



The transition from adolescence to adulthood in patients with schizophrenia: Challenges, opportunities and recommendations

Celso Arango^{a,b,*}, Jan K. Buitelaar^c, Christoph U. Correll^{d,e},
Covadonga M. Díaz-Caneja^{a,b}, Maria L. Figueira^f,
W. Wolfgang Fleischhacker^g, Daniele Marcotulli^h,
Mara Parellada^{a,b}, Benedetto Vitiello^h

^a Department of Child and Adolescent Psychiatry, Institute of Psychiatry and Mental Health, Hospital General Universitario Gregorio Marañón, IISGM, School of Medicine, Universidad Complutense, Madrid 28009, Spain

^b Centro de Investigación Biomédica en Red de Salud Mental (CIBERSAM), Madrid 28029, Spain

^c Department of Cognitive Neuroscience, Donders Institute for Brain, Cognition and Behavior, Radboudumc, Nijmegen, the Netherlands

^d Department of Child and Adolescent Psychiatry, Charité Universitätsmedizin, Berlin, Germany

^e Department of Psychiatry and Molecular Medicine, Zucker School of Medicine at Hofstra/Northwell, Hempstead, New York, USA

^f Faculdade de Medicina, Universidade de Lisboa, Lisbon, Portugal

^g Medical University of Innsbruck, Innsbruck, Austria

^h Department of Public Health and Pediatric Sciences, Section of Child and Adolescent Neuropsychiatry, University of Turin, Italy

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Abstract

Schizophrenia is a severely debilitating neurodevelopmental disorder that requires continuous multidisciplinary treatment. Early onset schizophrenia (EOS, onset before 18) is associated with poorer outcomes than the adult-onset type. The transition from adolescent to adult mental healthcare services (AMHS) poses various challenges for maintaining continuity of care.

* Corresponding author at: Department of Child and Adolescent Psychiatry, Institute of Psychiatry and Mental Health, Hospital General Universitario Gregorio Marañón, IISGM, School of Medicine, Universidad Complutense, Madrid 28009, Spain.

E-mail address: carango@hggm.es (C. Arango).

The heterogeneous availability of specialized mental health services and resources for people with schizophrenia across Europe and the inadequacy of training programs in creating a shared culture and knowledge base between child and adult mental health professionals are major challenges at the policy level. More flexible and individualized transition timing is also needed. While changes in the relationship between patients, caregivers and mental health professionals at a time when young people should acquire full responsibility for their own care are challenges common to all mental health disorders, these are particularly relevant to the care of schizophrenia because of the severe associated disability.

This Expert Opinion Paper examines the main aspects of transitioning of care in schizophrenia with the aim of identifying the challenges and the potential approaches that could enhance continuity of care.

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1. Introduction

1.1. Schizophrenia

Schizophrenia is one of the top ten causes of disability worldwide (Mueser and McGurk, 2004) and most patients with schizophrenia experience serious impairments in various aspects of daily living and need lifetime support and treatment (Fleischhacker et al., 2014).

The estimated point prevalence of schizophrenia is 0.46% and the lifetime morbid risk is 0.7% (McGrath et al., 2008). Schizophrenia is being increasingly recognized as a neurodevelopmental disorder, and most hypotheses about its pathogenesis involve alterations of early brain development that predispose to vulnerability to stress during the late stages of brain maturation in adolescence, when substantial synaptic pruning of prefrontal gray matter occurs and white matter in the same area undergoes myelination (Arango et al., 2014; Parellada et al., 2017; Patel et al., 2020). Nonetheless, the considerable plasticity of the rapidly developing adolescent brain may also offer an optimal window of opportunity for intervention (Arango et al., 2018; Patel et al., 2020).

Early interventions are associated with better outcomes than delayed treatment (Arango et al., 2021; Pablo et al., 2020; Catalan et al., 2021) and can therefore be considered central to the efforts of changing the trajectory of the disease. Indeed, longer duration of untreated psychosis is correlated with higher severity of positive and negative symptoms and poorer overall functioning later in life (Kane et al., 2016). Of added concern, treatment disengagement and dropout predict a more chronic course of psychosis, increased need for hospitalization, and longer duration of inpatient treatment (Caseiro et al., 2012).

In some, but not all, European countries (Maric et al., 2019) early intervention programs for psychoses (EIP) have been set up to provide multidisciplinary treatment at the onset of psychosis in order to promote recovery and reduce the probability of relapse following remission of the first episode of psychosis. Indeed, early intervention services have proven to be more effective than treatment as usual for young people with psychosis (Correll et al., 2018).

1.2. Early onset schizophrenia

Schizophrenia usually presents in the second or third decade of life, but an earlier onset is not uncommon. A recent meta-analysis found that 3% of the cases of schizophrenia spectrum disorders and primary psychotic disorders emerge before fourteen years and 12.3% before eighteen years (Solmi et al., 2021).

The clinical presentation of early onset schizophrenia (EOS, onset before 18) and very early onset schizophrenia (VEOS, onset before 13) is similar to the adult-onset form (Stentbjerg-Olesen et al., 2016), but in adults the duration of untreated psychosis is longer, delusions tend to be more complex, while and negative symptoms can be more difficult to identify in youth (Driver et al., 2020; De Berardis et al., 2021). Also, premorbid developmental disabilities and socio-communicative disturbances are more common in VEOS and EOS (Baeza et al., 2021).

It is estimated that approximately 60% of individuals with EOS have poor outcomes (Clemmensen et al., 2012). The early onset forms may thus carry a poorer prognosis and have higher therapeutic needs than adult-onset schizophrenia, probably due to the alterations in brain and psychosocial maturation processes determined by the disease (Diaz-Caneja et al., 2015; Driver et al., 2020). For these reasons, ensuring continuous treatment engagement of adolescent and young adult patients with schizophrenia is critical, and most patients with VEOS/EOS need to continue their treatment in adult psychiatry services. Furthermore, since younger age at onset is associated with more negative symptoms, more relapses, poorer social/occupational functioning, and more severe disease course (Immonen et al., 2017), the clinical and social needs of people with early onset schizophrenia are generally greater than those of patients with later onset of the disease throughout their lifetime.

1.3. Transition from adolescence to adulthood for patients with mental disorders

Adolescence is an age characterized by compelling transitions, including exiting mandatory education and entering advanced higher education or professional training, the passage from fully supported to gradually more independent living, forming intimate peer relationship with peers, and

generally changing social and legal responsibilities. Adolescents and young adults are increasingly expected to make their own decisions and be more independent. While this time can be an opportunity for increased autonomy and self-exploration, it is also a stressful period of life for most adolescents (Martel, 2021). Additionally, for individuals diagnosed with mental disorders in childhood or adolescence, the transition to the adult mental healthcare services (AMHS) poses various challenges for maintaining the continuity of care (Tuomainen et al., 2018). In fact, a large proportion of adolescents with mental disorders and almost all patients with VEOS/EOS need to transition to adult mental health services. However, their transition is not automatic, and many patients encounter discontinuity of care and difficulties in transitioning from CAMHS to AMHS. These challenges often lead to treatment disengagement and dropout (Appleton et al. 2019).

We here examine the main aspects of transitioning of care in schizophrenia with the aim of identifying both the challenges that transitioning care can face and the approaches that could enhance continuity of care in this particular population. The problems that need to be addressed for a smoother transition involve mental health policies and services, patients, and caregivers.

2. Experimental procedures

Recognizing the great importance of a smooth transition from adolescence to adulthood for patients with EOS, and considering the relevant challenges that patients, caregivers and mental health professionals face during this process, a work-group of child and adult psychiatrists held a targeted meeting on September 9th 2021. Before the meeting, a narrative review was carried out using the MEDLINE and Cochrane databases for articles published in any language up to September 1st, 2021. The topics transition, age, mental health and psychosis were searched using the following keywords and their truncation with relevant MeSH terms (adapted from Paul et al., 2018):

- transition: transition, transfer, interface, engagement, 'CAMHS to AMHS', 'child and adolescent mental health services to adult mental health services'.
- age: adolescent, adolescence, 'young people', youth, adult, adulthood, child, 'early onset'
- mental health: psychiatry*, mental health, healthcare.
- psychosis: schizophrenia, psychosis, psychotic.mental health services: including CAMHS, child and adolescent mental health service*, mental health service, youth service.

The reference lists of identified articles were hand-searched to find additional articles of interest.

During the meeting, the participants presented evidence, shared clinical experience and opinions, described local and international policies, and debated possible solutions to various challenges encountered in transitioning care. Following the meeting, the experts continued to exchange opinions and views with the aim of summarizing the main challenges identified in the transition from adolescence to adulthood for young people with schizophrenia and providing the recommendations reported here.

3. Challenges

3.1. Policies and mental health services

One of the main challenges for patients going through the transition process may lie in the different approach to mental health care that child and adult mental health professionals have (Cleverley et al., 2020). CAMHS generally use a family-oriented and holistic approach, while adult services may tend to emphasize individual patient's responsibility and pharmacological therapy. In this context, the separation between child and adult psychiatry training contributes to creating a gap of knowledge and attitudes towards patients and their therapies and plays a major role in maintaining cultural differences. Indeed, while in some European countries child and adolescent psychiatry is a sub-specialty of psychiatry, in others the two specialties are distinct and parallel (Karabekiroglu et al., 2007). It has been shown that only in half of European countries psychiatry trainees in general psychiatry receive lectures on adolescent psychiatry, and not in all countries practical training in child and adolescent psychiatry is mandatory (Deschamps et al., 2020). Adult psychiatrists may have insufficient knowledge about the developmental aspects of mental disorders. In addition, while schizophrenia is a common topic in both child and adult psychiatry training, adult mental health professionals usually have little experience with other neurodevelopmental disorders (e.g., ADHD and ASD) that persist in adulthood and often co-occur with schizophrenia, especially in early-onset cases (Baeza et al., 2015). Furthermore, Hendrickx and colleagues found that theoretical training about transition is given in only 17% of European countries (Hendrickx et al., 2020b). At the service level, a lack of connection and shared information systems between child and adult services has been documented in most European countries (Signorini et al. 2018, Hendrickx et al., 2020a), and this hinders collaboration. Adult psychiatrists may also feel unprepared to work with transitional age youth and their families on the boundary and balance between confidentiality and privacy, and may require further education. The organization of mental health services for children and adults, as well as policies regarding transition between services, are widely heterogeneous across Europe. Availability of adult mental health services is scattered. As a result, full AMHS caseload may hamper transitions in many European countries (Signorini et al., 2018). Similarly, the allocation of resources for CAMHS does not always match the adolescent mental disease burden (Signorini et al., 2017). In some European countries, services for neurodevelopmental disorders are separate from CAMHS, thus adding a further level of complexity.

With regard to transition age youth, positive experiences with specialized services have been documented outside Europe (Rickwood et al., 2019), whereas in Europe transition programs are still heterogeneous or absent. The age of transition varies among European countries, but the most common cut-off is set at 18 years old. Still, it is suggested that transition age should be flexible, and extended up to age 21 or 23, and that, in any case, it should be avoided during an acute phase of the disorder. The individual patient's readiness should be evaluated before initiating the tran-

sition process (Singh et al., 2016; Cleverley et al., 2020; Santosh et al. 2020).

Regarding psychoses, early intervention programs (EIP) might represent an opportunity toward flexibility and cost-effective specialized care (Aceituno et al., 2019).

Indeed, early intervention services for psychoses have been associated with reduced all-cause treatment discontinuation, higher involvement in school or work, and lower total symptom severity (Correll et al., 2018; Puntis et al., 2020). EIP could also allow patients to be stabilized and followed-up until they are out of the acute psychotic episode before transitioning (Poletti et al., 2020).

A particular challenge for practitioners dealing with transition is to account for possible age differences in response and tolerability to medications (Correll et al., 2011). Most data on antipsychotics come from research in adults and, although slowly expanding, research on the efficacy and safety of antipsychotics in youth is still rather limited (Vitiello et al., 2009; Amor 2012; Arango et al., 2014b; Lambert et al., 2016; Dinnissen et al., 2020). As a result, adult psychiatrists often use drugs and dosing that may be different from those used in adolescence, with the consequence that pharmacological therapies are frequently changed upon transition, with the risk of causing disorientation in the patients and detrimental impact on the therapeutic relationship.

3.2. Patients and caregivers

Adequate management of the changing relationships between clinicians, patients and caregivers during transition often faces various challenges. As the patients acquire full legal capacity, they are supposed to take full responsibility for their own care and parents are often excluded from decisions and information about patients' healthcare. As a result, while promoting the patient's independence and responsibility should be a goal of the transition process, taking responsibility for their own care is often stressful for young patients (Paul et al., 2018; Cleverley et al., 2020). Similarly, the lack of involvement in their child's care results in stress and anxiety in parents (Hendrickx et al., 2020a). Nonetheless, patients severely compromised by the illness or with premorbid intellectual disability might need a legal representative or guardian (OHCHR 1991, <https://www.ohchr.org/EN/ProfessionalInterest/Pages/PersonsWithMentalIllness.aspx>).

In addition, the acquisition of a new illness identity perceived as socially stigmatizing might be a further source of stress if the patient does not have a strong support network or perceives the transition as being imposed by clinicians and caregivers (McNamara et al., 2017).

3.3. Mental health care engagement

Treatment of schizophrenia requires continuous healthcare engagement. Poor engagement has been associated with higher rates of symptoms relapse, rehospitalization, and longer and debilitating disease course (Kreyenbuhl et al., 2009; Tiihonen et al., 2018).

Being able to form a strong therapeutic alliance (Frank and Gunderson, 1990), shared decision-making during treatment, and a comprehensive, supportive, person-centered approach to care, have been identified as the main prerequisites for a stable and enduring treatment engagement (Dixon et al., 2016). For young people with mental illnesses, feeling their own goals, such as employment and education, supported, strongly enhance treatment engagement (Tindall et al., 2020). Caregivers' involvement and treatment settings that reduce alienation and stigma are also associated with reduced treatment dropouts (Dixon et al., 2016). Accordingly, specialized first episode psychosis services have lower rates of treatment discontinuation than routine mental health services (Correll et al., 2018). Conversely, higher burden of positive symptoms, substance use, and treatment-related adverse effects are well known predictors of treatment disengagement in young people with psychosis (Solmi et al., 2018; Tindall et al., 2020; Mascayano et al., 2021). Pharmacological side-effects might be even more relevant in children and adolescents, as pediatric populations are at higher risk for adverse events (Correll et al., 2011). In addition, patients with schizophrenia tend to have poor disease insight, and a limited awareness of the need of continuous therapy hampers treatment adherence (Lysaker et al., 2018).

3.4. Social isolation and autonomy

An aspect intrinsic in the transition to adulthood is the end of the school age and the beginning of working life or of advanced and independent higher education. In this context, patients with schizophrenia are particularly prone to experience isolation and social withdrawal, as they tend to have poorer social networks than healthy age-matched individuals (Bengtsson-Tops and Hansson, 2001; Sibitz et al., 2011; Green et al., 2018). Yet, social isolation has detrimental effects on recovery and contributes to worse quality of life and overall disability (Sibitz et al., 2011; Harvey et al., 2019). This effect is even more relevant in young people with EOS since they tend to have poorer premorbid social functioning than adult-onset cases and since the illness impacts on the person in a developmental stage that is crucial for establishing social relationships and where the brain is especially sensitive to social interactions, particularly with peers (Lamblin et al., 2017). In this regard, young people with EOS might also be more susceptible to changes in daily living and to the social isolation imposed with the recent COVID-19 pandemic (Moreno et al., 2020).

Factors predisposing to disability might have tremendous impact on functional outcomes of young people with EOS at transitional age. Various illness-related factors have been correlated with disability in patients with schizophrenia. Among these factors, cognitive function, pervasiveness and severity of negative symptoms, functional capacity and physical health are common predictors of the level of disability (Nowak et al., 2016; Harvey et al., 2019; Lepage et al., 2021). Although the effects of antipsychotic treatment on disability is rather limited, recent data suggest that reduction of relapse and higher clinical stability obtained with the use of long-

acting antipsychotics contribute to improvement of functional outcomes (Harvey et al., 2019; Kishimoto et al., 2021). In addition, engagement in psychosocial, and psychoeducational therapies, and involvement in work activities also help to reduce disability (Nowak et al., 2016). For these reasons, considering work and academic opportunities and setting them up with patients, as well as providing patients with vocational support, is an important element of care in the transition process (Ajnakina et al., 2021)

3.5. Clinical trajectories

Approximately 13.5% of all patients with schizophrenia and 16.7% of those at the first episode of schizophrenia are estimated to achieve functional recovery (Jääskeläinen et al., 2013), but this proportion may be even smaller in with EOS or VEOS patients who tend to have poorer outcomes than adult-onset form of schizophrenia (Clemmensen et al., 2012). However, in well-resourced, early intervention service settings, first episode patients with EOS and early adult-onset schizophrenia may not differ as much in their outcomes (Stentebjerg-Olesen et al., 2016). In the population with EOS, premorbid difficulties and severity of negative symptoms at baseline correlate with worse outcome (Diaz-Caneja et al., 2015; Downs et al., 2018). Again, longer duration of untreated psychosis predicts worse clinical, functional, and cognitive outcomes (Fraguas et al., 2014), and early treatment termination correlates with more chronic disease course, increased risk for rehospitalization and functional disability (Dixon et al., 2016). In this context, specialized first episode psychosis programs are associated with longer treatment retention than standard services (Kane et al., 2016), although these programs are not present in most countries (Csillag et al., 2018)

While the diagnosis of early onset schizophrenia has been found to have high stability over time (Castro-Fornieles et al., 2011; Stentebjerg-Olesen et al., 2016), diagnostic transition from child and adolescent mental health disorders to adulthood, might be a further challenge both for the psychiatrist and the patient (Copeland et al., 2013). Indeed, the diagnosis of EOS is often associated with the need to reformulating young people and families' expectations and with long-term pharmacological treatments with potential side effects that need to be carefully considered. Knowledge about the most common trajectories of child and adolescent psychiatric disorders, and in particular of psychoses (Bromet et al., 2011), could help the psychiatrists in defining interventions and prognosis.

3.6. Comorbidities

Comorbidities are common in patients with VEOS/EOS. Stentebjerg-Olesen and colleagues described comorbidity with posttraumatic stress disorder (34.3%), with attention-deficit/hyperactivity and/or disruptive behavior disorders (33.5%), and with substance abuse/dependence (32.0%) (Stentebjerg-Olesen et al., 2016)

Consistent with the notion that schizophrenia and autism spectrum disorders (ASD) share pathophysiological, neuro-

biological, and clinical features, Rapoport and colleagues showed that EOS/VEOS are preceded by and coexisting with ASD in 30% to 50% of cases (Rapoport et al., 2007). Notably, patients with schizophrenia and ASD present a diagnostic challenge, and face several therapeutic difficulties. They usually have higher therapeutic needs than patients without ASD and lower responses to antipsychotic therapies (Pina-Camacho et al., 2016). Of added concern, adult psychiatrists often don't have adequate knowledge and experience in ASD treatment.

Another source of concern for patients with schizophrenia is risk of a concurrent substance use disorder (SUD) as about half of individuals with schizophrenia also show SUD (Hunt et al., 2018) and younger age at onset is associated with SUD (Addington et al., 2007). Comorbid SUD contributes to a more complex clinical spectrum (Potvin et al., 2006) and is associated with treatment disengagement and worse prognosis as shown by a higher number of hospitalizations, and prolonged disease course (Addington et al., 2007; Carbon and Correll, 2014; Czobor et al., 2015; Krebs et al., 2021). Krebs and colleagues also hypothesized that the association of comorbid SUD with more parental psychiatric diagnoses, increased birth complications, younger parental age at birth, and lower PGS for educational attainment might lead to a less resilient environment for the patient (Krebs et al., 2021).

4. Recommendations

Providing as much as possible the conditions for a continuous, purposeful, and stable engagement in evidence-based treatments and involvement in age-appropriate everyday activities should be the goal for any healthcare professionals confronting transitional age youth with schizophrenia. The following recommendations aim to address the major challenges in achieving these objectives (Table 1).

4.1. Mental health policies and services

All mental health training programs should have a common trunk between child and adult psychiatry to help trainees understand the approach, attitude, and available resources at different developmental ages and stages. Understanding and integrating child and adult psychiatry views will help to smooth the passage between services, improve professionals' awareness and reduce patients' disorientation. Additionally, since neurodevelopmental disorders often persist throughout the entire life, adequate knowledge and experience in treating neurodevelopmental disorders should be mandatory also for adult psychiatrists.

- CAMHS and AMHS should collaborate at each step of the transition process. Stable communication channels between easily identifiable professionals in both services and shared information system should be available for that purpose.
- Transition age should be flexible and individualized (Singh et al., 2016). Transition readiness should be evaluated with the use of evidence-based tools (Santosh et al., 2020). The passage to AMHS should be avoided in the

Table 1. Challenges and recommendations for transitioning care of young people with schizophrenia.

	Challenges	Recommendations
<i>Mental health policies and mental health services</i>	<p>Differences in knowledge, vision, attitudes, approach between child and adult mental health professionals</p> <p>Lack of collaboration and information sharing between services</p> <p>Lack of flexibility in transition age cut-offs</p> <p>Need for highly specialized care when treating EOS</p> <p>Lack of resources in the transition process</p> <p>Lack of collaboration and information sharing between services</p> <p>Abrupt passage to AMHS may compromise treatment engagement</p> <p>Abrupt passage to AMHS may compromise treatment engagement</p> <p>Transition process management and follow-up is critical for successful transition process</p>	<ul style="list-style-type: none"> - Common trunk between child and adult mental health training. - Neurodevelopmental disorders study should be implemented in adult psychiatry training programs - Stable communication channels between easily identifiable professionals in both services. - Shared information systems - Transition age should be flexible and individualized. - Individual patient's transition readiness should be evaluated - Refer young person with EOS to EIP - Align care of patients with EOS to clinical guidelines about first episode psychosis - Stratify patients on the basis of risk factors for treatment disengagement - A comprehensive summary of the patients' medical history, past and current treatments should be provided to the adult service at least six months before transfer. - The transition period should be flexible and individualized. - A period of parallel/joint care between services of at least 12 months should be considered. - A series of appointments with the healthcare professionals of the new service should be planned - Only strictly necessary pharmacological changes should be made during the transition period. - Identification of a case manager
<i>Patients and caregivers</i>	<p>Abrupt passage to AMHS may compromise treatment engagement</p> <p>Maintaining a strong therapeutic alliance and treatment engagement throughout the transition process</p> <p>Comorbid SUD</p> <p>Treatment of co-occurring neurodevelopmental disorders and intellectual disability</p>	<p>Inform patients and caregivers about the need for transition before starting transition process</p> <ul style="list-style-type: none"> - Involve the young people throughout the transition process. - Decisions should be shared. - Consider the young people's expectations, hopes and attitudes, <p>Integrated intervention programs should be privileged</p> <p>Integrated psychosocial, behavioral and educational interventions should be used to facilitate social integration, alleviate problematic behaviors and improve cognitive skills</p>

AMHS: Adult Mental Health Service; EOS: Early Onset Schizophrenia; EIP: Early Intervention Program (for psychosis); SUD: Substance Use Disorder.

acute psychotic phase of the disease. To avoid starting the transition process in the acute psychotic phase or in the early recovery, young people having a first episode psychosis during the 6 months before the transition age cut-off might be referred to the AMHS. The length of the transition period should also be individualized. The involved professionals should consider when to start informing the patient about transition, and the number of appointments and time that may be needed for preparing the patient before the actual transition process takes place. Patient's attachment to the service or to a particular professional should be considered in the decision process. A period of parallel/joint care between services of at least 12 months should be considered to avoid abrupt passages, confusion of roles, and adjust the transition plan as needed. A gradual stepwise substitution of

the professionals involved in the patient's care is also advocated. Community services or family care physicians might serve as a stable link between services. Difficulties in creating stable relationships with others or poor disease insight might be reasons for a longer period of joint care.

Overall, a great services' flexibility is necessary to adapt to transitional age youth needs.

- Psychosis in transitional age youth is an area of high specialization, and patients should be followed-up in specialized settings whenever possible:
 - A. A large percentage of the patients with EOS that may require a transition to AMHS will be in the first years of the illness. Therefore, patients' care should be

aligned with clinical guidelines for young people with first-episode psychosis.

- B. If possible, young people with psychosis and schizophrenia should be referred to early psychosis intervention programs for psychosis treatment and follow-up, until the patient is clinically stable and ready to transition to AMHS. There is sufficient evidence (Correll et al., 2018) to suggest that early intervention services' diffusion should be widespread and their adoption in early phase psychosis might become a standard of care. In care transitioning, Early Intervention Programs should take care of all aspects of mental health of patients with psychoses until transfer, avoiding the overlap with CAMHS (De Berardis et al., 2020).

Both CAMHS (or early intervention services) and AMHS should have a multidisciplinary team of professionals (psychiatrists, social service's workers, psychologists, occupational therapists, rehabilitation specialists should be involved) specifically designated to take care of transition process.

- A case manager should also be identified to coordinate all the stages of the transition process. The designated professional should be someone with whom the patient has established a strong therapeutic alliance and will be a reference for the patient and the family until a good therapeutic alliance is established with the adult service (Singh et al., 2016). A professional responsible for the patient's transition should be also named on the adult service side to evaluate the young person's engagement with the new service.
- Patients should be stratified on the basis of risk factors for treatment disengagement to personalize the intensity, time, and resources investment into the transition process.
- Before starting the transition process young people and caregivers should be informed about the changing relationships of young people, caregivers, and mental health services as the patient reaches the age of maturity and about the need for transitioning to AMHS. At this stage the young person and caregivers' needs, fears, hopes and expectations about the transition should be recognized and addressed.
- A series of appointments with the healthcare professionals of the new service should be planned. Practical obstacles for the young person to attend should be solved with the young person (arrange transportation if needed). Also schedule at least one appointment at the CAMHS to share impressions on the new service, discuss the difficulties encountered, and give feedback on the transition process. This appointment should take place after the young person has attended the AMHS and might be even more relevant when a period of parallel/joint care is not possible.
- A comprehensive summary of the patients' medical history, past and current treatments should be provided to the adult service at least six months before transfer.
- Only strictly necessary pharmacological changes should be made during the transition period. - An emergency care plan for symptoms exacerbations should be consid-

ered and discussed in details with patient and their caregivers.

4.2. Patient and caregivers

- The definition of the elements of care that needs to be transferred for each patient should be jointly identified by the services, shared with the patient and carefully detailed. As patients with schizophrenia are particularly prone to experiencing unemployment and social isolation with detrimental effects on functional outcomes and quality of life, it is even more important that the transition plan also comprises educational, employment, or alternative plans for the young person. Throughout the transition process, patient's involvement is fundamental, and the decision process should consider the young person's expectations, hopes and attitudes, but also their social and medical needs, and current level of disability. Mental health professionals should prepare for educational accommodations or supported employment accordingly. In this context, patients with higher levels of cognitive impairment may require greater amounts of vocational support than those with lower levels of impairment. The living skills needed to acquire as much independence as possible and how to develop them should also be discussed. Patient's involvement in extracurricular or free time activities (art groups, reading clubs, sport activities) should be supported.
- Factors predisposing to disability should be evaluated and addressed during the transition process.
- The support network of the patient, not limited to caregivers, should be evaluated and involved in the transition process to the extent allowed by patient's autonomy and inclination and balancing young person's independence and need for support.
- Reasonable treatment objectives should be shared with patients and their families, with an understanding and supportive attitude. Possible intermediate goals in achieving treatment objectives might be considered and detailed.
- For patients with co-occurring neurodevelopmental disorders and intellectual disabilities, integrated psychosocial, behavioral, and educational interventions should be used to facilitate social integration, alleviate problematic behaviors, and improve cognitive skills.
- For patients with comorbid SUDs, integrated intervention programs should be privileged, as they have been shown to improve various outcomes, including treatment participation, reductions in substance use, and number of psychiatric hospitalizations and arrests (Dixon et al., 2016)
- If the patient keeps going back to the old service and refuses the transfer of care, joint visits should be planned with the new service until a good relationship with the AMHS practitioners is established.
- If the young person does not engage with the adult service, they should be referred back to the CAMHS to evaluate solutions and alternatives in the transfer of care (Singh et al., 2016).
- Dealing with the changing relationship between parents/caregivers and patient is delicate. The best ap-

proach might be to explicitly explain to the patient and caregivers what can be disclosed to the family after the patient reaches full legal capacity, try to mediate patient's and family's requests, and obtain informed consent to share information accordingly. In any case, empowering the patient's environment and family in recognizing prodromes of relapse, symptoms worsening, declining functions, and possible interventions is a critical part of care. Discussing with the parents about role during and after the transfer of care might help both young people and their families.

An example for a transition protocol is provided (Supplementary Material).

5. Conclusion

The life and healthcare changes associated with the transition from adolescence to adulthood are critical in defining the prognosis of young people with schizophrenia. In this context, the passage from CAMHS to AMHS presents with both opportunities and challenges. While relevant research has been carried out about mental health care transition over the last few years in most European countries, the problem of transition seems to be underestimated at the policy level. The inadequacy of a shared knowledge base between child and adult mental health professionals and the lack of specific training programs about transition age mental health disorders appear among the main limits in the transition between services.

To ensure continuous engagement of young people with schizophrenia with purposeful treatments and daily activities, the transition from CAMHS to AMHS needs to be individualized on each patient's needs and strengths. Furthermore, the transition plan should contain all the fundamental elements of care including supported work, school, social and daily living aids that need be transferred to (or initiated at) the AMHS. An emergency care plan should be considered and shared with the young person and caregivers.

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Supplementary materials

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