

AperTO - Archivio Istituzionale Open Access dell'Università di Torino

Facilitating discharge planning: the Risk Assessment of Complex Discharge Index

This is the author's manuscript

Original Citation:

Availability:

This version is available <http://hdl.handle.net/2318/1889896> since 2023-09-12T09:37:31Z

Published version:

DOI:10.1093/pubmed/fdac162

Terms of use:

Open Access

Anyone can freely access the full text of works made available as "Open Access". Works made available under a Creative Commons license can be used according to the terms and conditions of said license. Use of all other works requires consent of the right holder (author or publisher) if not exempted from copyright protection by the applicable law.

(Article begins on next page)

Title:**Facilitating discharge planning: the Risk Assessment of Complex Discharge Index****Authors:**

Bert F MD¹, Cugudda E MD¹, Lo Moro G MD^{1§}, De Vardo C RN², Citino E RN³, Faenzi C RN², Scarmozzino A MD², Siliquini R MD Prof^{1,2}

Affiliations:

1 Department of Sciences of Public Health and Pediatrics, University of Turin, 10126, Turin, Italy

2 Molinette Hospital, AOU City of Health and Science of Turin, 10126, Turin, Italy

3 Mauriziano Hospital, 10128, Turin, Italy

Corresponding Author:

Dr. Giuseppina Lo Moro, giuseppina.lomoro@unito.it

PUBLISHER VERSION available at: Bert, F., Cugudda, E., Lo Moro, G., Devardo, C., Citino, E.,

Faenzi, C., Scarmozzino, A., & Siliquini, R. (2023). Facilitating discharge planning: the Risk

Assessment of Complex Discharge Index. *Journal of public health (Oxford, England)*, fdac162.

Advance online publication. <https://doi.org/10.1093/pubmed/fdac162>

Facilitating discharge planning: the Risk Assessment of Complex Discharge Index

Abstract

Background

Untimely social interventions prolong hospitalizations, suggesting discharge planning should begin early. This study aimed to create a tool to identify, already in Emergency department, patients at risk of complex discharge for social reasons.

Methods

We developed the Risk Assessment of Complex Discharge Index (RACDI). In Emergency department, we administered RACDI to patients destined to hospitalization. We calculated sensitivity and specificity of RACDI in identifying patients who need a social intervention. RACDI was compared with simplified BRASS. A multivariable logistic regression explored social intervention predictors (p-value<0.05).

Results

RACDI was administered to 296 patients. There were significant associations between classes of risk defined by RACDI or by simplified BRASS and social intervention. The sensitivity of RACDI and simplified BRASS was respectively 0.59 and 0.43; the specificity 0.81 and 0.83. Chances of social intervention were higher for patients at high risk with RACDI (adjOR:3.13, 95%CI:1.23-8.00, p=0.017).

Conclusions

The reduced items and mostly dichotomous answers made RACDI a tool easy to be used in daily practice. RACDI helps in classifying patients needing discharge planning for social care and is a starting point to standardize the evaluation of social context early in hospitalization. Further work is needed to overcome limitations and assess additional outcomes.

Introduction

The transition of care from the hospital to post-discharge care can be critical^{1,2} and a comprehensive assessment of the discharge path is crucial to fulfil health and social needs of patients²⁻⁷.

Discharge planning consists of the development of an individualised discharge plan for a hospitalized patient to enhance the coordination of services that follow the discharge, decrease delayed discharge from hospital, reduce readmissions, and ensure that patients leave the hospital with the provision of post-discharge services organised with adequate notice¹. An insufficient planning can increase the risk of adverse events⁸ and be partly responsible for delays and avoidable days of hospitalization⁹. A great level of care coordination can decrease the risk of hospital readmission¹⁰ and facilitate the transition from the hospital to the community⁹.

A standardized and early assessment could be essential to develop and implement an appropriate discharge plan^{2,6,11}. Particularly, complex patients require a social intervention at the earliest possible point of their path in the hospital⁹.

In Italy, there is not a unique discharge planning approach to be followed at national level. In Piedmont (North-West Italy), the discharge planning is pursued by multidisciplinary teams of nurses and social workers, which form the Continuity of Care Hospital Bureau (NOCC) and mediate the social intervention. The NOCC receives warnings from healthcare workers about patients who have health-related and social needs (e.g. disability, family and living conditions) that indicate the need of a personalized discharge^{1,12,13}. The NOCC mediates the transition to the territorial care together with the Continuity of Care District Bureau (NDCC). The purpose of these units is to propose the most appropriate setting for the discharge, optimize and facilitate the discharge path¹⁴. Social interventions need time to be organized: high-risk patients should be early identified since the risk of prolonging hospitalization without a clinical issue exposes patients to hospital-acquired infections and adverse events⁹.

The present paper focuses on the Molinette Hospital, i.e. part of the *Azienda Ospedaliero-Universitaria (AOU) “Città della Salute e della Scienza di Torino”*, the largest health centre in Piedmont and one of the largest centres in Europe¹⁵.

Since 2008, the BRASS Index (Blaylock Risk Assessment Screening)¹⁶ has been introduced in Molinette Hospital to identify patients for whom the planning of the discharge was necessary. This instrument needs to be used within the first 48 hours of the admission and is a good predictor for patients who are not discharged home¹⁷. During the first years of implementation, several critical issues of the BRASS Index were registered (e.g. the excessive length) and the need of simplifying and reweighing the BRASS items was recognized¹⁸. Therefore, since 2015, a simplified BRASS Index, with revised and reweighted items¹⁸, has been implemented in the departments of General Medicine, Geriatrics and Neurology. To accelerate the process of discharge planning and reduce the length of stay, in October and November 2018, the simplified BRASS Index was administered to patients in the Emergency department of Molinette Hospital. The administration of the simplified BRASS in the Emergency department (unpublished data) highlighted the persistence of critical issues regarding the excessive amount of time for the completion and the impractical inclusion of the index within the clinical daily routine, as also suggested by a previous study¹⁹.

Therefore, this exploratory study aimed to develop a new tool to identify patients at risk of complex discharge already within the Emergency department. “Patients at risk of complex discharge” were defined as patients who cannot be discharged home and who need the implementation of a social care intervention. The main objective was to create a tool that was quick and feasible during the daily routine in the Emergency department and that was easy to administer to a patient in a stressful situation. The new tool was called the *Risk Assessment of Complex Discharge Index (RACDI)*.

Methods

The study was conducted within the Molinette Hospital (Turin, Italy) and it represents the first exploratory use of the RACDI. The RACDI was developed between December 2018 and March 2019 and it was implemented between April and July 2019 to explore its usefulness to timely identify patients at risk of complex discharge. Initially, participants were enrolled within the Emergency department. Then, only patients admitted to General Medicine, Geriatrics or Neurology departments (i.e. the departments where the simplified BRASS is actually implemented) were included in the final sample.

Development of the tool

To develop the instrument, the authors mostly took into account the work of Mistiaen⁵ and previous works on discharge planning and BRASS in the setting of Molinette Hospital^{18,20}. Moreover, a focus group with workers from the Molinette Hospital was organized. This group was composed of healthcare workers from the hospital management unit, clinicians, and nurses from the General Medicine and Geriatrics departments. Mainly, the focus group highlighted the importance of investigating whether the patient has already been known to the out-of-hospital local healthcare services and whether he/she has already had a caregiver.

The RACDI consists of four items (Table I). The first item explores if the patient lives alone. Indeed, the importance of such information has been outlined by previous findings about Molinette patients^{18,20}. Second, presence and characteristics of a caregiver are investigated, as suggested by the focus group and by the work of Mistiaen⁵. Then, the assessment of the patient's living condition represents a necessary requirement: if the patient lives in a precarious living condition (e.g. homelessness; patient with movement impairment who lives in a house without elevator; patient who has an illness due to the sanitary conditions of his/her house), it is assigned the score "R" that directly leads to the label "high risk of complex discharge". Last, the RACDI explores if the patient is already

known to the out-of-hospital local healthcare services because such services can usually plan personalized pathways for the discharge in advance.

To assign a score, the researchers considered several borderline cases, i.e. cases that had to fall necessarily into the categories of low or high risk of complex discharge. Various scoring possibilities were attempted, so that the various identified borderline cases fell into the low or the high-risk category. The points that were assigned to each item are presented in Table I. The total score ranges from 0 to 5. If the score is ≤ 2 , the patient has a low risk of complex discharge. If the score is ≥ 3 , the patient has a high risk. If the patient scores “R” at the third item, he/she has a high risk of complex discharge regardless of the other items.

Implementation of the tool and data collection

The RACDI was implemented between the 19th of April and the 5th of July 2019 in the Emergency department of the Molinette Hospital. The instrument was administered to patients with code Green (minor urgency: symptoms do not compromise vital functions) or code Yellow (urgency: symptoms compromise the vital functions partially).

In addition to the RACDI, age, gender, city of residence, and modality of arrival to the Emergency department were investigated. Then, the destination of the patient after being at the Emergency department was registered (e.g. home/hospital department). Among all the interviewed patients, only patients who were admitted to General Medicine, Geriatrics, and Neurology departments were included in the analyses.

Additional data were collected for the final sample. First, it was reported whether the patient had accessed to the Emergency department in the previous three months. Then, since in General Medicine, Geriatrics, and Neurology departments the simplified BRASS^{18,20} is usually administered to the admitted patients within the first 24/48 hours of their hospitalization, these scores were registered. The simplified BRASS is used in the above-mentioned departments to assess if there are patients at

risk of complex discharge to be reported to the NOCC. The simplified BRASS has ten items like the original BRASS, but items and answer options have been modified as reported by Zarovska and colleagues¹⁸. The simplified BRASS investigates: age, living situation/social support, cognitive status, mobility, previous admissions/emergency room visits, number and category of active medical problems, functional status dependence (in the following spheres: eating/feeding, bathing/grooming, meal preparation), behaviour pattern, and citizenship status. The score can be categorized in low risk (0-3), average risk (4-6), and high risk of complex discharge (7-19)¹⁸.

Last, for the patients admitted to the above-mentioned departments, the actual implementation of a social intervention by the NOCC was registered.

In a subsample of patients, the time for completing the RACDI was measured.

Statistical analysis

Descriptive analyses were performed for all variables. Chi-squared tests (Fisher's tests where appropriate) were computed to assess associations between the classes of risk defined by the RACDI, the simplified BRASS, and the actual implementation of a social intervention.

The sensitivity, i.e. true positive/(true positive + false negative), and specificity, i.e. true negative/(true negative + false positive), in identifying patients with the necessity of a social intervention after discharge were calculated for the RACDI and the simplified BRASS.

Potential predictors of the necessity of a social intervention (binary outcome: yes/no) were explored through a multivariable logistic regression model. The independent variables included in the model were: age, gender, city of residence, modality of arrival to the Emergency department, hospital department where the patient was hospitalized, access to the Emergency department in the previous three months, and the risk class according to the RACDI.

STATA 13 was used, and a two-tailed p-value<0.05 was considered to be statistically significant.

Missing values were excluded.

Results

Characteristics of the sample

A total of 536 patients were interviewed in the Emergency department. Fifteen patients (2.8%) refused to participate because they were suffering too much. In a subsample (30 patients), the time for completing the RACDI was measured and it ranged from 43 seconds to 3 minutes and 27 seconds for the most complex patient.

Among these 536 patients, 118 (22.0%) were discharged from the Emergency department and 123 (22.9%) were admitted to departments different from General Medicine, Geriatrics, or Neurology departments. Thus, the final sample of the present paper consisted of 295 patients who were hospitalized in General Medicine, Geriatrics, or Neurology departments after the admission in the Emergency department.

Females accounted for 43.39% and the mean age was 75.28 years ($SD\pm 13.00$). More than half of the sample was from Turin. The most common modality of arrival was from home by own means, followed by ambulance. The majority was hospitalized in a General Medicine department and more than three quarters did not access the Emergency department in the previous three months (Annex I).

Implementation of the tool

Table II shows the descriptive analysis of the items of the RACDI. A total of 75 patients (25.42%) resulted to be at high risk of complex discharge. The class of risk of complex discharge was not associated with the type of department of hospitalization ($p=0.868$).

The simplified BRASS was available for 223 patients (75.59%). According to the simplified BRASS classes of risk, 84 patients (37.67%) were at low risk of complex discharge, 59 patients (26.46%) at average risk, and 80 patients at high risk (35.87%). Among these 223 patients, for 44 patients (19.73%) a social intervention was implemented.

As shown in Table III, there were significant associations between the classes of risk defined by the RACDI, the classes defined by the simplified BRASS, and the implementation of a social intervention. Indeed, 92.86% of BRASS low-risk patients were at low risk with the RACDI, while 67.80% of BRASS average-risk patients and 56.25% of BRASS high-risk patients were at low risk with RACDI. Combining BRASS low and average risk, 82.52% were at low risk with the RACDI. Considering patients who did not receive a social intervention, 81.01% were at low risk according to the RACDI. A total of 59.09% of patients who received a social intervention were at high risk with the RACDI, while 63.64% of patients who received a social intervention were at high risk with the simplified BRASS (Annex II).

The sensitivity of the RACDI was 0.59 and the specificity 0.81. Concerning the simplified BRASS the sensitivity and specificity were 0.43 and 0.83, respectively.

Predictors for social intervention

Table IV shows the multivariable logistic regression model with the presence of social intervention as outcome. Patients who arrived at the Emergency department from home had a reduced likelihood of having a social intervention. The probability of social intervention was higher for patients who accessed to the Emergency department in the previous three months and for patients classified at high risk with the RACDI.

Discussion

Main finding

The present study aimed to develop and implement in an explorative way an instrument to identify patients at high risk of complex discharge when they access the Emergency department.

Considering the multivariable model, the RACDI high-risk category was significantly associated with the implementation of a social intervention. The RACDI identified about 25% of high-risk patient, while the simplified BRASS identified about 35% high-risk patients. This difference could be due to the fact that some variables of the simplified BRASS scale have a high weight on the decision of the class of risk¹⁸. The comparison between the RACDI and the simplified BRASS scale showed a good agreement between the two instruments regarding the identification of low-risk cases. However, considering the high-risk category the agreement was lower. This could be explained by the fact that the simplified BRASS scale does not assess only the social component, but it includes also clinical items, which are not considered in the RACDI.

Moreover, 89% of patients classified as low risk with the RACDI and 89% of patients classified as low\average risk with the simplified BRASS scale did not need a social intervention, showing a low margin of error in recognizing low risk patients. However, only for 43% of patients at high risk with the RACDI and 35% of patients at high risk with the simplified BRASS scale it was necessary to implement a social intervention. The agreement between the two instruments regarding the margin of error in recognizing low and high-risk patients suggests a great similarity. Both these tools showed low sensitivity and high specificity, similarly to findings about the original BRASS¹⁷. These results seem to confirm the hypotheses of Mistiaen and colleagues about the original BRASS: many patients, especially older patients, can experience a deterioration of their functional status during the hospitalization, however at the time of their access to the hospital they would not have been recognized as being in need of a planning of their discharge¹⁷. This consideration highlights the need of ongoing assessments during the path of the patient. However, the RACDI seems to overcome some

critical issues of the simplified BRASS due to the RACDI reduced number of items and the mostly dichotomous answers, thus potentially being a practical instrument to be used quickly and in a timely manner.

Therefore, we argue that the RACDI should be studied and validated on larger samples to screen patients early during their stay the Emergency department. This would allow to assess patients' baseline social conditions and start activating the coordination with social workers in case of hospitalization.

Since almost 20% of the study sample actually needed a social intervention, it is essential to identify these patients early. Indeed, managing socially complicated discharges can take a long time and untimely social intervention is an important component of delayed discharge, suggesting that the planning should begin very early¹². Among the main reasons for this delay, ineffective communication, slow processing of paperwork, limited forward planning, and waiting for availability of social care in the community have been described²¹. Thus, the importance of a timely communication between clinicians and social workers is clear.

What is already known

Discharge planning aims to ensure that patients leave the hospital with an appropriate timing.

A standardized and early assessment could be essential to develop and implement an adequate discharge plan, especially for patients with social care needs.

The administration of the simplified BRASS in the Emergency department highlighted an excessive amount of time for the completion and an impractical inclusion of the index within the daily routine.

What this study adds

The RACDI seems to overcome some critical issues of the simplified BRASS thanks to its reduced number of items (with no time-consuming clinical evaluations) and the mostly dichotomous answers, thus being potentially easier to be incorporated in daily practice.

The RACDI was found to be possibly useful in classifying patients who may need discharge planning for social care. It could be a starting point for standardizing the evaluation of social context at a very early moment of hospitalization.

Limitations

The present work had some limitations. First, the exploratory nature of the study limits robust conclusions on the use of the RACDI. Also, the RACDI item assessing the living condition of the patient may be a source of bias, since the living condition may be considered precarious or not depending on the clinical situation of the ongoing hospitalization. Additionally, the limited sample size and the fact that it was not possible to collect more information about the patients restricted the chance to execute sub-analyses to understand the different use of the instrument among subgroups of patients. Moreover, different timings and other tools could have been used to compare sensitivity and specificity. It is also worth noting that the time of completion of the simplified BRASS was not measured, thus it is not possible to state the real difference with the time of completion of the RACDI. Last, only the implementation of a social intervention was used to understand the characteristics of the RACDI, while it would have been interesting to see if the RACDI can predict also other outcomes, such as readmissions.

Nevertheless, this study explored the characteristics of a new tool that was found to be potentially useful in classifying patients who may need a discharge planning for social care. This work can be a starting point for standardizing the evaluation of social context at a very early moment. Future research can further examine this new instrument and take into account other variables that appeared to be significant in the present work, such as the modality of arrival to the Emergency department and the access to the Emergency department in the previous three months.

Funding

The authors received no specific funding for this work.

Acknowledgments

The Authors would like to thank all the patients and professionals who collaborated in this study

References

1. Gonçalves-Bradley DC, Lannin NA, Clemson LM, Cameron ID, Shepperd S. Discharge planning from hospital (Review). *Cochrane Database Syst Rev*. 2016;(1):1-18. doi:10.1002/14651858.CD000313.pub5.www.cochranelibrary.com
2. Holland DE, Mistiaen P, Bowles KH. Problems and unmet needs of patients discharged home to self-care. *Prof Case Manag*. 2011;16(5):240-250. doi:10.1097/NCM.0b013e31822361d8
3. Bull MJ. Discharge planning for older people: a review of current research. *Br J Community Nurs*. 2000;5(2):70-74. doi:10.12968/bjcn.2000.5.2.7166
4. Connolly M, Grimshaw J, Dodd M, et al. Systems and people under pressure: the discharge process in an acute hospital. *J Clin Nurs*. 2009;18(4):549-558. doi:10.1111/j.1365-2702.2008.02551.x
5. Mistiaen P. *Hospital Discharge: Problems and Interventions.*; 2007.
6. Naylor MD. Transitional care of older adults. *Annu Rev Nurs Res*. 2002;20:127-147.
7. Slieper CF, Hyle LR, Rodriguez MA. Difficult Discharge: Lessons from the Oncology Setting. *Am J Bioeth*. 2007;7(3):31-32. doi:10.1080/15265160601171812
8. Kripalani S, LeFevre F, Phillips CO, Williams M V., Basaviah P, Baker DW. Deficits in Communication and Information Transfer Between Hospital-Based and Primary Care Physicians. *JAMA*. 2007;297(8):831. doi:10.1001/jama.297.8.831
9. Stark P. Advancing Complex Case Management Competencies in a Health Care System. *Prof Case Manag*. 2020;25(1):19-25. doi:10.1097/NCM.0000000000000361
10. Kamermayer AK, Leasure AR, Anderson L. The Effectiveness of Transitions-of-Care Interventions in Reducing Hospital Readmissions and Mortality. *Dimens Crit Care Nurs*.

2017;36(6):311-316. doi:10.1097/DCC.0000000000000266

11. Bull MJ, Roberts J. Components of a proper hospital discharge for elders. *J Adv Nurs*. 2001;35(4):571-581. doi:10.1046/j.1365-2648.2001.01873.x
12. Hendy P, Patel JH, Kordbacheh T, Laskar N, Harbord M. In-depth analysis of delays to patient discharge : a metropolitan teaching hospital experience. *Clin Med*. 2012;12(4):320-323.
13. Rojas-garcía A, Turner S, Pizzo E, et al. Impact and experiences of delayed discharge: A mixed-studies systematic review. *Heal Expect*. Published online 2018:41-56. doi:10.1111/hex.12619
14. *Disposizioni Urgenti per La Revisione Della Spesa Pubblica Con Invarianza Dei Servizi Ai Cittadini.*; 2012:Art 15 comma 13.
15. A.O.U. Città della Salute e della Scienza di Torino. Presentazione Molinette, Dermatologico San Lazzaro, San Giovanni Antica Sede. Accessed March 19, 2021. https://www.cittadellasalute.to.it/index.php?option=com_content&view=article&id=1840:presentazione-molinette-dermatologico-san-lazzaro-san-giovanni-antica-sede&catid=132:presentazione-citta-della-salute-e-della-scienza&Itemid=511
16. Blaylock A, Cason CL. Discharge planning: Predicting Patients' Needs. *J Gerontol Nurs*. Published online 1992.
17. Mistiaen P, Duijnhouwer E, Prins-Hoekstra A, Ros W, Blaylock A. Predictive validity of the BRASS index, in screening patients with post-discharge problems, Blaylock Risk Assessment Screening Score. *J Adv Nurs*. Published online 1999.
18. Zarovska A, Evangelista A, Boccia T, et al. Development and validation of a simplified BRASS index to screen hospital patients needing personalized discharge planning. *J Gen*

Intern Med. Published online 2018:1084-1091. doi:10.1007/s11606-018-4405-y

19. Hayajneh AA, Hweidi IM, Abu Dieh MW. Nurses' knowledge, perception and practice toward discharge planning in acute care settings: A systematic review. *Nurs Open.* 2020;7(5):1313-1320. doi:10.1002/nop2.547
20. Camussi E, Boccia T, Ciccone G, et al. [Qualitative experiential analysis of the BRASS scale.]. *Recenti Prog Med.* 2019;110(6):275-284. doi:10.1701/3182.31608
21. Emes M, Smith S, Ward S, Smith A, Ming T. Care and Flow: Using Soft Systems Methodology to understand tensions in the patient discharge process. *Heal Syst.* 2017;6(3):260-278. doi:10.1057/s41306-017-0027-6

Table I. Risk Assessment of Complex Discharge Index (RACDI)

Item	Answers	Score
1) Does the patient live alone?†	Yes	1
	No	0
2) Has the patient got a caregiver? ‡	No	3
	Yes: professional caregiver living with the patient	0
	Yes: professional caregiver not living with the patient	1
	Yes: non-professional caregiver living with the patient	1
	Yes: non-professional caregiver not living with the patient	2
3) Is the setting where the patient lives appropriate for returning home?	Yes	0
	No	R§
4) Is the patient known to the out-of-hospital local healthcare services?	Yes	0
	No	1
† if the patient lives in a facility the score is 0 ‡ if the patient does not need a caregiver the score is 0 § R directly leads to the label “high risk of complex discharge”		

Table II. Results of the implementation of the RACDI

		Score	% (N)
Does the patient live alone?	<i>Yes</i>	1	25.42 (75)
	<i>No</i>	0	74.58 (220)
Has the patient got a caregiver?	<i>Not needed</i>	0	43.73 (129)
	<i>Yes: professional caregiver</i>	1	40.34 (119)
	<i>Yes: non-professional</i>	2	12.88 (38)
	<i>No</i>	3	3.05 (9)
Is the setting where the patient lives appropriate for returning home?	<i>Yes</i>	0	86.78 (256)
	<i>No</i>	R	13.22 (39)
Is the patient known to the out-of-hospital local healthcare services?	<i>Yes</i>	0	22.37 (66)
	<i>No</i>	1	77.63 (229)
Risk of complex discharge	<i>Low risk</i>	0-2	74.58 (220)
	<i>High risk</i>	3-5 or R	25.42 (75)

Table III. Relationship between classes of risk defined by the RACDI and the simplified BRASS and the implementation of a social intervention

		Class of risk according to the new tool		p-value
		Low risk % (N)	High risk % (N)	
Class of risk according to the simplified BRASS	<i>Low risk</i>	R 92.86 (78) C 47.85 (78)	R 7.14 (6) C 10.00 (6)	<0.001
	<i>Average risk</i>	R 67.80 (40) C 24.54 (40)	R 32.20 (19) C 31.67 (19)	
	<i>High risk</i>	R 56.25 (45) C 27.61 (45)	R 43.75 (35) C 58.33 (35)	
Dichotomized class of risk according to the simplified BRASS	<i>Low-average risk</i>	R 82.52 (118) C 72.39 (118)	17.48 (25) 41.67 (25)	<0.001
	<i>High risk</i>	R 56.25 (45) C 27.61 (45)	R 43.75 (35) C 58.33 (35)	
Implemented social intervention	<i>No</i>	R 81.01 (145) C 88.96 (145)	R 18.99 (34) C 56.67 (34)	<0.001
	<i>Yes</i>	R 40.91 (18) C 11.04 (18)	R 59.09 (26) C 43.33 (26)	

Figures are expressed as percentages (%) and number (N). Both row (R) and column (C) are presented.

Table IV. Multivariable logistic regression model to predict the presence of social intervention

		adjOR (95% CI)	p-value
Age		1.01 (0.97 – 1.06)	0.598
Gender	<i>Male</i>	1	-
	<i>Female</i>	2.28 (0.96 – 5.41)	0.062
Modality of arrival to the emergency department	<i>Ambulance</i>	1	-
	<i>From home</i>	0.33 (0.13- 0.83)	0.019
	<i>From residential facilities</i>	2.00 (0.16 – 24.86)	0.589
	<i>From other hospital</i>	3.57 (0.29 – 43.60)	0.320
	<i>Other</i>	0.80 (0.06 – 10.70)	0.863
Access to the emergency department in the previous three months	<i>No</i>	1	-
	<i>Yes</i>	10.04 (3.97 – 25.43)	<0.001
Class of risk according to the RACDI	<i>Low risk</i>	1	-
	<i>High risk</i>	3.13 (1.23 – 8.00)	0.017

The model is also adjusted for city of residence and department of hospitalization (non-significant relationships)