

Causes of delayed hospital discharge among adult clients: a scoping review



Causas de atraso na alta hospitalar no cliente adulto: scoping review
Causas de retraso en el alta hospitalaria en el cliente adulto: scoping review

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ABSTRACT

Objective: To map the existing evidence on the causes of hospital discharge delays among adult clients.

Methods: A scoping review was conducted. We searched in the Ebscohost[®] platform, in PubMed, and in grey literature, consulting the bibliographic references of the documents found.

Results: From the 22 articles analyzed it was verified that the delay in hospital discharge is due to causes related to community resources, namely the lack of vacancies in health units, and social reasons; to organizational causes related to health care; to individual causes, standing out family and financial issues; culminating in organizational causes related to hospital management.

Conclusion: The delay in hospital discharge is multifactorial. It's necessary to monitor the hospitalization process, focusing on early discharge planning.

Keywords: Patient discharge. Nursing care. Length of stay.

RESUMO

Objetivo: Mapear a evidência existente sobre as causas de atraso na alta hospitalar no cliente adulto.

Métodos: Efetuada revisão da literatura do tipo scoping review. Pesquisou-se na plataforma informática da Ebscohost, na PubMed e na literatura cinzenta, consultando-se as referências bibliográficas desses documentos.

Resultados: Dos 22 artigos analisados verificou-se que o atraso na alta hospitalar se deve a causas relacionadas com os recursos da comunidade, designadamente a falta de vagas em unidades de saúde e motivos sociais; a causas organizacionais relacionadas com os cuidados de saúde; a causas individuais, destacando-se as questões familiares e financeiras; culminando nas causas organizacionais relacionadas com a gestão hospitalar.

Conclusão: O atraso na alta hospitalar é multifatorial, tornando-se necessário monitorizar o processo de internação, apostando-se num planeamento de alta antecipado.

Palavras chave: Alta do paciente. Cuidados de enfermagem. Tempo de internação.

RESUMEN

Objetivo: Mapear la evidencia existente sobre las causas de retraso en el alta hospitalaria en el cliente adulto.

Métodos: Se realizó una revisión de la literatura del tipo scoping review. Se investigó en la plataforma informática de Ebscohost, en la PubMed y literatura gris, consultando las referencias bibliográficas de estos documentos.

Resultados: De los 22 artículos analizados se verificó que el retraso en el alta hospitalaria se debe a causas relacionadas con los recursos de la comunidad, en particular la falta de vacantes en unidades de salud y motivos sociales; a causas organizacionales relacionadas con la asistencia sanitaria; a causas individuales, destacándose las cuestiones familiares y financieras; culminando en las causas organizacionales relacionadas con la gestión hospitalaria.

Conclusión: El retraso en el alta hospitalaria es multifactorial. Es necesario controlar el proceso de internación, centrándose en una planificación de alta anticipada.

Palabras clave: Alta del paciente. Atención de enfermería. Tiempo de internación.

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■ INTRODUCTION

The Organization for Economic Co-operation and Development (OECD)⁽¹⁾ defines hospitalization time as the mean number of days the client stays in the hospital, excluding cases in which admission and discharge happen in the same day. Delayed discharge is the permanence of the person in the hospital after clinical discharge was granted. The delay time is the interval between the moment in which the person is in good condition to be discharged and the moment in which they actually leave the hospital⁽²⁾. This delay in discharge and in the return home has consequences to the health and wellbeing of the client, as well as for the institution, regarding the costs involved⁽³⁾ and its profitability, making it more difficult to offer efficient and efficacious care⁽⁴⁾.

Identifying the obstacles that make it more difficult to discharge clients in due time may help the institution to make efforts towards diminishing unnecessary hospitalization periods⁽⁴⁾. Nurses have an essential role in the process of client discharge, since they are the closest to the client and are responsible to evaluate the needs of the person. The discharge planning must start as soon as possible, and aim to prevent problems during and after the discharge, offering quality care⁽⁵⁾.

Considering the issues above, this work was elaborated as a scoping review of the literature, whose general objective is describing the evidences currently available on the causes for delayed hospital discharges in adult clients, and their consequent increase in hospitalization times.

The relevance of this study is in the fact that it addresses a pertinent and relevant problem, which deserves attention in the current context, due to the increasingly high costs associated to health, which are partially results of preventable and prolonged hospitalizations. This reality is a constant preoccupation of the government and of society as a whole.

This review is urgent because it analyses different causes for the problem, and no review focused on the actions of the nurse was found. Giving support to the hospital discharge process is one of the dimensions of the role of the nurse, as a way to promote the continuity of care, a care which is integral and requires commitment⁽⁶⁾. As causes for the delay in hospital discharges are found, measures that can contribute for the diminution of hospitalization time can be defined, optimizing the process of client hospitalization and resulting in benefits for their health and wellbeing and in economic and financial advantages for the institution.

■ METHODS

A scoping literature review was carried out to analyze broadly and comprehensively the studies focused on this issue. Using a methodology from the Joanna Briggs Institute, the following review question was defined, based on the mnemonic device population-concept-context (PCC): what are the causes for delayed hospital discharges among adult clients hospitalized in the hospital ward?

The following were defined as secondary review questions: What are the different typologies of causes for delayed discharges of adult clients hospitalized in the hospital ward? In what clinical contexts do delays in hospital discharge take place? In what populations do delayed hospital discharges take place?

Regarding the inclusion criteria, this investigation chose for analysis studies that addressed the causes for delayed hospital discharges, factors that may be related to the person, the health institution, or the community. To carry out a general analysis about the different causes for delayed discharges, the study included adult and elderly clients hospitalized and with delayed discharges, in acute and/or chronic situations, in the different medical specialties: cardiology, surgery, dermatology, oral medicine, gastroenterology, OB/GYN, infectiology, medicine, nephrology, neurology, ophthalmology, medical oncology, orthopedics, otolaryngology, pneumology, endocrinology, and urology. The context of the study was the hospitalization services of the hospitals. The temporal limit of the research was the year 2001, as to determine causes that took place in the 21st century, results that are relevant to the contemporary health system and correspond to studies carried out in the European Union, so that it is possible to compare similar realities. The other time limit was July 2017. Concerning data sources, this research included studies that addressed causes for delayed discharges. These studies could be primarily quantitative or qualitative, including literature reviews, as a way to complement the maximum amount of evidences in existence. They also had to have abstracts and full text made available in Portuguese, Spanish, and English.

The exclusion criteria included all opinion articles, advertisements, editorials, and letters to the editor.

Regarding the research strategy, in the first stage, a research was conducted in the databases Medline with full text, Cinahl with full text, and PubMed, as well as in the platform Descritores em Ciências da Saúde (Health Science Descriptors), in which a floating research on the subject was conducted as to find the most common keywords used in articles regarding hospital discharges. These were

later adapted to MeSH, Headings, and Descriptor terms. After the descriptors to use in the research for the articles were found, the equation of the research was elaborated, and the following databases were investigated in the Ebscohost electronic platform: Medline with full text, Cinahl with full text, MedicLatina, Cochrane Data Base of Systematic Reviews, and PubMed.

To complement this analysis with primary studies and reviews, a research involving grey literature was used, via consultation to the websites The Grey Literature Report, Open Grey, Repositório Científico de Acesso Aberto de Portugal (Portugal Open Access Scientific Repository), Veritati — Institutional Repository of the Catholic Portuguese University, MedNar Search, and WorldWideScience.org – The Global Science Gateway.

Bibliographical references of selected documents were consulted, to verify if there were more studies worth analyzing. The research in literature took place in August 2017.

In the PubMed database, the following research syntax was used:

((((delay) OR length of delay)) AND (((("Patient Discharge"[Mesh]) OR "Patient Discharge Summaries"[Mesh]) OR Transfer, Discharge) OR Hospital Discharge)) AND "Length of Stay"[Mesh])

Similar syntaxes were adopted for the other databases.

After the studies were identified, the selection process started, eliminating repeated studies. The others were selected according to inclusion criteria, and the selection process was initially carried out through reading the title, which was followed by the reading of the abstract, and later, that of the article as a whole, to check whether it could respond to the question proposed by this investigation. The process of article selection must be carried out carefully and transparently, and for that, this research was carried out by two independent reviewers.

After this process, the corpus to be analyzed was formed, leading to data collection for later comparison of scientific evidences. The information acquired involved: article identification, title, author, year of publication, country, objective, participants, population, sample size, methodological characteristics, research design, results found, and main conclusions relevant for a scoping review. Regarding the presentation of the results, the causes were divided in groups, after a descriptive and comparative analysis of the results was carried out with a narrative synthesis.

■ RESULTS

From all articles found, after the duplicates were re-

moved, 381 were selected to have their titles read. In this first analysis, 58 were selected, and 323 eliminated. Later, 25 articles were eliminated after their abstract was read, since they do not meet the inclusion criteria, as 13 of them were carried out outside the European Union, 1 included pediatric clients, and 11 did not have the causes for delayed discharge as their main focus. The 33 articles left were then read integrally, after what 17 were selected for analysis. Through a consultation of the bibliographic references of the 17 articles, 5 others were found and added to the analysis, since they gave a response to the research question. Therefore, 22 articles were selected for analysis and inclusion in the review.

Through an analysis of the results, it was found that most studies suggest that multiple factors contribute for delayed hospital discharges, related to social services, acute hospital care services, and community, including personal and family issues. Considering this guiding line, three types of causes or factors were defined for delayed hospital discharge, relating to the characteristics of the care provider, of the people, and of the health system: organizational or intra-hospital causes; individual causes, also called personal; and community causes, that is, causes related to the resources the clients have available to them.

Succinctly, the analysis performed found that the delayed hospital discharges relate especially to: community resources, mainly regarding the lack of vacancies in retirement homes and healthcare units, namely in continued care^(2-3,7-18) and due to social reasons^(3,7,9,12,14,17,19-21); organizational causes related to healthcare, with a greater incidence of waiting for health evaluations, treatments, or exam results^(4,7,14-15,17-18,22); individual causes, especially family^(7,8,14-15,17,21) and financial^(7,14,16) issues; and organizational causes related to hospital management, in which case the lack of human resources stands out^(7,14-15,23).

■ RESULT DISCUSSION

Delayed hospital discharges and their repercussions among clients, institutions, and health systems are issues experienced and addressed in many countries. Considering the focus this analysis had on the European Union, the United Kingdom is the country that gave the most relevance to this subject.

The 22 articles found were published from 2001 to 2016, standing out the years 2006 and 2012, with 3 articles each. Most of them were conducted in the United Kingdom (n=14)^(3,4,7,9-11,13-14,16,18,20,22-23,25), Spain (n=3)^(15,17,21), Italy (n=2)^(8,19), Portugal (n=1)⁽¹²⁾, Norway (n=1)⁽²⁾, and Denmark (n=1)⁽²⁴⁾.

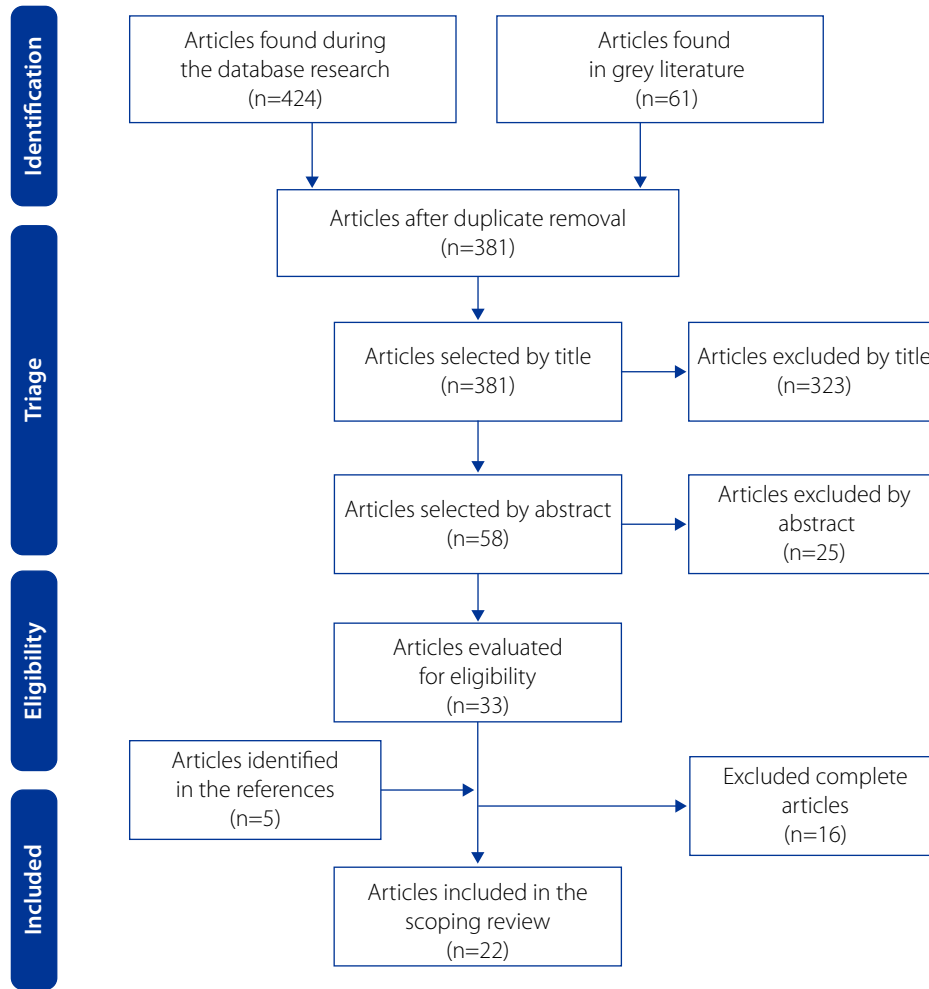


Image 1 - Prism of the article selection process

Causes	Cause subtype
Organizational Related to healthcare	Waiting for health evaluations, treatment, or exam results ^(4,7,14-15,17-18,22)
	Falls ⁽¹⁹⁾
	Pain management ⁽¹⁹⁾
	Care during intra-hospital rehabilitation ^(10,24)
	Number of procedures undergone ⁽²⁾
	Need for bladder catheterization ⁽²⁴⁻²⁵⁾
	Need for blood transfusions ^(20,24-25)
	Use of patient-controlled analgesia ⁽²⁵⁾
	Discharge preparation ⁽⁴⁾
	Nurse referral ^(3,9)
	Professional team mistakes ^(4,15,17)
	Healthcare-related infection ^(3,19-20)

Organizational Hospital Management	Lack of human resources ^(7,14-15,23)
	Hospitalization in one or more medical fields ⁽¹⁰⁾
	Admission day ^(15,23)
	Social worker actions ⁽⁹⁾
Personal / Individual	Associated pathology ^(2,10,19)
	Increase in the dependency level ^(10,19)
	Family issues ^(7-8,14-15,17,21)
	Financial issues ^(7,14,16)
Community	Social issues ^(3,7,9,12,14,17,19-21)
	No vacancy in retirement homes and healthcare units ^(2,3,7,8-18)
	Waiting for treatment in the community ^(4,9,11,14,18,22,25)
	Need for care at home ^(7,10,14,22)
	Safety conditions at home ^(3,11,13)

Chart 1- Main causes for delayed hospital discharges
 Source: Research data, 2018.

Regarding the type of study, one⁽¹⁴⁾ was a literature review from the United Kingdom focused on elder clients, and 21 were observational studies, including cross-sectional^(2,8,11,18), prospective cohort^(3,4,9,12-13,15,17,19-25), and retrospective studies^(7,10,16). Concerning the level of scientific evidence per type of study, according to Melnyk and Fin-out-Overholt, most would be classified as level IV^(3,4,7,9-10,12-13,15-17,19-25), 4 would be level VI^(2,8,11,18), and one level V⁽¹⁴⁾.

Regarding medical specialties, 8 articles involve surgical clients^(4,8,11,13,18,20,24), 7 involve medical clients^(8-10,13,15,19,21), 6 analyze orthopedics-traumatology clients^(3,8,10,12,24-25), including orthopedic surgeries⁽²⁴⁾, 2 focused on cardiology clients^(10,23), 2 in gastroenterology clients⁽⁹⁻¹⁰⁾, 2 on rehabilitation clients^(8,16), 1 was regarding a psychiatric client⁽¹⁰⁾, and 1 a geriatric client⁽⁸⁾. From the 22 articles analyzed, 4^(2,7,17,22) did not specify a medical specialty, and 1⁽¹⁴⁾ involved different specialties.

Regarding the age group of these clients, most are elders, that is, 65-year-old or older people (n=16)^(2,3,7-12,14,17-19,21-22,24-25), while 4 studies^(4,13,16,20) focused on adult clients. 2 articles^(15,23), however did not disclose the age group of the clients analyzed.

Concerning the size of the sample, it varied from 50 to 23,390 people, mostly comprised of females. 5 studies^(2-4,7,23) did not include gender in the client data and 1⁽¹⁴⁾ did not mention the number of clients investigated in the different studies.

Hospital admission and discharge are stressful mo-

ments for the individual, their family, caretakers, and care providers⁽¹⁹⁾. When confronted with a situation of disease, the person is often more dependent and vulnerable, and thus require more psychological, physical, and social support⁽²⁶⁾. The transference from hospital to home when healthcare at home is necessary also means that a significant change in life is necessary, for both the clients and their families⁽⁷⁾.

The delay in the hospital discharge increases the number of occupied beds, meaning that the bed remains occupied by a person who no longer needs acute care, which makes it impossible for new clients in acute situations to receive said care. As a consequence, the number of hospitalizations and the turnover of clients in the service decreases, maintaining the costs associated to a hospitalization.

By specifying the different clinical specialties, it was found that the medicine and orthopedics are the ones most commonly associated to delayed discharges, followed by surgical, gastroenterology, and cardiology clients. The delay time in surgical clients went from 9.48%⁽⁸⁾ (the same found among orthopedics, rehabilitation, and geriatric clients), 19.2%⁽⁴⁾, 35%⁽¹⁸⁾, to 41.9%⁽¹¹⁾ of the entirety of the hospitalization time. Among orthopedic clients, the interval went from 9.48%⁽⁸⁾ to 11.49%⁽¹²⁾ of the length of the hospitalization, whereas among internal medicine and gastroenterology clients it was 20.7%⁽⁹⁾.

Many factors can be pointed out as causes of delays in hospital discharge. It is important to know them to im-

prove care, diminishing the number of occupied beds⁽²³⁾. Thoroughly analyzing the causes, it can be found that in most cases the cause is in the community, due to lack of vacancies in continued healthcare and rehabilitation units^(2,7-9,12-17), followed by the lack of vacancy in retirement homes^(2,3,8-11,13,17-18) and social causes. These social causes are related to the fact that social support is not provided^(7,9,21), to situations of social fragility^(3,14,17,19-20), and one study mentioned social isolation situations⁽¹²⁾, all of which are relevant conditions for the return home.

Concretely, regarding the lack of vacancy in continued care and rehabilitation units, this situation tends to become worse, due to the increase in the mean life expectancy among the population, associated to a higher level of dependency and the need for healthcare⁽²⁷⁾. These aspects are in accordance to a report by the OECD⁽²⁸⁾, which indicates that Portugal must continue expanding its capacity to offer healthcare in the community level, decreasing the burden and the pressure on hospitals, promoting effective care and client safety, and improving the quality of the care offered on a national level. An Italian study involving different medical specialties reflected this need, as it found that clients who are hospitalized in long-term care/rehabilitation and orthopedics/traumatology suffered longer delays. Comparing surgical and medicine services, the latter had more delays⁽⁸⁾.

Still considering the community causes, waiting for treatment within the community^(4,9,11,14,22), including rehabilitation^(9,11,14,18,25), is a prominent cause of delayed hospital discharges, followed by the need of home care^(7,10,14,22) and the guarantee of safe conditions at home^(3,11,13), for the person to be transferred to their residence. Considering the data presented it can be concluded that the European Union does not yet offer enough community support to the discharged client.

Concerning organizational causes, these can be divided regarding healthcare and hospital management, that is, as delays in discharge that are related to the providing of care and results with the client, or according to issues that are more directed towards management and administrative procedures. As a result, among the most common delays regarding healthcare itself, stand out those due to waiting for evaluations of the health situation, treatments, or exam results^(4,7,14-15,17-18,22), followed by bad professional practices^(4,15,17), healthcare associated infections^(3,19-20), and the need for blood transfusions^(20,24-25). Less frequent, but equally important causes are the need for intra-hospital rehabilitation care^(10,24), the need for bladder catheterization⁽²⁴⁻²⁵⁾, the delay in referrals by the nurse^(3,9), falls⁽¹⁹⁾, pain management⁽¹⁹⁾, the need for post-operative ventilation⁽²⁰⁾,

the number of procedures conducted⁽²⁾, the use of patient-controlled analgesia⁽²⁵⁾ and discharge preparations⁽⁴⁾. A British study suggests interventions that can promote shorter hospitalization periods, through improvements in analgesia, in the monitoring of blood losses and in the diminution of the number of clients that require blood transfusions or bladder catheterization⁽²⁵⁾.

Concerning the falls, an Italian study with medicine clients was focused on this problem, finding that it was responsible for 5% of hospital discharge delays⁽¹⁹⁾. The nurse has a fundamental role regarding this issue, which is the identification of clients who are under the risk of falls, as they are the ones who arrange for all necessary safety measures.

Regarding infections associated to healthcare, a study in the United Kingdom found that in 28% of their sample, the delay in the discharge was due to sepsis. Among these 28%, 50% had infections associated to healthcare, most of which were related to urinary infections (12%) and pneumonia (10%)⁽³⁾. Another English study with surgical clients found that situations related to the infection of the surgical wound led to 11.7 more days of hospitalization. The authors suggest that the surgical team should developed measures that can prevent said complications, as well as intra-surgery urinary complications and blood loss⁽²⁰⁾. According to data from the OECD⁽²⁸⁾, these infections have a significant prevalence in Portugal, when compared to the average of the European Union (reported prevalence of 10.7% in 2011/12, when compared to the average of the European Union, which is of 6.0%).

A study focused on the role of the nurse, involving clients hospitalized in a general gastroenterology medicine service, found that 3.5% of cases of delayed hospital discharges were due to delays in the referral by the nurses, generating an additional cost of 22,628.49€, which corresponds to 22.15€ per client. To solve this problem, the authors suggest effective solutions, with the careful elaboration of a discharge plan as soon as possible, as a way to avoid delays in hospitalizations, saving money, and also, showing that the client is a priority⁽⁹⁾.

Regarding hospital management, the most worrying factor is the lack of human resources^(7,14-15,23). More human resources and materials contribute for a diminution of the length of hospitalizations and delays⁽²⁾. According to the opinion of health professionals regarding the causes for delay in the hospital discharge of elderly patients, these are related to the lack of professionals who can provide support at home, as well as to the lack of support from informal caretakers and financial limitations⁽⁷⁾.

Concerning individual causes, family issues are the most prominent^(7,8,14-15,17,21), followed by financial issues^(7,14,16)

and the health condition of the client, more specifically, the associated pathologies^(2,10,19) and high levels of dependency^(10,19).

A Spanish study that analyzed family issues, involving medicine clients, found that cases of delay in the discharge were related to older clients, who had alcohol and benzodiazepine consumption problems or cerebrovascular accidents. 51.8% of these delays were due to the overload and/or inability of family members to offer the care they needed, since they could not balance their work and the caretaking. In 21.8% of cases, it was due to the lack of family members available or to a lack of support from the client's social network⁽²¹⁾.

Elderly clients, in particular, have a higher change of delayed discharges, not just due to the comorbidities associated to high levels of dependency⁽¹⁰⁾, those already present before the situation became acute, but also due to their higher chance of needing short or long-term rehabilitation-related care, in their homes or not, a type of care which oftentimes is not available at the moment of clinical discharge^(8,19).

This analysis made it clear that many factors are co-related, since, as the age of the client increases, the number of comorbidities tend to grow, as does the level of dependency in the performance of daily life activities, which may increase the hospitalization time. Similarly, the need for institutionalization implies that there are health conditions with associated health problems, which indicate a higher need for the use of health services.

Delayed hospital discharges are preventable if adequate strategies are implemented in a timely manner. It is important to develop programs that aim at responding to the needs of the clients, decreasing the length of their stay in the hospital and optimizing the process of hospitalization and discharge. This is the context in which the co-operation between health and social support services show themselves to be essential^(11,14), perfecting the articulation between the different types of professionals to improve the situation of the client^(9,19), offering complete services that must be made available 7 days a week for a faster evaluation to be possible⁽²³⁾. It is important to reorganize the services into specialized services, improving health care and the efficiency of the health service^(13,15).

It is essential to identify, at the moment of admission, clients under the risk of delayed discharge, who need a complex discharge planning, and risk situations should be monitored^(21,23). This careful discharge planning should be carried out as soon as possible^(3,8-9,11,21,23), in accordance to discharge administration and healthcare network management teams, while also implementing interventions to prevent delays in hospital discharges⁽¹¹⁾.

A study in Norway highlights how important the existence of additional resources is⁽²⁾. Focusing on human resources, an English study highlights the relevance of the nurse in the guidance of the discharge process of the client⁽⁴⁾. These health professionals should worry about preparing the person and their lives for discharge and for post-discharge care, fulfilling their role as educators and advisors⁽²⁹⁾.

■ CONCLUSION

This state-of-the-art research shows that the delay in hospital discharges is a multi-factorial problem. It can result from factors inside or outside the hospital, as well as from personal ones, and these causes are often inter-dependent and predictable. The main delay causes are similar among the many studies from different countries, as are the clinical characteristics of clients, most of whom are elderly, frail, and more dependent due to the deterioration of their functional capacities.

This analysis presents many limitations of which we are aware. First and foremost, we are aware of the risk of not having included relevant studies that were not contemplated by the descriptors and keywords used in the initial investigation. However, to decrease this risk, the bibliography used by the studies found was verified, as a way to complement this analysis process. Linguistic limitations also factor in, since studies in languages other than Portuguese, English, and Spanish were excluded, some of which could be important for the review.

Additionally, the different definitions adopted to state what characterizes delayed hospital discharges, based on clinical decision or on the definition of the authors themselves, may influence this analysis, generating more subjective results and comparisons between them. That is because the length of time considered by the author as what defines a delay is different in some studies.

This scoping review allows for the conclusion that it is necessary to invest in resolute methodologies regarding the delay in hospital discharge. There should be investments in discharge planning, leading to the creation of models and protocols for the implementation of nursing practices, at the moment of client admission, which can identify potential cases of discharge delay.

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