions to be assumed include: the strategic planning of the State's public health (including health security), the prioritisation of public health policies and communication strategies, the assessment of the population's health status and social conditions, the guarantee of the transversality and horizontality of health policies (health and health equity in all State policies), as well as their verticality (serving as an enriching link between the European Union level and the administrations of the Autonomous Communities and local authorities). The proposal also include 11 recommendations on the main elements to be taken into account in the establishment of the future SAPH.

Lessons:

COVID19 pandemic has highlighted the need of creating strong public health institutions. Spain is giving its first steps toward the creation of the SAPH, which constitute a key step in addressing the current and future challenges of public health in Spain.

Key messages:

- Spanish Public Health Agency is an opportunity to transform health policies and to improve the health of the Spanish population.
- Strengthening public health starts with building national institutions that ensure comprehensive and integrated health policies.

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The health impact of the Triple Challenge of Brexit, COVID-19 and Climate Change in Wales

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The COVID-19 pandemic has revealed the complex relationships between health, well-being, economy and society. The United Kingdom's (UK) withdrawal from the European Union (Brexit) and climate change are having a cumulative, magnifying impact. UK nations have to tackle the multifaceted nature of Brexit, COVID-19 and climate change ('Triple Challenge' or TC) not only in isolation, but as a cumulative whole.This study provides a strategic overview of the interactions of the TC on determinants of health and equity in Wales and proposes opportunities to take forward. Using findings from existing Welsh Health Impact Assessments (HIAs) undertaken on the single challenges, rapid searches of the academic and grey literature were undertaken to identify evidence which focused on the TC and its impacts.From this, key determinants impacted and spotlight examples were identified and analysed. Evidence indicates the TC will have a wide range of compounding impacts across multiple determinants and inequalities. These will need to be viewed in synergy, not singularly. Determinants affected include i.e mental well-being, food insecurity, employment.Population groups potentially affected include rural communities, fishers/farmers, young people. Policy responses need to be constructed in an integrated way with cross sector involvement as actions intended to have positive impacts for one challenge could also have negative unintended impacts for others. This innovative work has highlighted the significant interconnectedness of the challenges. Developing an overarching policy approach could support lasting change.Having the TC as the underpinning focus point for new policies and strategies will help to maximise impact when addressing concerns in relation to post Brexit policy/actions, COVID recovery and climate change adaptation/mitigation.This work can be utilized by other nations as an example for challenges they may face in their context and nations in the UK/Europe affected by the TC.

Key messages:

- Brexit, COVID-19 and climate change have cumulative health impacts which must be considered together.
- Health impact assessment can provide a core framework through which to explore inequalities and health impact of multiple policy and practical issues.

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Categorising commercial sector practices to advance human and planetary health

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Background:

There is growing interest in the commercial determinants of health, broadly understood as the ways in which commercial actors influence health & health equity. Such actors can impact on health & health inequity, positively or negatively, through two main routes: (1) producing & driving use of/access to products or services potentially damaging or beneficial to health. (2) through diverse commercial practices which range from marketing, through lobbying, to tax & labour practices. Practices are arguably of greater importance given the growing shift to private sector employment & because all industries, not just those whose products are harmful, engage in them. Yet their contribution to physical, mental & planetary ill health is generally under-recognised with a focus hitherto on unhealth commodities. We aim to develop a practical categorisation of commercial sector practices

Methods:

Narrative review & content analysis of existing categorisations (those attempting to cover all practices), & taxonomies (those focused on specific practices (e.g., marketing), related academic &grey literatures.

Results:

There is dualism between the business studies & public health literatures, the latter tending to dichotomise market & non-market strategies while the former sees this as an outdated approach. While some specific practices are well documented, others remain poorly understood & theorised. A simplified categorisation is proposed which attempts to identify key commercial sector practices that can impact on health, the ways in which they overlap & reinforce each other. Evidence-based taxonomies for specific practices are identified.

Conclusions:

Our categorisation provides a simple approach through which the commercial practices that can harm human & planetary health & drive health equity can be understood & addressed. It draws attention to the diverse ways through which corporations can harm health, identifies areas for action & further research.

Key messages:

- The ways in which commercial sector practices influence health and health equity are diverse yet poorly understood.
- We offer a simple categorisation of commercial practices which draws attention to the diverse ways through which they can harm health, helps identify solutions and areas for PH action.

Abstract citation ID: ckac131.544
Agnogenic practices: an analysis of UK gambling industry-funded youth education programmes

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Background:

The corporate political activities of harmful industries, including the use of agnogenic (ignorance or doubt producing) practices and the construction of dystopian narratives, directed at influencing policymaking are well documented. However, the use of agnogenic practices by industry-funded organisations who deliver industry-favoured education-based measures remains unexplored. This study aims to build understanding of this by analysing three UK gambling industry-funded youth education programmes that represent key policy responses to gambling harms.

Methods:

Using a published typology of corporate agnogenic practices the ways that evidence is used within the programmes' resources to legitimise their content and implementation were analysed. Programme evaluations and claims about the programmes' evidence base and effectiveness were also analysed.

Results:

Agnogenic practices, including confounding referencing, misleading summaries and evidential landscaping, that resemble those adopted by harmful industries are used within gambling industry-funded youth education programmes and by the charities that oversee their delivery. These practices serve corporate interests, distort the limited evidence in support of youth gambling education measures, and legitimise industry favoured policies.

Conclusions:

This novel study demonstrates that agnogenic practices are used to construct utopian narratives that claim that gambling industry-favoured youth education programmes are evidence-based and evaluation-led. These practices misrepresent the literature and evaluation findings and may undermine effective policymaking to protect children and young people from gambling harms.

Key messages:

- Gambling industry-funded education programmes warrant greater scrutiny and conflicts of interest need to be addressed.
- The methods and findings of this study are of relevance to other contexts and areas in the field of the commercial determinants of health given other harmful industries adopt similar approaches.

Abstract citation ID: ckac131.545
Citizen participation in healthcare: a field perspective

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Background:

Many nations are faced with challenges regarding the sustainability of their healthcare systems. Rising costs and limited financial and human resources mean that difficult decisions regarding the provision of healthcare are imminent. Which care should be provided, when and where? These decisions will affect all current and future users of healthcare. This has given rise to calls from policy makers and others to include citizens in the decision making process. The question is how this can be done. What are viable ways of citizen participation in healthcare? What are critical issues to take into account? And how do citizens themselves want to participate?

Methods:

We use results from a literature review, six interviews with organizations in the field and the results of two citizen platforms to map the challenges and opportunities for citizen participation in healthcare. We study the case of the Netherlands, a country with a long and singular tradition of participatory policies.

Results:

Preliminary findings indicate there are six key decision variables that are instrumental in shaping citizen participation in the field of healthcare. Among those are the kinds of knowledge that participants possess and the valuation of these kinds of knowledge by agents in the field of healthcare.

Conclusions:

We interpret the results using a Bourdieusian conceptual framework, which emphasizes the contextual framing of participation. Citizen participation can be understood as an intervention in the field of healthcare. Participation is structured by the different forms of knowledge of participants as capitals. This highlights power differences that must be understood in order to design fruitful participatory processes.

Key messages:

- Citizen participation in healthcare understood as an intervention in the field of healthcare.
- Understanding power differences is crucial for designing and implementing this intervention.

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Implementation of integrated knowledge translation in NCD research: Examining intervention components

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Background:

Integrated knowledge translation (IKT) has been a cornerstone of the Collaboration for Evidence-based Healthcare and Public Health in Africa (CEBHA+) with partners in Ethiopia, Germany, Malawi, Rwanda, South Africa, and Uganda. The consortium conducts research on preventing and treating non-communicable diseases as well as road traffic injuries. IKT is understood as the continuous engagement of decision-makers throughout the research process in order to build equitable, mutually beneficial partnerships to conduct policy-relevant research and, ultimately, strengthen evidence-informed decision-making (EIDM). Gradually, a structured ‘‘CEBHA+ IKT approach’’ was developed, including systematic stakeholder mapping and analysis, and the development of local IKT strategies.

Methods:

We conducted a mixed-methods process and outcome evaluation of this IKT intervention. This comprised structured interviews, an online survey, and document analyses at two time points, two and four years after IKT initiation.

Results:

Preliminary results show that partnerships with decision-makers were successfully established or strengthened. While continuous engagement was implemented, fidelity to formalised IKT strategies was variable. The development, monitoring and updating of the IKT strategies, originally conceptualised as an essential intervention component, has been helpful for some CEBHA+ researchers and may facilitate implementation. However, the vision for decision-maker engagement as well as emphasis on continuous engagement (defined as a deliverable) emerged as more important intervention drivers and may be conceptualised as intervention components.

Conclusions:

A strong vision and continuous engagement with decision-makers are critical for strengthening EIDM. Formalised IKT strategies proved to be of moderate importance in current CEBHA+ research activities, but may turn out to be an essential intervention component if implemented from the start of a research project.

Key messages:

- Continuous engagement with decision-makers has successfully strengthened or established partnerships between researchers and decision-makers.
- Formal IKT strategies to plan stakeholder engagement were developed but continuous stakeholder engagement and a strong vision proved to be of greater importance.

Abstract citation ID: ckac131.547
Political consciousness, agency and mental health. Students in the Covid 19-Pandemic

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Introduction:

The influence of social crises in their objective quality as well as their subjective processing on health well-being has been researched many times. The loss of agency that can be observed in the course of social crises is considered to be a negative mediating factor between both variables. The Corona pandemic was also associated with a loss of options and routines for action for most of the population.

Methods:

We conducted two quantitative surveys on mental health in the pandemic in spring 2020 and autumn 2021. While the first international comparative survey was conducted under the auspices of the University of Antwerp, the second was carried out at five German universities.

Results:

The quantitative data show the negative impact of the pandemic on students’ mental health - CES-D 8 (0 to 24) ($\bar{x}2020 = 9.22$, $\bar{x}2021 = 9.38$). They also show a negative correlation between whether students’ concerns are sufficiently considered by policy makers in the pandemic and depressive symptomatology ($r = -0.146$, $p < 0.01$). That is, the less satisfied students are with political measures, the lower the depressive symptomatology.

Conlusion:

Against the background of the socio-psychological inequality study ‘Die Arbeitslosen von Marienthal’, which is considered a classic, this connection is far less paradoxical than might initially be assumed if one interprets political awareness as a correlate of a subjectively perceived power to act, which has a positive effect on mental health. Based on this thesis, we have opted for a mixed-methods design and are conducting qualitative interviews on subjective crisis processing, the results of which we will be able to present at the conference.

Key messages:

- Subjectively perceived agency reduces the health-reducing effect of social crises.
- Students are a relevant group to learn from for capacity building.

Abstract citation ID: ckac131.548
Map of Health Needs – basis for the national strategic frameworks

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As the economies transform into data-centred, so do the health systems. Responding effectively to emerging challenges through right decisions and setting up adjusted policies require a well-functioning evidence-based tool. The one developed in Poland is called ‘Maps of Health Needs’. It provides key stakeholders with unbiased data to support decision making processes. The Map depicts the current situation in the system, and forecasts the changes in upcoming years. The system is shown widely: starting with the background of demography and epidemiology, later moving to the out- and in-patient care, including long term care and rehabilitation, concluding with resources (staff and infrastructure). This broad and unbiased view on the system now and in the years to come, allows the public sector institutions to plan the short, medium and long term actions. It regards both strategic and operational levels, for the whole country and for the regions respectively. The documents juxtapose the current and the desired state of the system in the future, outlining necessary actions and goals in order to achieve it. In the recent years a few strategic frameworks have been developed in Poland, as the preparation for the next EU programming period advanced and in reaction to the pandemic crisis. The main documents include:

1) Healthy Future, the umbrella-like framework for the period 2021-2027,
2) Recovery and resilience plan,
3) Transformation plans.

The first and the second one became a part of the negotiation conditions at the European level, as they form a reliable source for modelling the flux of investments’ financing. In that way the maps shape the national policies, becoming the basis for strategic frameworks.

Key messages:

- Reliable data is nowadays a key factor in strategic planning, also in the healthcare system.
- The tool developed in Poland, called Maps of Health Needs, serves as a base for strategic national frameworks.

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Design of value-added tax on medicines in 41 European countries

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Background:

Recently, among others due to the COVID-19 pandemic and the war in Ukraine, European countries have been experiencing rising inflation. Value-added taxes (VAT) on essential goods have gained public attention, and abolishing VAT for these goods has been discussed as a measure to prevent poverty and inequities. The study aims to investigate the relevance of value-added tax on medicines in European countries.

Methods:

We collated information on medicines-specific and standard VAT rates in 41 countries of the WHO European Region (all 27 European Union Member States, Albania, Armenia, Iceland, Israel, Kazakhstan, Kyrgyzstan, Kosovo, Moldova, North Macedonia, Norway, Serbia, Switzerland, Turkey and United Kingdom). Data were reviewed from literature and were validated by national public authorities.

Results:

In three countries (Albania, Kazakhstan and Malta), all medicines are exempt from VAT. 28 of the 38 countries with VAT on medicines impose a single VAT rate on all medicines, and in most of these countries (21 countries) the medicines-related VAT is lower than the standard VAT rate. Ten countries have differentiated VAT rates: In Ireland, Kyrgyzstan, Sweden and the UK defined medicines (e.g. oral medicines, prescription-only medicines) are exempt from VAT, whereas for the other medicines the standard VAT rate applies; six further countries have a lower VAT rate for some medicines (e.g. heparins, blood products, contraceptives or reimbursed medicines in general) compared to the remaining medicines, whose VAT rate equal the standard rate or is lower.

Conclusions:

Some European countries apply specific mechanisms (exemptions, reduced rates) regarding the VAT for defined or all medicines. This may act as a protective measure for patients in case of non-reimbursed medicines and help public payers to ensure financial sustainability to funded medicines. Further medicines-specific research is needed to understand the impact of inflation.

Key messages:

- Value-added tax is a relevant component of medicine prices.
- Lowering or abolishing the VAT on medicines can be an important policy espeically when patients pay out-of-pocket.

Abstract citation ID: ckac131.550

Paid Sick Leave and Sickness Benefits for employees' economic and job security: A Scoping Review

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In health emergencies, such as in the COVID-19 pandemic, the need to expand or introduce the Paid sick leave(PSL) and Sickness benefits(SB) increases. They are key components of the universal health coverage(UHC) and active labor market policies(ALMPs) that enable workers to take care of their health and guarantee return-to-work after recovery. This study examines effects those policies in achieving economic stability and job security of covered workers through a scoping review. Studies were selected using the search terms 'paid sick leave', 'sickness benefits', 'paid sick day', and 'earned sick leave' in PubMed and Web of Science. Our search conducted on 6th April 2021 yielded 1,030 articles, of which 22 articles were included in the review. All articles were analyzed by the 4 subgroups(employees, families, employers, and government) and we investigated indicators of socio-economic impacts on their lives. Articles are largely PSL(90.9%)-focused. PSL guarantees not only workers' job security by securing employment agreement, but also their income security by promising part of wages enough to afford healthcare and living expenses during the medical treatment and recovery. Additionally, PSL attenuates employers' financial risk, as it reduces presenteeism while increasing the return-to-work rate. Moreover, PSL and SB reduce the total healthcare and social security expenditures of the government. To sum up, PSL and SB guarantee health and labor rights by ensuring income and job security to employees while assuring financial stability to both employers, and the government. However, as the previous studies paid less attention on the equity of these impacts at the system levels, future research should more focus on the dimension.

Key messages:

- PSL and SB guarantee health and labour rights by ensuring income and job security for employees, while assuring financial stability for both employers and the government.
- The previous studies that examined the effects of PSL and SB paid less attention on the equity of ensuring income and employment security, therefore future studies should focus more on this dimension.

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Implementing pictorial health warning labels on waterpipe tobacco products: a qualitative study

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Background:

Waterpipe smoking rates in Lebanon are among the highest in the in the world. Research has documented the effectiveness of introducing pictorial health warning labels (PHWLs) in curbing waterpipe smoking. Seventeen years after ratification of the WHO Framework Convention on Tobacco Control and twelve years post adoption of a tobacco control law, PHWLs have not yet been implemented in Lebanon. This study aims to gain insight into stakeholders opinions and recommendations for adopting and implementing PHWLs on WP products within the current tobacco control policy environment.

Methods:

We conducted 13 online interviews with policymakers, media, owners of establishments that serve waterpipe, as well as international and local NGO representatives whose mandate is tobacco control. During the interview process, key informants were shown PHWLs on waterpipe tobacco products and asked about feasibility of implementation and enforcement. National documents and legislations related to PHWLs were obtained from public record. We conducted content analysis on the documents. Interviews were transcribed, coded, and analyzed thematically.

Results:

The majority of the key informants agreed on who is responsible for enforcement of PHWLs and on the contextual obstacles to enforcement. Main barriers to implement PHWLs on WP products were: 1) the fact that the WP is a multi-component tobacco use method that will require including all WP components (charcoal, tobacco, device); 2) WP usually is used in several locations (e.g., home, restaurants); and 3) WP is sold via multiple sources (supermarkets, tobacco shop, etc). Stakeholders recommended some solutions to address barriers to implementation.

Conclusions:

Stakeholders responsible for implementation of PHWLs need to take into consideration contextual barriers as well as the particularities of waterpipe tobacco smoking in terms of multiple components used to smoke, locations of consumption, and sources where it is sold.

Key messages:

- Implementing PHWLs on waterpipe tobacco products requires distinct understanding of policy environment and context.
- Implementing PHWLs on waterpipe tobacco products needs to address the complex nature of waterpipe smoking as a multi-component tobacco use method .

Abstract citation ID: ckac131.552
Stakeholder perceptions and public health system performance: evidence from Greece

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Policy choices, aims and priorities are defined by the dominant belief system among stakeholders in a policy area (Jenkins-Smith et al., 2018). Traditional assessments of health systems performance have focused on the institutional configurations, processes and resources in place (Murray and Frenk, 2000). We argue that the more latent dimension of 'stakeholder perceptions' is crucial to understanding why seemingly effective health system policy designs underperform during implementation. This paper brings in new evidence (2020) from an elite population study of 261 stakeholders in Public Health policy in Greece (politicians, civil servants, experts, interest groups, industry). We questioned stakeholders on: their conceptual understanding of public health, public health determinants, the field's policy responsibilities and jurisdiction, threats and enabling factors to policy advancement, and public health systemic performance in Greece. Our findings highlight that: 1) stakeholder beliefs converge regarding drivers for effective policymaking - most prominently resources, expertise, coordination and management - but respondents also identify their scarcity in the Greek public health system (GPHS); 2) stakeholders converge regarding systemic pathogenies - most prominently managing inequalities and monitoring - and rank all legally stated functions of the GPHS poorly on average; 3) stakeholders agree that the existing paradigm in Greek public health policy does not promote the holistic perspective to health but most maintain a medicine-centric view of public health. We conclude that despite Greece enjoying a progressive public health system policy design, the mismatch between the system's stated aims and the prevailing anachronistic stakeholder perceptions has hampered effective policy development. Future research should zero in on the importance of installing a co-oriented culture among stakeholders to achieve success in the performance of health systems.

Key messages:

- Stakeholder perceptions are crucial to understanding why seemingly effective health system policy designs underperform during implementation.
- Despite Greece enjoying a progressive public health system policy design, the mismatch between the stated aims and the prevailing anachronistic stakeholder perceptions has hampered policy development.

Abstract citation ID: ckac131.553
Response to the Ukrainian war: Support to the Ukrainian health professionals – war refugees

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Issue/problem:

There are currently more than 300,000 war refugees from Ukraine in the Czech Republic, including several hundred health workers of various health professions, including physicians, dentists, pharmacists, nurses and others. The Institute for Postgraduate Medical Education (IPVZ) on behalf of the Ministry of Health prepares and organizes the approbation exams of physicians, dentists and pharmacists who as foreign nationals have obtained medical qualification outside the EU and wish to practice their profession in the Czech Republic or the EU.

Description of the problem:

To follow up on new legislation of the Czech Republic, valid from 21 March 2022, focused on the Ukrainian war refugees and their stay in the Czech Republic, IPVZ immediately formulated its strategic response and support to an urgent needs of the Ukrainian refugees with a focus on health professionals and their integration to the Czech health system. IPVZ and its School of Public Health (SPH) work on capacities development courses, in particular on the Czech language courses and on introduction to the Czech health system.

Results:

First 3 Czech language courses, held on 2 May -1 July 2022, were completed by 34 attendees. Next 10 courses will start on 1 August 2022. There is an interest in both face-to-face and online Czech language courses. In parallel, we provide the introduction to the Czech health system through consistent creation of bilingual cycle of short videos, first videos are available free of charge on IPVZ web site at https://ua.ipvz.cz.

Lessons:

Interest in the Czech language classes indicates its importance for all Ukrainian health professionals - war refugees, who plan to stay in the Czech Republic and to work in the Czech health system in their health professions -physicians, nurses and others. Cycle of short bilingual videos is an important support tool for adoption of the Czech health system terminology and for their preparation for the approbation exams.

Key messages:

- Institute for Postgraduate Medical Education in Prague formulated its immediate strategic response to the Ukrainian war and needs of the Ukrainian war refugees with a focus on health workers.
- Intensive Czech language courses supplemented by the cycle of short bilingual videos, introducing the Czech health system, available free of charge at https://ua.ipvz.cz, fully support MoH CZ policy.

DX Public health genomics

Abstract citation ID: ckac131.554

Differential willingness for genetic testing to target treatment in older Danish citizens

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Background:

Studies from different countries have shown that population majorities are willing to accept genetic tests for treatment personalisation and that considerable proportions are ready to donate their data to research. However, it has also been shown that concerns, for example about data use and confidentiality or treatment rationing, are common. To enable a more targeted communication process with the public about personalized medicine, more knowledge is needed on views in different sub-populations. In the present study, a hypothetical scenario was used to investigate differential readiness to accept a genetic test for treatment targeting and to permit use of personal data for research.

Methods:

A cross-sectional survey was conducted with 50-80-year-old Danish citizens (n = 6807) who were sampled to represent the Danish population in that age segment. Socio-demographic data were added from a national registry. Data were analyzed by multivariable logistic regression analysis.

Results:

Preliminary results showed that a majority was willing to be tested (78.3%). Readiness was lower in women [OR = .67; CI = .59-.77] and those 70-80 [OR = .72; CI = 61-.86], while it was higher in those with better income [OR = 1.29; CI = 1.09-1.52]. Further, those less satisfied with their health, the obese and those with a perceived genetic vulnerability were more willing to be tested. Over 90% of those ready to be tested were also willing to permit use of their data for research. Rates were higher in men, older segments, those with higher income/ education as well as those with current pain experience and those aware of a personal genetic vulnerability.

Conclusions:

Findings indicate group differences in acceptance of a genetic test for personalisation of medicine and data use for research. Further research should investigate group-specific benefit perceptions versus concerns in population subgroups to inform implementation and enable targeted communication strategies.

Key messages:

- Acceptance of genetic testing for personalisation of treatment as well as willingness to contribute data to research may differ between population subgroups.
- Women and those with lower income are less willing to accept genetic testing for treatment personalisation and accept research use of data while health vulnerabilities increase acceptance.

DY Public health monitoring, reporting and foresight

Abstract citation ID: ckac131.555

The influence of overweight and obesity in the oral health of a sample of portuguese adults

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Background:

Overweight and obesity may lead to different problems in various body systems and in the oral cavity. Dental caries and periodontal disease have been related with overweight. The aim of this study was to assess how overweight and obesity have impact on the lifestyle, oral habits and oral pathologies.

Methods:

We conducted an observational cross-sectional study where we applied a questionnaire to 140 individuals from Lisbon and Viseu, Portugal., which 70 had a normal Body Mass Index (BMI) (control group) and 70 had an excessive BMI. We also made an oral observation in each individual to record the permanent teeth decayed, missing and filled index (DMFT), the Community Periodontal Index and the oral hygiene status.

Results:

From the final sample, 30% of the subjects with overweight brushed their teeth once a day or less, while the majority (62.9%) of the control group brushed twice a day. In the oral examination, 70% had calculus, while in the control group only 22.5% presented calcified plaque. The DMFT was higher among the obesity group in comparison with the control group. Regarding periodontal disease, the participants with overweight need more dental intervention (81.4%) in contrast with the control group (14%).

Conclusions:

Most overweight and obese individuals present precarious oral hygiene habits, higher prevalence of dental caries, and worse periods of periodontal health. They are not aware of the repercussions of the association between their cariogenic diet, oral health and overweight.

Key messages:

- Oral health behaviors are related with other health conditions, namely obesity and this is a fundamental public health issue.
- Primary preventive strategies should be established having in consideration the oral health status of adults in treatment for obesity and in weight control programs.

Abstract citation ID: ckac131.556

Measured vs self-reported overweight/obesity in the Italian adult population: CUORE Project 2018-19

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Background:

In monitoring population health and the effectiveness of public health strategies, the body mass index (BMI) is often assessed within national surveys from self-reported height and weight rather than measured values. Using data collected within a recent health examination survey (HES), the discrepancies between self-reported and measured values were assessed, and correction models were estimated and implemented on national interview survey data.

Methods:

Within the CUORE Project, the Italian National Institute of Health conducted the HES 2018-2019 measuring height and weight as well as collecting data on self-reported values in random samples of general population aged 35-74 years residing in ten (of 20) Italian regions distributed in the North, Centre and South: 1033 men and 1061 women.

Results:

Self-reported and measured data comparison showed greater differences in mean values of height than weight and in women than in men (height +2 cm in men and +3.2 in women; weight -0.7 kg and -1.4 kg, respectively) and a corresponding under-estimation of BMI (-0.7 kg/m2 and -1.4 kg/m2, respectively). Differences were stable across age groups and educational levels, except for height discrepancy, which was greatest in women aged 65-74 years. Self-reported vs measured prevalence were: normal weight 39.7%-33.3% in men and 54.8%-44.7% in women, overweight 45.8%-46.1% and 26.0%-29.2%, obesity 13.8%-20.1% and 15.7%-23.9%. Linear regression models adjusted by sex and age classes were assessed for height and weight (R2 > = 0.92) and implemented to estimate adjusted BMI and normal weight/overweight/obesity prevalence on the national multi-purpose interview survey data collected by the Italian National Institute of Statistics.

Conclusions:

To provide more accurate prevalence of normal weight, overweight and obesity, self-reported values could be adjusted using correction models developed on the basis of the relationship between self-reported and measured height and weight values.

Key messages:

- Discrepancies between self-reported and measured values of height and weoght were found.
- Self-reported values could be adjusted using correction models developed on the basis of the relationship between self-reported and measured height and weight values.

Abstract citation ID: ckac131.557
Algorithm for early diagnosis of viral hepatitis C

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Issue:

Viral hepatitis C (VH C) is a global problem of the public health. Different interventions for achieving the Global Health Sector Strategy on viral hepatitis targets (65% reduction in HCV-related deaths, 90% in new infections and 90% of infections diagnosed by 2030) were considered. Increased diagnosis and treatment rates would be required to achieve these targets in all countries, even with the introduction of high sustained viral response therapies.

Description of the problem:

The latest global HCV disease burden estimates showed that about 71.1 million people worldwide are viremic, corresponding to a prevalence of 1%. The prevalence of HCV is not homogenous: the WHO Eastern-Mediterranean Region is with the highest number of infected subjects (15 millions), followed by the European Region (14 million). In Bulgaria, the incidence of VH C is 0.63-1.30 at 100 000 population (2008-2020) and in Pleven region is 0.38-3.8, respectively.

Results:

Retrospective study was conducted upon epidemiological, demographic, clinical, laboratory and viral characteristics in fifty cases of VH C confirmed with positive anti-HCV, evaluated by ELISA. Thirty eight of cases were hospitalized in different clinics of the University Hospital “Dr Georgi Stranski”-Pleven (2017-2018) and remainders were blood-donors registered in Regional Center of Transfusion Hematology-Pleven. Surgical interventions (26.32%), blood infusions (23.68%) and hemodialysis (15.79%) were at highest risk for VH C. Twenty five hospital patients were with chronic VH C (66%), five with cirrhosis (13%) and eight (21%) with acute hepatitis C. Twenty of the patients (53%) were asymptomatic about hepatitis and were hospitalized because of different comorbidities ($p < 0.0005$).

Lessons:

We propose an algorithm for early diagnosis of VH C based on mandatory screening for anti-HCV in risk groups, especially before invasive procedures. The early detection of HCV infection will reduce the complications and nosocomial infections.

Key messages:

- Different scenarios developed to achieve the WHO Targets in all countries assume an implementation of national policies to prevent new infections and to diagnose current infections through screening.
- The early detection of HCV infection will reduce the complications and nosocomial infections.

Abstract citation ID: ckac131.558
Health, wellbeing, and the impact of Corona in older adults in Dresden, Germany: the LAB60+ study

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Introduction:

As the proportion of older people increases, it is necessary to evaluate their health and well-being to identify measures to promote healthy ageing. Moreover, the COVID-19 pandemic has impacted older adults’ health- not just through the infection itself, but also due to infection protection ordinances.

Methods:

LAB60+ is a population-based cross-sectional study investigating, among other things, the physical and mental health of older adults. Residents of Dresden aged 60 years and older were invited to participate in the first half of 2021. Participants answered questions on their habits, health status and well-being, using, among others, the Short Form-8 Health Survey and the WHO wellbeing index.

Results:

2399 people participated in the study (40% response). Participants assessed their physical health similar to the German population. The most common chronic conditions were hypertension (54%), chronic pain (32%) and osteoarthritis (31%). 42% of the participants were overweight and 20% were obese. One-fifth did not engage in physical activity: this number increased with age and decreased socioeconomic status. Participants reported lower levels of wellbeing compared to the German population (58 vs. 67 pts.). One-third had higher levels of depressiveness and half reported an increase in their experienced loneliness due to the pandemic. 34% participated in risky alcohol consumption, but it did not markedly change during the pandemic. The greatest negative impact of the pandemic on health behaviors was physical activity: more than one-third exercised less compared to the time before the pandemic.

Conclusions:

Physical health was comparable to the German population, while depressivity was higher, perhaps due to the pandemic. Age-appropriate interventions should especially target an increase in physical activity. It is important to take measures to reduce the possible negative effects of the pandemic, such as increased loneliness or reduced physical activity.

Key messages:

- This is the first study on health and wellbeing on older adults (60+ years) in the city of Dresden, Germany.
- The COVID-19 pandemic had a high impact on older adults' physical activity and loneliness.

Abstract citation ID: ckac131.559
Are pressures sores in nursing homes related to nursing home size? A cross-sectional analysis

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Background:

Incidence of pressure sores are an indicator of quality of care provided. Pressure sores requiring hospitalisation are a very poor outcome and may indicate a chronic unmet need. Organisational factors of services are modifiable factors and may be associated with occurrence and severity of pressure sores. However, little investigation has been completed on this to date. The aim of this study was to assess the association of size of nursing homes and pressure sores requiring hospitalisation.

Methods:

Using the Database of Statutory Notifications from Social Care in Ireland we identified from notifications received by the regulator in 2019, the number of pressure sores that required hospitalisation from nursing homes. Association of size of service (registered beds) and the percentage of pressure sores requiring hospital treatment was investigated, using negative binomial regression, unadjusted and adjusted for provider type (company, sole trader, statutory body, unincorporated body, partnership), staff to resident ratio and distance to hospital (km), and nurse to resident ratio as a proxy for resident complexity in a further model.

Results:

598 Nursing homes were in operation in 2019. 1 was excluded for missing covariate data and 597 included for analysis. 447 submitted 2996 notifications of pressure sores, median (IQR): 3 (0 to 8). 255 pressure sores (8.51% of total) required hospitalisation. Pressure sores that required hospitalisation and size of service was positively associated, incidence rate ratio (95% confidence interval): 1.001 (1.000 to 1.002). This remained when adjusted for covariates, 1.003 (1.001 to 1.006) and additionally for nurse to staff ratio, 1.013 (1.011 to 1.016)

Conclusions:

A small but significant higher number of pressures sores required hospitalisation from larger nursing homes. The reasons for this are unknown but may include cultural differences and ability to provide continuity of care between larger and smaller nursing homes.

Key messages:

- Larger nursing homes are associated with higher incidents of pressure sores that require hospitalisation. This association remains when adjusted for covariates and nurse to staff ratio.
- Reasons larger nursing homes are associated with higher incidents of pressure sores that require hospitalisation are unknown but may be influenced by their ability to provide continuity of care.

Abstract citation ID: ckac131.560
Sentinel monitoring of COVID-related daily activity in primary care practices of the canton of Vaud

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Introduction:

During the COVID pandemic, COVID-related data collected in family medicine were scarce. We aimed to monitor cantonal trends of COVID-related activity in family medicine and paediatric practices during the year 2021.

Methods:

Family physicians and paediatricians established in the canton of Vaud were invited to join an ad hoc sentinel surveillance system. Online data collection was based on daily activity reports and monthly questionnaires. In particular, participants categorized daily counts of consultations and phone calls into predefined COVID-related categories.

Results:

Thirty-seven practices contributed regularly to the system between March 20th and December 31st 2021. Out of 81'407 medical consultations, 4'950 (6.1%) were related to new COVID suspicions as defined by the Federal Office of Public Health, and 5'252 (6.4%) otherwise related to COVID. Depending on the week and the practice, between 5.6% and 26.5% of face-to-face consultations were COVID-related. In paediatrics, COVID-related activity corresponded mostly to new COVID suspicions (11.2% of on-site consultations), whereas among family physicians other COVID topics predominated (9.8% of face-to-face consultations), mainly questions about vaccination. Consultations for persisting COVID-related symptoms were stable at a low level throughout the year, and constituted less than 1% of all consultations. Most practices swabbed patients for SARS-CoV-2 tests, and an increasing proportion performed rapid antigenic tests over the year. In paediatrics, COVID-suspicions were not systematically tested.

Conclusions:

Throughout 2021, COVID-related consultations constituted an important part of family medicine and paediatric practices' activity in the canton of Vaud. Monitoring COVID-related activity in primary care during a pandemic documents how physicians translate recommendations into practice and provides health authorities with valuable information to guide public health action.

Key messages:

- Throughout 2021, COVID-related consultations constituted an important part of family medicine and paediatric practices' activity in the canton of Vaud.
- Monitoring COVID-related activity in primary care during a pandemic documents how physicians translate recommendations into daily practice.

Abstract citation ID: ckac131.561
Digital COVID-19 surveillance tool for a mass gathering event - a prospective cohort study

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Introduction:

Mass gatherings have been associated with a high risk of SARS-CoV-2 transmission. On-site research can foster knowledge of risk factors for infections and improve risk assessments and precautionary measures at future events. We tested a web-based participatory disease surveillance tool to detect COVID-

19 infections at and after an outdoor mass gathering by collecting self-reported COVID-19 symptoms and tests.

Methods:

We conducted a digital prospective observational cohort study among fully immunized attendees of a sports event that took place from September 2 to 5, 2021 in Thuringia, Germany. Participants used our study app to report demographic data, COVID-19 tests, symptoms, and their contact behavior. This self-reported data was used to define probable and confirmed COVID-19 cases during the full "study period" (08/12/2021 - 10/31/2021) and within the 14-day "surveillance period" during and after the event, in which the highest likelihood of an event related COVID-19 outbreak could be expected (09/04/2021 - 09/17/2021).

Results:

A total of 2,808 of 9,242 (30.4%) event attendees participated in the study. During the study period, 776 symptoms and 5,255 COVID-19 tests were reported in the study app. During the surveillance period, seven PCR positive COVID-19 cases were found to be associated with the event. This translated to an estimated seven-day incidence of ~125/100,000 cases (95% CI [67.7/100,000, 223/100,000]), which was comparable to the average age-matched incidence in Germany during this time (118.3/100,000).

Conclusions:

COVID-19 cases attributable to the mass gathering were comparable to the German-wide age-matched incidence, implicating that our active participatory surveillance tool was able to detect mass gathering related infections. Further studies are needed to evaluate and apply our participatory disease surveillance tool in other mass gathering settings.

Key messages:

- Our digital COVID-19 surveillance tool for mass gathering events was easy to implement within the organizational structure of the event and well accepted amongst event attendees.
- Our active participatory surveillance tool was able to detect mass gathering related infections comparable to the Germany-wide incidence.

Abstract citation ID: ckac131.562
Innovative methods for health monitoring in Europe: results of a cross-sectional study

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Background:

Innovative solutions are used to monitor the spread of COVID-19, to research and develop vaccines, and to ensure online privacy and security. The aim of the study is to investigate which innovative methods, including algorithms and digital tools (e.g., social media, artificial intelligence, contact tracing applications) are used to monitor health issues related to COVID-19 in Europe, and who is using them.

Methods:

A questionnaire was developed and administered online to European countries' representatives and stakeholders of the project Population Health Information Research Infrastructure (PHIRI). The survey investigated the use of innovative solutions and digital tools in Europe to monitor COVID-19 and vaccination programs, to research and develop diagnostics and teleconsultations, and to fight online disinformation. Legislative and ethical aspects were also considered. A descriptive data analysis was performed.

Results:

19 responses were collected from 14 countries. Digital tools are used to monitor COVID-19 (13/14 countries), vaccination programs (12/14), for telemedicine (7/14), and to fight disinformation (10/14). Specific algorithms to detect the patterns of the pandemic spread are available in five countries. The main target groups of the tools are the general population, healthcare providers, patients and epidemiologists. The uptake rate of the tools ranged 5-100% across countries. Measures to evaluate the impact of digital tools (e.g., user surveys, reviews, evaluation teams) have been adopted in seven countries. Information on legislative and ethical aspects related to the use of digital solutions are available in 10 countries.

Conclusions:

The development and use of innovative methods for population health monitoring and research purposes have been the key to mitigate the COVID-19 pandemic. Improving the uptake rate, impact assessment of digital tools and fight against disinformation could enhance countries' preparedness for future pandemics.

Key messages:

- Given that digital solutions are deployed in population health monitoring, research, and for online privacy and security, they have a key role in mitigating the COVID-19 pandemic.
- Enhancement of the uptake rate and assessment of digital tools, and fight against disinformation could strengthen countries' preparedness for future pandemics.

Abstract citation ID: ckac131.563
The study on health of older people in Germany (Health 65+): Design and first results

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Background:

Integrating older persons into continuous national public health monitoring is crucial but challenging. Health 65+ is the first national health interview and examination survey in Germany specifically tailored to the needs of the population 65+ years.

Methods:

Health 65+ is based on two-stage stratified random sampling from 128 local population registries. It is based on a previously tested three-step procedure to contact the study population (letter, telephone, home visits). 12,448 individuals 65+ years were invited for survey participation between June 2021 and April 2022. Participation comprised answering a baseline-questionnaire/interview covering a consented set of key health indicators including SARS-COV2 infections, and 3 follow-ups. After one year participants are invited to an examination (e.g. blood pressure, grip strength, cognitive function) during a home visit. All-cause mortality, health insurance data and information on social and built environment will be linked to survey data. The preliminary data set comprises 3,107 baseline participants.

Preliminary results:

Only few individuals were excluded for survey participation as they had deceased before invitation, moved to an unknown residence or had insufficient German language skills. Of the adjusted gross sample, 32% took part in the survey (47.9% women, mean age 78.8 years). Only 3.3% of the participants did not receive any vaccination against COVID-19, with no differences between gender or age-groups. 3.5% had already experienced a laboratory-confirmed SARS-CoV-2 infection.

Conclusions:

Health 65+ collects information that cannot be obtained from any other data sources. In combination with information from routine health data and official health statistics, the results will aid health policy planning and implementation research to improve health and wellbeing of older people in Germany. For example, preliminary results show, that vaccination acceptance was high in persons 65+ years in Germany.

Key messages:

- Health 65+ will provide health data of people 65+ years in Germany.
- The results will aid health policy planning.

Abstract citation ID: ckac131.564
HPV self-sampling acceptability among women in Italy: preliminary results of a cross-sectional study

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Background:

Secondary prevention measures have strongly contributed to the reduction of incidence and mortality of cervical cancer (CC) identifying women at high risk of developing it. This cross-sectional study aimed to investigate the acceptability of a home-based self-sampling methodology for Human Papilloma Virus (HPV) testing and the factors that may influence women's preference.

Methods:

A random sample of women over the age of 50 years has been selected in Southern part of Italy. Data was collected through an anonymous self-administered questionnaire and included socio-demographic characteristics, knowledge of HPV infection and prevention measures, and attitudes towards the acceptability of self-collected cervico-vaginal sampling (CVS) and urine sampling (US).

Results:

Among the 321 women who completed the survey, more than two-thirds (73.7%) knew that CC is caused by HPV, only 68.9% knew that the HPV screening is useful for an early detection and diagnosis of CC, and 17% never had Pap-test or HPV-DNA test. Of the respondents, 67.9% declared that they preferred self-collected US for future HPV testing compared with clinician-taken cervical samples (CCS). The most common reasons reported for preferring US included that it was easier (54.8%), more convenient (28.7%), and less embarrassing (21.7%). Among those women who showed negative attitude towards self-collected US, 8 out of 10 (77.3%) expressed scepticism about its diagnostic performance. Only 37% of the sample preferred CVS, and this attitude is mainly attributable to the fear of not carrying out a correct self-sampling (71.2%) and to its underrated diagnostic performance (33.7%).

Conclusions:

The preliminary results suggest that US is more acceptable than CCS and CVS in Italy. Urinary HPV test presents similar accuracy of the latter tests to detect CC and its supply in the context of population-based screening programmes could improve adherence, reducing the cost and burden on physicians.

Key messages:

- Urine self-sampling could represent an innovative early detection approach to increase adherence to cervical cancer screening programmes.
- Further research is needed to assess whether the screening status and the strategy of self-samplers distribution could act as predictors of screening uptake.

Abstract citation ID: ckac131.565
Dissemination of knowledge from Cochrane systematic reviews in public health: Cross-sectional study

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Background:

Appropriate dissemination of public health evidence is of high importance to ensure that relevant knowledge reaches potential stakeholders and relevant population groups. A wide distrust towards science and its findings indicates that communication thereof remains below its potential. Cochrane Public Health (CPH) provides an important source of high-quality scientific evidence. This study aimed to identify (1) dissemination strategies and (2) possible stakeholders of Cochrane Public Health reviews.

Methods:

This is a cross-sectional, meta-research study. All 68 records (reviews or protocols) listed on the CPH website https://ph.cochrane.org/cph-reviews-and-topics up to 08.03.2022 were included. Record characteristics, dissemination strategy information and potential stakeholder details were coded by one author and 10% of records were checked by another author. Data were descriptively analysed.

Results:

53 reviews (46 systematic reviews, 6 rapid reviews, 1 scoping review) and 15 review protocols were included. The 53 reviews were published between 2010-2022 and included 1-153 primary studies. All reviews had an open-access plain language summary (PLS) in English with translations in 3-13 other languages. Although 16 of 53 reviews and 4 of 15 protocols reported any involvement in the review process of an advisory group, only 3 of 68 records included a dissemination plan aiming to inform non-academic audiences or policy.

Conclusions:

All identified records can be considered as relevant to a wide range of stakeholders and population groups. However, CPH reviews or protocols rarely report their dissemination strategies. It is unclear what dissemination strategies are used after CPH reviews are published. High relevance of CPH evidence for non-academic stakeholders and the general population highlights the need for adequate knowledge translation beyond academia.

Key messages:

- Dissemination plans and implementation is rarely reported in CPH reviews.
- Evidence from CPH reviews is relevant for a multitude of stakeholders.

Abstract citation ID: ckac131.566
Access to nicotine products among Polish youth – PolNicoYouth study results

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Smoking and the use of electronic cigarettes pose a risk of cardiovascular disease. The aim of the study was to analyze the

availability of these products for Polish youth. The cross-sectional study was carried out in 2020 on a sample of secondary school students (N = 19241) representative of the Polish population, using the CAWI method. In order to estimate the relationship between the independent variables and the outcome variables, the Bayesian multivariate logistic regression was used in the R program using the brms library. It was observed that there were differences in the factors related to the refusal to sell traditional cigarettes and e-cigarettes to Polish youth. The age of adolescents has a more significant relationship (lnBF <2.3) with the refusal to sell them traditional cigarettes (lnBF = 49.65) than e-cigarettes (lnBF = 25.21). Contrary to gender and province of residence, which show a significant relationship only with the refusal to sell e-cigarettes (lnBF = 4.9, lnBF = 3.5). However, they are not related to the refusal to sell traditional cigarettes at all. The amount of expenditure of Polish youth on traditional cigarettes and e-cigarettes significantly depends on the size of pocket money (lnBF = 49.39), the type of school attended by young people (lnBF = 12.19) and the province of residence (lnBF = 3). Other factors, such as age, gender or the size of the place of residence, remain irrelevant. Higher pocket money contributes to higher spending on nicotine products ((lnBF = 12.19). It seems that the age of adolescents does not equally limit access to nicotine products, making e-cigarettes more easily available for sale. Action is needed to effectively limit the access of young people to harmful products.

Key messages:

- It seems that the age of adolescents does not equally limit access to nicotine products, making e-cigarettes more easily available for sale.
- Action is needed to effectively limit the access of young people to harmful products.

Abstract citation ID: ckac131.567
Nicotine initiation risk among Polish youth - PolNicoYouth study results

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Smoking and the use of electronic cigarettes pose a risk of cardiovascular disease. The aim of the study was to analyze the initiation of these behaviors among Polish youth. The cross-sectional study was carried out in 2020 on a sample of secondary school students (N = 19241) representative of the Polish population, using the CAWI method. In order to estimate the relationship between the independent variables and the outcome variables, the Bayesian multivariate logistic regression was used in the R program using the brms library. Among Polish youth, age (lnBF = 303.55), smoking of traditional cigarettes by parents (lnBF = 117.29) and the type of school to which youth (lnBF = 36.15) and the province of residence (lnBF = 9.08) attend. Gender, size of the place of residence and parents' education are not related to the risk of tobacco initiation with traditional cigarettes. When e-cigarettes were tried at least once in their life, a significant correlation was identified with a greater number of factors, such as age (lnBF = 124.87), smoking of traditional cigarettes by parents (lnBF = 56.48), province of residence (lnBF = 23.41), gender (lnBF = 16.53), use of heated tobacco (lnBF = 9.34) and e-cigarettes (lnBF = 9.13) by parents, size of the place of residence (lnBF = 8.61) and school type (lnBF = 7.26). Only the level of parents' education remains unrelated. Factors related to the initiation and attempted use of nicotine products by adolescents indicate potential targets for the intervention. Parents who smoke and use e-cigarettes and heated tobacco should be made aware that their addiction is a strong risk factor for their children's health. It can become a motivating factor for quitting the addiction.

Key messages:

- Parental health behaviors are factors related to the initiation and attempted use of nicotine products by adolescents and indicate a potential target for a public health intervention.
- Parents who smoke and use tobacco products should be made aware that their addiction is a strong risk factor for their children's health. It can become a motivating factor for quitting the addiction.

Abstract citation ID: ckac131.568
The burden of disease due to COVID-19 in Sweden: a disability-adjusted life years (DALY) study

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Background:

Many countries have been severely affected by the COVID-19 pandemic, including Sweden, which has been in the spotlight regarding its policies and their impact on mortality and morbidity. Therefore, it is of high interest to measure the disease burden of COVID-19 in terms of disability-adjusted life years (DALYs). DALYs have two main components: the years of life lost through premature death (YLL) and the number of years lived with disability (YLD). This study aims to measure DALYs due to COVID-19 in Sweden.

Methods:

This study used data from the nationwide multi-register observational study SCIFI-PEARL (Swedish COVID-19 Investigation for Future Insights - a Population Epidemiology Approach using Register Linkage) covering the entire Swedish population. The methodology used in the modelling and calculation of DALYs was based on the Global Burden of Disease guidelines, using Sweden-specific life tables for estimated life expectancies.

Results:

In Sweden, 152877 DALYs were lost to COVID-19 between March 2020 and October 2021, corresponding to 1447/ 100 000, 99,3% of which was attributed to YLL. DALYs loss occurred mainly among elderly groups with 66,78 % of DALYs being attributed to individuals above 70 years old. 57,6% of the lost DALYs occurred among men that lost more DALYs compared to females in all age groups.

Conclusions:

Similar to other countries, the burden of COVID-19 in Sweden is concentrated mainly among the elderly, which contributed to the highest DALY loss due to mortality. Yet, DALY loss remains lower for COVID-19 compared to other major non-communicable diseases such as cardiovascular diseases and neoplasms. The contribution of YLD was minimal. However, YLD due to post-Covid is not well understood and long-term disability is likely still underestimated.

Key messages:

- The burden of COVID-19 was mainly due to premature mortality in the older age groups.
- More research is needed especially on post-COVID disability to derive better estimates of YLD.

Abstract citation ID: ckac131.569
Harnessing the potential of digital data for infectious disease surveillance in sub-Saharan Africa

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Despite efforts by the WHO to support local surveillance strategies in developing countries, there is a lack of robust public health surveillance frameworks. As a result, early infectious disease outbreak detection and response remain a significant challenge for local health systems in low-resource settings such as sub-Saharan African countries. In contrast, the growing digital infrastructure, especially in the mobile phone sector, and the global availability of extensive digital data offer promising solutions to enhance and strengthen epidemiological surveillance. Yet, there is little insight into concepts of utilisation and transfer into local public health practice. Using Tanzania as an example, a novel electronic surveillance and early outbreak alert framework is being developed that links signals on emerging diseases with relevant contextual Open Data for rapid outbreak risk assessment. The concept focuses on haemorrhagic fever diseases, specifically dengue virus disease, which is increasingly spreading in sub-Saharan Africa. A data stack framework forms the core of the system, which augments electronic information on the occurrence of acute haemorrhagic fever syndrome, e.g., collected via mobile phone-based surveillance tools, with openly available socio-ecological context data specific to dengue. Preliminary results on the data and information flow within the surveillance framework are presented and strategies for an automated indicator-based risk assessment for dengue outbreaks will be discussed, supplemented by an agent-based simulation framework to model possible short-term outbreak scenarios. In addition, adequate data inputs, identified through an appraisal of various data sources available for Tanzania, are outlined. The framework could serve as a blueprint for designing locally implementable early warning and decision support systems integrated with existing digital surveillance infrastructure.

Key messages:

- Digital health surveillance and Open Data offer great potential for early outbreak detection and supporting health decisions but require tailored solutions to benefit low-resource settings.
- Building on existing digital surveillance infrastructure, the framework may serve as a blueprint for designing an enhanced surveillance and decision support system for infectious disease outbreaks.

Abstract citation ID: ckac131.570
Monitoring tobacco use among a sample of Tunisian high school pupils

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Background:

Smoking is the leading cause of preventable death. This risk behavior usually begins during adolescence. However, only the third of the countries are monitoring this risk behavior among adolescents.

Objective:

To assess the prevalence of tobacco use and to determine the predictors of its experimentation among high school students from Sousse (Tunisia) in 2018 and 2019.

Methods:

In 2018 and 2019, two cross-sectional studies were led among 1399 and 1342 adolescents randomly selected from the same four high schools in Sousse. For data collection, the same pre-tested questionnaire was self-administered anonymously to the participants in the presence of pre-trained investigators.

Results:

Girls represented 60.5% and 63.2% of participants in 2018 and 2019 respectively. The prevalence of tobacco experimentation was of 29.4% in 2018 and of 26.7% in 2019. Current cigarette smoking was objectified in 9.8% and 7.4% of participants in 2018 and 2019. Regardless of the year of the study, the main predictors of lifetime tobacco use among them were: current use of e-cigarette (adjusted OR of 6.4 [4.5-9.0]), cannabis experimentation (adjusted OR of 5.3 [2.7-10.7] and alcohol consumption (adjusted OR of 3.9 [2.5-6.3]).

Conclusions:

Experimentation and current use of tobacco are common among the high school students of Sousse. The national smoking prevention program should be reinforced by multi-sectoral prevention actions targeting not only tobacco use but also the consumption of other substances.

Key messages:

- Tobacco experimentation is high among the adolescents of Sousse.
- Tobacco experimentation is strongly associated with other substances use among the adolescents of Sousse.

Abstract citation ID: ckac131.571
Impact of the COVID-19 pandemic on the health behaviour of university students in Hamburg, Germany

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Background:

The academic surveillance system SuSy has been collecting and analysing data regarding the health behaviour of health sciences and medical technology students twice a year since 2014. The aims of the project are to identify risk factors as well as trends and to explore the impact of the COVID-19 pandemic on university students. The data provides a suitable basis for planning and implementing health promotion and prevention measures to improve students' health.

Methods:

A cross-sectional assessment as part of a rolling cohort analysis overall captured data of more than 3,000 cases using quantitative paper-pencil and online questionnaires at a German university in Hamburg. In autumn 2021, 257 students (193 women, 62 men), aged 18 to 54 years participated in the survey. However, trends are only described among undergraduate health sciences students ($n \approx 150$ each survey).

Results:

During the COVID-19 pandemic the health behaviour of students has changed considerably in many aspects. After remaining almost constant for five years the percentage of students consuming analgetic drugs regularly increased significantly from 45 % to 68 % during the first two years of the pandemic. The percentage of students consuming soporific drugs and tranquilizers has doubled during the same time and reached a new high (28 %) in autumn 2021. Parallel to the implementation and relaxation of relevant restrictions the consumption of alcohol first decreased noticeably, but then rose to an even higher level. Also, the percentage of students exhibiting low mental well-being more than doubled from 18 % to 43 %.

Conclusions:

The surveys indicate that students started to engage in riskier health behaviour during the COVID-19 pandemic while being subjected to low mental well-being. In addition to the observed vulnerability, further research regarding students' health is required to identify potential, yet generalisable health risks to enhance and initiate expedient preventive measures.

Key messages:

- The development, implementation and regular enhancement of a student health-related surveillance system is advisable.
- University students need to receive more public health attention in the future.

Abstract citation ID: ckac131.572
Multi-drug and β-lactam resistance in Escherichia coli and food-borne pathogens

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Antimicrobial resistance (AMR) is one of the top ten global public health threats facing humanity by menacing the effective use of available antimicrobials for treatment of an ever-increasing range of infections caused by bacteria. Its potential recognize the transmission to humans by contact with commensal and zoonotic resistant bacteria from animal and food sources. The aim of this study is to describe multi-drug resistance (MDR) profile in Campylobacter (n = 541), Salmonella (n = 919) and commensal Escherichia coli (n = 2777) isolated from animal and food samples between 2014 and 2019 in Portugal. Antimicrobial susceptibility testing results to fluoroquinolones/quinolones, macrolides, 3rd generation cephalosporins, polymyxins, carbapenems, penicillins, aminoglycosides, tetracyclines, sulphonamides, trimethoprim and chloramphenicol were clustered using k-modes. Clusters were described by population (broilers, broilers meat, turkeys, pigs, pig meat), AMR classification (mono/dual-resistance, MDR to 3-4, 5-6 and $\geq$7), β-lactamases production, sample stage (farm, slaughterhouse, processing plant, retail), season, and year. Overall, the results suggest an escalating MDR behavior from farm to post-farm stages in all bacteria, including E. coli MDR to critically important antimicrobials, and that Salmonella (fluoro)quinolones resistance may be associated with broilers. Most ESBL/AmpC producing E. coli were resistant to both C3G and C4G in isolates from animal and food samples (respectively, 77%; n = 846; and 74%; n = 188). The statistical method, K-modes, offers an overall visualization of the data with the identification of AMR profiles that have been further described using surveillance variables. Our results provide relevant information to support policy and decision making to tackle MDR in farm and post-farm stages.

Key messages:

- An escalating multi drug resistance behavior from farm to post-farm stages.
- Escherichia coli multi drug resistance to critically important antimicrobials.

DZ Other public health issues

Abstract citation ID: ckac131.573
Mortality before and during COVID-19 outbreak in the Federation of Bosnia and Herzegovina

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Background:

Mortality data are essential for monitoring population health and is one of the most important data for evaluation and comparison of health status at the local, national, and international level.

Objective: We analysed all-cause mortality data in the Federation of Bosnia and Herzegovina (FBiH) for the period 2016-2021 and compared it with mortality occurred during the COVID-19 pandemic, in 2020 and 2021.

Methods:

Using data on all-cause deaths for the period 2016-2021, obtained from the Institute for Statistics of the Federation of Bosnia and Herzegovina, we compared annual number of deaths (all-ages) and death rates during the 2020 and 2021 to pre-pandemic years.

Results:

In 2016 the reported number of death was 21,146, in 2017 was 21,942, in 2018 was 21,691, and in 2019 was 22,024, and during the pandemic period in 2020 and 2021, 26,026 and 29,086 deaths were reported respectively. In 2020, 4,115 more deaths has been reported (15,8%), and in 2021 more 6,438 death (22,1%) compared with period 2016-2019. In FBiH in 2021, the death rate per 100,000 inhabitants was 1,341.2 and it is recorded an increase compared to 2020 when it had a value of 1,208.3 while in 2016 the value was 951.7.

Conclusions:

A large proportion of increased mortality during pandemic was probably caused directly by COVID-19. However, the pandemic also resulted in deaths that would otherwise not have occurred (indirect deaths) due lack of access to medical services when hospitals were overwhelmed and changes in health seeking behaviour. An in-depth investigation of the underlying causes of the high excess mortality should be conducted to inform changes in the health care system and efforts to prevent severe COVID-19 through vaccination of vulnerable groups should be a priority.

*This abstract is support by 'BoCO-19 - The Burden of Disease due to COVID-19'. Project is coordinated/led by Robert Koch Institute and supported by the WHO Regional Office for Europe.

Key messages:

- During the two years of the COVID-19 pandemic, population in FBiH had a significant increase in all-cause mortality.

- The direct standardized death rate for all causes and age groups per 100,000 inhabitants in 2020 for FBiH was 818.0 and it is slightly higher compared to the EU average.

Abstract citation ID: ckac131.574
Masculinities and self-perceived risk of contracting STIs among young men in Stockholm, Sweden

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Background:
Risk perception is a key factor influencing young men's health-seeking behavior for sexually transmitted infections (STIs) detection. Men's risk perception could be influenced by gendered norms embedded in social constructions of masculinities. However, the association between different domains of traditional masculinities and young men's risk perception - which is key to inform effective health interventions - has not been studied yet. This study aimed to test if young men's endorsement of different traditional masculinities forms were associated with current self-perceived risk of contracting STIs among young men in Stockholm, Sweden.

Methods:
A population-based cross-sectional survey was conducted in 2018 in Stockholm (N = 521 men aged 20-29 years). The Conformity to Masculinity Norms Inventory 46-items tool was used to measure different traditional masculinity domains (Winning, Emotional control, Risk taking, Violence, Playboy, Self-reliance, Primacy of work, Power over women and Heterosexual self-presentation) and overall masculinity. Adjusted multinomial logistic regressions tested the associations between masculinities (overall and each domain) and self-perceived risk of contracting STIs.

Results:
Any self-perceived risk of contracting STIs was reported by 39.5% of the sample. After adjusting for confounding factors, endorsing any traditional masculinity behavior was associated with reporting any perceived risk of contracting STIs (RRR 4.9; 95% CI 2.4-10.0). Among the domains, Playboy showed the strongest association (RRR 3.6; 95% CI 2.5-5.1), followed by Risk taking (RRR 1.8; 95% CI 1.3-2.5).

Conclusions:
Young men who endorse traditional masculinities behaviors have higher self-perceived risk of contracting STIs, especially those endorsing playboy and risk-taking norms. These findings highlight the need to design policies challenging traditional masculinity behaviors among young Swedish men that can be underpinning their self-perceived STIs risk.

Key messages:
- Endorsement of playboy (willingness to have casual sexual partners) and risk taking (willingness to be exposed to risk) masculinity norms were associated with perceiving any risk of contracting STIs.
- Policies challenging traditional masculinity norms among young Swedish men can be designed to influence behaviors underpinning the self-perceived risk for STIs in this group.

Abstract citation ID: ckac131.575
Peristomal skin complications in ileostomy and colostomy patients: a systematic literature review

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Background:
Peristomal skin complications (PSCs) are one of the main post-operative complications of ostomy surgery. They have a considerable impact on patients' quality of life and represent a challenge for healthcare professionals involved in their management. The majority of PSCs is preventable and costly. Knowing their burden could guide decision makers on the ostomy patients' management who are predominantly cancer and chronic bowel disease patients. Thus, the aim of this study was to summarize existing literature regarding the clinical-epidemiological burden of PSCs in ostomy patients.

Methods:
A systematic literature review was performed querying three database (PubMed, Scopus, Web of Science) from January 2012 to February 2022. It included studies in English language and focused on the clinical and epidemiological burden of PSCs in the adult patients with ileostomy and colostomy.

Results:
Overall, 35 studies were considered. Epidemiological data on PSCs were not systematically collected in the available literature. The principal underlying disease requiring the ostomy surgery were rectal, colon and gynaecological cancers, inflammatory bowel diseases, diverticulitis, occlusion and intestinal perforation. It was described a range of PSCs from 11% to 45%. The PSCs were most commonly erythema, papules, erosion, ulceration and vesciculation. Skin complications increased the average number of hospitalization days and of hospital readmission within 120-day following surgery.

Conclusions:
The data on PSCs are still limited. Estimating the PSCs burden could support healthcare professionals and decision makers called upon to identify the most appropriate responses to patients' health needs. The management of these complications plays a vital role to improve patient's quality of life and a multidisciplinary approach with the active involvement of stomatherapist, surgeon and dermatologist is critical. Furthermore, a better patient education and empowerment is needed.

Key messages:
- Developing a multidisciplinary approach to managing PSCs is essential in order to provide the best treatment possible and the best outcomes for patients.
- Further studies should be conducted in order to better define the clinical-epidemiological burden of ileo- and colostomies and to support better health planning.

Abstract citation ID: ckac131.576
Drinking water quality as a risk factor for pupils' health in rural schools in Serbia

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Background:
Access to safe drinking water in schools is essential for a good health, wellbeing, learning and dignity of pupils. The rural schools are most frequently connected to the rural water supply system or own water supply source, where the monitoring of drinking water quality is scarced. The study was conducted in the rural regions in Serbia in 2016, aiming at assessing drinking water quality and sanitary conditions of school water supply facilities.

Methods:
In total 238 school facilities, including 108 in Šumadija and 130 in Pomoravlje District were investigated using laboratory testing of drinking water and sanitary inspection.

Results:

Study revealed that 32% of analysed samples showed microbiological faecal contamination with bacteria E. coli, while 52% of samples showed physico-chemical non-compliance with the national standards, where higher nitrates were the most common cause. Overall non-compliance of drinking water from school rural water supply systems amounted to 66% of tested water samples. This study also showed the main technical shortcomings of school water supply facilities and distribution networks such as the lack of fencing of the water source, damaged or absence of drainage channels from the well concrete floor and poor construction characteristics of wells.

Conclusions:

The results of this study, particularly presence of E. coli in drinking water may affect pupils' health and is a consequence of poor sanitary conditions and maintenance of small rural drinking water supply systems and individual wells. It is necessary to provide continuous disinfection of water available in schools and to undertake measures for technical improvements in order to provide better sanitary protection of water sources and other water supply facilities in rural schools.

Key messages:

- Drinking water quality in schools is vital for children public health.
- Raise awareness of local community on drinking water safety and enforce continuous monitoring of drinking water quality in small rural water supply systems in schools.

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Strengths and weaknesses in the implementation of the IHR (2005) in low GNI countries

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Background:

The International Health Regulations (IHR) 2005 are an international legal instrument adopted by World Health Organization General Assembly to strengthen global health security and empower the countries to prevent and respond to public health threats.

Methods:

This study was done within the Joint Action on Strengthened International Health Regulations and Preparedness in the EU (SHARP JA) with the aim to assess the strengths and weaknesses in preparedness and IHR implementation in order to develop and improve countries' IHR capacities. Desk-based review and analysis of available data from the States Parties Annual Report tool (SPAR) from 2019 were done. Data (for 13 IHR capacities with 24 indicators) were analyzed for 15 countries participating in SHARP JA with gross national income (GNI) less than 90% of the EU average.

Results:

The overall capacity for IHR implementation in low GNI countries is 69%, ranging from 33% in Bosnia and Herzegovina to 84% in Spain. The highest capacities are recognized in the area of Legislation and financing - 78%, IHR Coordination & NFP Functions - 77%, Food Safety - 76%, and Health service provision - 76%. The weak areas with the need for further improvement are recorded in the Points of entry (PoE) - 51%, Risk Communication - 52%, Chemical events - 60%, National health emergency framework - 65%, Surveillance - 66%, and Human Resources - 67%. The overall IHR capacity of low GNI countries is lower compared to the SHARP JA countries and the European average (76% and 73% respectively).

Conclusions:

The results have shown the strongest and the weakest points of the IHR implementation in low GNI countries. This indicates the need for capacity building and further development in identified areas (Points of entry, Risk Communication, Chemical events, National health emergency framework, Surveillance, and Human Resources).

Key messages:

- The assessment of the strengths and weaknesses in preparedness and IHR implementation is the key prerequisite for identifying countries' needs for their capacity enhancement.
- Special attention should be given to the strengthening low GNI countries' capacities.

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Burden of road traffic injuries in Federation of Bosnia and Herzegovina – fifteen-year survey

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Introduction:

Road traffic injuries (RTI) are among the ten leading causes of death worldwide, and they are the leading cause of death among young adults aged 15-29 years. In Federation of Bosnia and Herzegovina (FBiH), with population of 2,1 million, around 380 people die every year and additional 11.000 get seriously injured in RTI.

Aim:

The aim of this study was to investigate the incidence and fatality rate of RTI in FBiH in the period of 2006 until the end of 2020.

Methods:

Data source of RTI (ICD-X) incidence and fatality rate was Statistical book for Federation of Bosnia and Herzegovina, which includes all injuries and deaths reported through Ministry of internal affairs. Fatality rate was calculated as number of confirmed deaths in total number of reported RTI. To compare frequencies of reported deaths Chi square test was used. YLD were calculated based on information on injury that was caused in road traffic accidents.

Results:

In the last 15 years, in FBiH, total 39,455 injuries related to road traffic were reported. According to the official data, over the period 2006-2020 the peak of fatality rate (8.52% deaths among all cases with RTI) was in 2016, while it had a statistically significant decline in 2018: 6.51%; 2019: 6.35%; and 2020: 6.32% ($x2 = 7728{,}584$; $p < 0{,}0001$). It is estimated that young adults (in the age group 30 to 39 years) injured in the road traffic accidents have 197.01 patient-years of total 881.17 years to live with disabilities just based on serious RTI in 2020.

Conclusions:

RTI pose a significant burden on the health of the population in FBiH. After implementing strict laws in the year 2017, and 2018, a significant decrease of RTI was registered, including the number of deaths due to RTI (fatality rate).

This abstract is support and sponsorship by 'BoCO-19 - The Burden of Disease due to COVID-19'. Project is coordinated/led by Robert Koch Institute and supported by the WHO Regional Office for Europe.

Key messages:

- RTI are significant burden for health of population in FBH. Strict laws and stronger punishments and fees are decreasing number of RTI.
- This abstract is support and sponsorship by 'BoCO-19 - The Burden of Disease due to COVID-19'. Project is coordinated/led by Robert Koch Institute and supported by the WHO Regional Office for Europe.

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Healthcare utilization among aging Latvians with diminished activities of daily living

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The population in Latvia is aging. Independence in performing activities of daily living (ADL) is a core aspect of functioning, and the elderly frequently experience limitations in functioning. Little is known about the utilization of healthcare of elderly Latvians with functional difficulties. The purpose of this study was to determine the relationship between functional difficulties and utilization of healthcare among the elderly in Latvia. This study had three overall objectives: (i) to investigate the determinants of utilization of health care for elderly Latvians with functional difficulties; (ii) examine the relationship between predisposing characteristics, enabling resources, and need with specific measures of access to care using the Behavioral Model for Vulnerable Populations and to (iii) identify the nature and existence of health disparities among the elderly in Latvia, with and without functional difficulties. Data from the 2017 Survey of Health, Ageing and Retirement in Europe (SHARE) survey, with a sample size of 1479 was utilized. There was a statistically significant difference in the utilization of healthcare between individuals with and without functional disabilities ($F(4,1) = 759.615$, $p < 0.01$), with a higher utilization of healthcare among individuals with functional difficulties ($p < .01$). The results of Automatic Linear Modeling indicate that significant ($p < 0.05$) factors in predicting utilization of healthcare include factors such as age, public sickness benefit and disability pension, and overall health status. This study is significant because it fills critical gaps in knowledge that exist with respect to healthcare utilization for elderly Latvians with functional disabilities.

Key messages:

- This study contributes to our understanding of healthcare utilization of aging Latvians.
- This study provides insight into the functional limitations of the aging Latvian population.

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Validation of cardiovascular risk prediction in Type 2 diabetes through federated cohorts in Europe

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Background:

The SCORE2 risk model has been recommended for cardiovascular risk assessment in individuals aged over 40 years without diabetes in 4 defined risk regions of Europe. We aimed to validate a novel SCORE2-DM model in Type 2 diabetes with additional risk factors mainly based on UK datasets, using federated databases from the EUBIROD network.

Methods:

We defined a full operational protocol to implement a standard procedure for validation across contributing sources in Europe. The manual described inclusion/exclusion criteria (aged 40+, diagnosis of T2 diabetes at 30+, no prior CVD), risk factors measured over a baseline interval (1/2013-62015), target/competing events at follow-up (2015-2019). We specified a common data model with 9 steps required to process longitudinal records and deliver summary cohort data (one record per person). All rules were implemented in R and NeuBIRO, an original tool written in Java/Groovy and H2 SQL (https://github.com/eubirodnetwork/neubiro).

Results:

Software was able to produce the following outputs at each source: distribution of risk factors by sex and 5-year age groups; Harrell's C-index and standard error of SCORE2 and SCORE2-DM by sex and 10-year age groups, C-index differences; average 5-year predictive vs observed risk by risk deciles; adjusted cumulative incidence of 5-year competing risk by sex and 5-year age groups. Code was packaged into a standalone bundle, with test data and coefficients ofthe SCORE2-DM model. The procedures allowed either creating cohort data autonomously to run the supplied R code, or let NeuBIRO complete all steps foreseen to deliver. Tests have been successfully completed in the derivation data, with results from federated databases expected to contribute to the final external validation of SCORE2-DM by midyear.

Conclusions:

We defined a collaborative method to validate risk prediction models in high risk subgroups using international pooling of cohort data with privacy protection.

Key messages:

- Collaborative methods to validate risk prediction models can enhance access to real world data for researchers across chronic diseases.
- Implementation of flexible and reusable source code can increase opportunities to use prediction models for robust clinical decision making in multimorbidity.