

SAFETY OF HOSPITALIZED ELDERLY PATIENTS: AN INTEGRATIVE LITERATURE REVIEW

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ABSTRACT: The objective was to identify how the safety of hospitalized elderly patients has been discussed in the scientific literature. An integrative literature review was undertaken in the databases *Literatura Latino Americana e do Caribe em Ciências da Saúde*, Scientific Electronic Library Online, Medical Literature Analysis and Retrieval System and U.S. National Library of Medicine, published between 2009 and 2015. The 25 selected publications discuss the importance of promoting affective care in the reduction of insecurity and adverse events in hospitalized elderly, besides the challenges for the implementation of a safe and high-quality environment for these patients. Gaps were found in the knowledge on this theme. Further studies are needed that focus on the description of a dimensioned and suitable environment and on the elaboration and implementation of care quality safety and improvement programs for elderly patients while in hospital.

DESCRIPTORS: Patient safety; Elderly; Hospitalization; Nursing.

SEGURANÇA DO PACIENTE IDOSO HOSPITALIZADO: UMA REVISÃO INTEGRATIVA

RESUMO: O objetivo foi identificar como a segurança do paciente idoso hospitalizado vem sendo abordada na literatura científica. Trata-se de revisão integrativa realizada nas bases de dados *Literatura Latino Americana e do Caribe em Ciências da Saúde*, *Scientific Electronic Library Online*, *Medical Literature Analysis and Retrieval System*, *U.S. National Library of Medicine*, publicados entre os anos de 2009 e 2015. Os 25 selecionados abordam a importância da promoção do cuidado afetivo na redução da insegurança e dos eventos adversos em idosos hospitalizados, além dos desafios à implementação de ambiente seguro e de qualidade para este paciente. Constataram-se lacunas do conhecimento sobre este assunto, sendo necessária a realização de mais estudos que foquem na descrição de ambiente dimensionado e adequado, elaboração e implementação de programas para segurança e melhoria da qualidade do cuidado ao idoso durante a hospitalização.

DESCRIPTORES: Segurança do paciente; Idoso; Hospitalização; Enfermagem.

SEGURIDAD DEL PACIENTE ANCIANO HOSPITALIZADO: UNA REVISIÓN INTEGRADORA

RESUMEN: El objetivo fue identificar como la seguridad del paciente anciano hospitalizado ha sido tratada en la literatura científica. Se trata de revisión integradora en las bases de datos *Literatura Latino Americana e do Caribe em Ciências da Saúde*, *Scientific Electronic Library Online*, *Medical Literature Analysis and Retrieval System* y *U.S. National Library of Medicine*, publicados entre 2009 y 2015. Los 25 seleccionados discuten la importancia de promover el cuidado afectivo en la reducción de la inseguridad y de los eventos adversos en ancianos hospitalizados, además de los retos a la implementación de ambiente seguro y de calidad para este paciente. Fueron constatadas brechas en el conocimiento sobre este tema, siendo necesarios otros estudios con foco en la descripción de ambiente dimensionado y adecuado, elaboración e implementación de programas para seguridad y mejora de la calidad del cuidado al anciano durante la hospitalización.

DESCRIPTORES: Seguridad del paciente; Anciano; Hospitalización; Enfermería.

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● INTRODUCTION

Population aging is one of the most distinctive and challenging events in the contemporary society. This fact has been observed in developed countries, and more recently in developing countries like Brazil.

According to the Brazilian Institute of Geography and Statistics (IBGE), the number of elderly in Brazil is one of the largest in the world, with an annual growth perspective of more than 4% per year between 2012 and 2022. For the next ten years, an average increase by more than 1.0 million elderly per year is expected⁽¹⁾.

Aging entails physical, psychological and social changes, which in addition to unfavorable conditions for successful aging, culminate in an increased risk for the development of non-transmissible chronic conditions and related problems, turning this age group more vulnerable to the hospitalization process⁽²⁾.

The hospital environment is the place where most health care for the elderly takes place. These subjects are hospitalized more frequently, the bed occupancy time tends to be longer when compared to other age ranges and the readmission rates are high (one out of five), entailing high costs for the health system. Furthermore, the costs do not always turn into benefits for this patient, who receives generalized care in which the changes inherent in the aging process are not always taken into account, making these elderly more prone to adverse events during the hospitalization⁽³⁾.

Adverse Events (AE) are incidents that affect the patient during health care delivery, resulting in damage or injury, and can represent a temporary or permanent loss and even death among these health service users⁽⁴⁾. On the other hand, in hospitalized elderly, the AE are frequently avoidable and can culminate in functional ability losses that did not exist before the elderly's hospital admission, in a worse prognosis and predisposition to the frailty process⁽⁵⁾.

The importance of the nurse is evidenced in the assessment of elderly patients during the hospital admission, and of daily reassessments in search of risk factors, which should be included in the therapeutic plan, thus promoting safe, efficient, equitable care that is centered on the patient's demands⁽⁶⁾.

According to the most recent proposal of the World Health Organization (WHO), patient safety means "absence of actual or potential unnecessary harm (Adverse Events) associated with health care". Thus, the health systems that reduce the risks to patient safety (harm) to an acceptable minimum are consequently enhancing the quality of their services^(4,7).

The quality of care and patient safety have been widely discussed nowadays in the context of health work, with a view to making care safer in the health services. In that perspective, the interest in collecting scientific evidence on the theme safety of hospitalized elderly patients emerged, as these clients, due to their singularities, are more vulnerable to the countless AE related with health care in the hospital environment.

In that context, the objective in this study is to identify how the safety of hospitalized elderly patients has been discussed in the scientific literature.

● METHOD

An integrative review was undertaken to investigate the productions on the theme "Safety of hospitalized elderly patients". The method involves a comprehensive analysis of the literature, which contributes to discussions about research results and methods and future studies⁽⁸⁾.

To elaborate this review, the following phases were undertaken: identification of the theme and selection of the research question; establishment of inclusion and exclusion criteria of articles (sample selection) and data collection; definition of information to be extracted from the selected articles/ categorization of the studies; assessment of the studies; interpretation of the results; presentation of the results/knowledge synthesis⁽⁸⁾.

To guide the study, the following guiding question was formulated: "How has the safety of hospitalized elderly patients been addressed in the scientific literature?"

The criteria for inclusion in the study were: articles fully available, published in Portuguese, English and Spanish, between 2009 and 2015, and which discuss the theme safety of hospitalized patients. The exclusion criteria were: articles repeated in the databases, whose full text was not available, which did not discuss the defined theme and which were not related to nursing.

References were surveyed between March and April 2015 in the following databases: *Literatura Latino Americana e do Caribe em Ciências da Saúde* (LILACS), Scientific Electronic Library Online (SciELO), Medical Literature Analysis and Retrieval System on-line (MEDLINE) and in the database of PubMed. To select them, the following descriptors were used in Portuguese: "*segurança do paciente*", "*idoso*", "*hospitalização*", in English: "Patient Safety"; "Aged"; "Hospitalization", used individually and in combination. The Boolean operator "AND" was used in the searches.

The search in the databases revealed 321 publications in LILACS, 100 in SciELO, 415 in MEDLINE and 717 in PubMed, totaling 1553 articles. After reading the titles of the publications and the descriptors, 130 articles continued. Among these publications, 40 were repeated in two databases. Thus, the abstracts of 90 articles were read.

After the exploratory reading of the abstracts and the application of the preset inclusion and exclusion criteria, 25 publications were selected, whose content was fully read.

To facilitate the content analysis of the selected articles, an instrument was elaborated that contained the following variables: title, database and year. To interpret, analyze and discuss the selected studies, the thematic categorization by similarity of themes was used.

● RESULTS

In total, 25 articles were analyzed that attended to the inclusion criteria. In Table 1, the articles selected for this study are displayed, including the title, database and year.

Table 1 - Distribution of articles selected according to title, database and year (2009-2015). Rio de Janeiro, RJ, Brazil, 2015

Title	Database/Year
Percepção do idoso dos comportamentos afetivos expressos pela equipe de enfermagem	LILACS/2011
Afetividade no processo de cuidar do idoso na compreensão da enfermeira	SciELO/2012
Fatores ambientais como coadjuvantes na comunicação e no cuidar do idoso hospitalizado	SciELO/2012
What makes hospitalized patients more vulnerable and increases their risk of experiencing an adverse event?	PubMed/2011
Scale, nature, preventability and causes of adverse events in hospitalized older patients	PubMed/2013
Rastreamento de resultados adversos nas internações do Sistema Único de Saúde	LILACS/2012
Características de eventos adversos evitáveis em hospitais do Rio de Janeiro	SciELO /2013
Diagnósticos de enfermagem identificados em idosos: associação com as síndromes geriátricas	SciELO/2010
Risco para úlcera por pressão em idosos hospitalizados: aplicação da escala de Waterlow	LILACS/2012
What is known about adverse events in older medical hospital inpatients? A systematic review of the literature	PubMed/2013
Nursing diagnoses identified in records of hospitalized elderly	SciELO/2014
Iatrogenias de enfermagem em pacientes idosos hospitalizados	SciELO/2009
Evento adverso no idoso em Unidade de Terapia Intensiva	SciELO/2013
Percepções da equipe de enfermagem sobre segurança do idoso na tomografia computadorizada cardíaca contrastada	SciELO/2014
Polimedicação no idoso	SciELO/2010
Beyond the prescription: medication monitoring and adverse drug events in older adults	PubMed/2011

Quedas intra-hospitalares na santa casa de Belo Horizonte MG são adequadamente relatadas?	LILACS/2010
Risco de queda da cama. O desafio da enfermagem para a segurança do paciente	SciELO/2011
Risco de quedas em idosos: revisão integrativa pelo diagnóstico da North American Nursing Diagnosis Association	SciELO/2012
Pilot Study Examining the Association Between Ambulatory Activity and Falls Among Hospitalized Older Adults	PubMed/2011
Making Hospitals Safer for Older Adults: Updating Quality Metrics by Understanding Hospital-Acquired Delirium and Its Link to Falls	PubMed/2013
Nursing staff's awareness of keeping beds in the lowest position to prevent falls and fall injuries in an adult acute surgical inpatient care setting	PubMed/2012
Which bed designs and patient characteristics increase bed rail use?	PubMed/2013
What impedes and what facilitates a quality improvement project for older hospitalized patients?	MEDLINE/2014
Nurses Improving Care for Healthsystem Elders – a model for optimising the geriatric nursing practice environment	PubMed/2012

Among the 25 articles in this research, 14 (56%) were published in Portuguese and 11 (44%) in English. Among the studies, 11 (44%) were published in Brazil, six (24%) in the United States, five (20%) in England, two (8%) in Colombia and one (4%) in Portugal.

As regards the databases, it was verified that 11 (44%) articles came from SciELO, nine (36%) from PubMed, four (16%) from LILACS and one (4%) from MEDLINE. Thirteen (52%) used quantitative methods, five (20%) qualitative methods, two (8%) systematic reviews, two (8%) reflexive, two (8%) integrative reviews and one (4%) discursive role.

Concerning the year of publication, one (4%) was published in 2009, three (12%) in 2010, five (20%) in 2011, seven (28%) in 2012, six (24%) in 2013 and three (12%) in 2014. These data show that most studies on the theme were published between 2012 and 2013, after the establishment of the Requisites of Best Practices for Health Service Functioning and the enactment of the National Patient Safety Program, evidencing an advance in the development of research on elderly patient safety in that period.

Concerning the authors' activity area, 14 (56%) come from the nursing area, six (18.7%) from medicine, one (3.1%) from physiotherapy and this information was unavailable in four (12.5%) publications.

What the essential content of the selected studies is concerned, it was verified that three (12%) references discussed the factors that interfere in the promotion of affective/effective care for hospitalized elderly, 13 (52%) discussed the AE the elderly are most vulnerable to in the hospital environment, seven (28%) highlighted the occurrence of falls and the risk factors for the safety of hospitalized patients and two (8%) discussed the safety programs for hospitalized elderly clients.

In that perspective, the selected articles were grouped in four thematic categories: Promotion of affective and safe care according to the nurses and hospitalized elderly; Adverse events in hospitalized elderly clients; Risk factors for falls in elderly: offering a safe hospital environment; The challenges for the implementation of a safe and high-quality care environment for hospitalized elderly: limits and possibilities.

● DISCUSSION

Affective and safe care promotion according to the nurses and hospitalized clients

According to the elderly patients' perception of the nursing team's verbal and non-verbal behaviors, it was verified that most patients perceived the affective care as positive with regard to the verbal dimension, which is related to the actions of talking before delivering care, giving advice on the care to be performed, offering safety and demonstrating sincerity during care practice. The elderly are unanimous on this behavior in the nursing team⁽⁹⁾.

Both the elderly and the nurses highlighted the need for effective care that goes beyond technical skills, valuing the importance of talking during care and of their participation in the decision process on their treatment, granting a feeling of safety while in hospital⁽⁹⁻¹⁰⁾.

One of the factors mentioned that can interfere in the effectiveness of care, however, is linked to the non-verbal dimension of care, represented by attitudes of hearing/listening and touching delicately. In this sense, the elderly negatively assessed the care received by the nursing team. Nevertheless, the nurses understand that the non-verbal behavior equips the care that is to be provided, as it permits unveiling the individuals' emotions, thoughts and expressions, intensifying the relations between the patient and the professional⁽⁹⁻¹⁰⁾.

Another factor discussed that interferes in the care and safety of hospitalized elderly is the environment. In that perspective, the environmental factors (sound and vibration, decoration and space, light, color and texture, temperature and ventilation, hygiene, professional safety and visual signs) are mentioned as supporting factors in the care process, demanding adaptations in the physical structure to enhance the safety, continued autonomy and independence of the hospitalized elderly⁽¹¹⁾.

Adverse events in hospitalized elderly clients

In some studies, the incidence rates of AE were compared between adult and elderly hospitalized patients, demonstrating that the elderly patients experience more of these incidents than the younger patients, with more severe consequences. Most of these subjects are susceptible at the medical clinical wards⁽¹²⁻¹⁵⁾.

The factors that significantly contribute to increase the risks of adverse events in care delivery to the elderly are: reduced functional capacity, presence of comorbidities and severe illnesses, use of invasive devices, prolonged hospitalization and inappropriate care^(12,16).

Concerning the types of avoidable adverse events in hospitalized elderly, the events mentioned range from geriatric syndromes like delirium, pressure ulcers (PU), urinary or fecal incontinence, adverse drug events (ADE), hospital infection and procedure-related complications.

It should be highlighted that ignoring the physiological and pathological consequences of aging contributes to the emergence of the main geriatric syndromes which, when they occur during the hospitalization, are considered AE, as these events are avoidable and can cause damage to the patients in terms of morbidity and mortality, prolonged hospitalization and need for special care⁽⁵⁾.

One important indicator of the quality of care is the prevalence of PU, which not only extends the hospitalization period, but also burdens the care⁽¹⁷⁾. Only one article discusses the identification of the risk for PU in hospitalized elderly though, using the Waterlow Scale, which is an instrument to predict the risk for PU⁽¹⁸⁾.

A study on the safety of the elderly in Cardiac Computed Tomography (CCT) highlights the importance of the nurse's knowledge on the adverse events associated with the use of iodinated contrast (allergic reactions, extravasation, contrast-induced nephropathy and drug interactions) and the promotion of elderly patient safety during and after the CCT, in view of the vulnerability the aging process imposes⁽¹⁹⁾.

Due to the knowledge on the social context the elderly patient is inserted in and the singularities involved, the nurse is in a privileged position to work with the physician and other health professionals to promote the quality of care and safety of patients who are taking medication⁽¹⁹⁻²⁰⁾.

To improve the safety and reduce the burden of ADE in elderly patients through an approach focused on monitoring, the initial prescription decision is but the first step. After prescribing a drug, the health professionals (nurses, physicians, pharmacists) need to engage in a continuing monitoring process that comprises three steps: 1º) Education of the subjects about the benefits and possible complications associated with the medication, including their active participation in the registration of problems that may emerge; 2º) Reassessment of drug efficacy, possible ADE, compliance with the medication and if it is still necessary; 3º) Adjustment of the drug and restart of the process⁽²¹⁾.

In that sense, the importance is emphasized of enhancing the health professionals' knowledge, mainly of the nurse, who maintains closer contact with the patient during the hospitalization and the identification and prevention of possible factors that can cause AE. Professional education should be encouraged in gerontology, as well as satisfactory interpersonal communication, continuing patient assessment, strategies to encourage the elderly's involvement in decision making and the relatives'/companions' participation in elderly care, with a view to promoting improvement in these subjects' quality of life, preserving their functional capacity, autonomy and independence.

Risk factors for falls in the elderly: offering a safe hospital environment

Reducing the occurrence of falls is one of the basic patient safety protocols proposed by the National Health Surveillance Agency (ANVISA), corresponding to patient safety target 6. It is fundamental to identify and mitigate this risk in hospitalized patients⁽⁴⁾.

The falls in hospitalized elderly are more related to cognitive and environmental factors than to the distance these patients walk during the hospitalization. Hence, the falls are associated with multifactorial causes, involving both intrinsic (changes in mental status, use of various drugs, previous history of falls, use of walking aids, longer hospitalization, fecal/urinary incontinence, visual alterations and diseases like osteoporosis and cardiac arrhythmias), and extrinsic factors (absence of anti-slip material from the floor, bed without rails, high bed and absence of safety bar)⁽²²⁻²⁸⁾.

One risk factor for frequent falls in hospitalized elderly is delirium, triggered by the immobilization, use of urinary catheter, malnutrition, multidrug intake, among others. The incidence of this hospital-acquired syndrome is common in the elderly and affects approximately 1/6 of these patients submitted to health procedures. Therefore, it is important to prevent delirium in order to avoid the occurrence of falls⁽²⁴⁾.

As essential measures to prevent falls in hospitalized elderly, the nurses' profound knowledge on the elderly's functional characteristics and the background history of illnesses and falls, accomplishment of environmental changes through safety bars, suitable lighting and ventilation, withdrawal of objects that are obstacles during the elderly's walk, use of lower beds and raised lateral bedrails when necessary⁽²⁵⁻²⁸⁾.

Concerning the used of bedrails, perceived as one of the nursing concerns to prevent falls, it was verified that they were used inappropriately as a patient containment system instead of a physical barrier and a reminder of the bed perimeters, mobility support and to offer safety and comfort to the hospitalized elderly. Hence, the use of bedrails in the elderly with altered cognitive conditions demands careful assessment as, if the patient is sufficiently mobile, this can contribute to increase the chances of falling and getting hurt more severely⁽²⁵⁾.

Therefore, the need is highlighted for the nurses to assess the risk factors from the elderly's admission to the hospital until the discharge, as well as to implement risk prevention strategies, offering safety to the hospitalized elderly with their vulnerabilities while in hospital.

Challenges for the implementation of a safe and high-quality care environment for hospitalized elderly clients: limits and possibilities

The Frail Elderly Project is part of a patient safety program implemented in most hospitals in the Netherlands, which aims to reduce adverse events in hospitalized frail elderly through the use of screening instruments and interventions focused on the main geriatric problems, associated with functional decline such as delirium, with falls, with malnutrition and with physical losses⁽²⁹⁾.

Based on the physicians and nurses' discourse, the factors were identified that impede the implementation of this quality improvement program in care delivery to hospitalized elderly. These are: insufficient involvement of the nurses in the project, lack of time to screen frail elderly and insufficient knowledge of professionals about care for patients with delirium. The factors appointed as facilitators were: leadership, possible flexibility of the methods used, orientation guide of the program and use

of patients' digital register⁽²⁹⁾.

As a counterpart, the crucial role of the nurse was emphasized to lead a nursing care improvement program for the elderly in the health system. Nurses should take part in the entire implementation phase of the program at the hospitals, contributing to the education and preparation of the human resources serving on the interdisciplinary team, to the elaboration and application of clinical protocols for AE (pressure ulcers, catheter-related urinary tract infections, delirium and falls), guaranteeing a safe and high-quality practice environment for hospitalized elderly clients⁽³⁰⁾.

In the same study, to implement the program mentioned, willingness and organizational readiness are needed, a shared view on care for elderly patients, the construction of hospital and community support and the development of a care plan for its implementation. The use of this approach will permit the success of this evidence-based program, making the hospitals more prone to improve the hospitalization outcomes of elderly clients⁽³¹⁾.

Among the positive results found in the studies, the improvement of the attitudes regarding pressure ulcer, the non-use of containment measures and the appropriate management of elderly incontinence, besides better compliance with registers and family support⁽²⁹⁻³⁰⁾.

To reduce the barriers in the implementation of the programs mentioned above, some strategies were developed, such as: partnerships between the hospitals and nursing schools to educate the nurses, inclusion of classes on frail elderly patients in the nursing students' curriculum, training of professionals about care for elderly with delirium, publication of website to disseminate the program and exchange experiences among team members⁽²⁹⁻³⁰⁾.

In recent years, many other care quality improvement programs have been developed around the world with a view to patient safety⁽³²⁾. These have paid little attention to elderly patients though. In addition, the implementation of the quality care models for these clients have been assessed inappropriately⁽²⁹⁾, which is highlighted as a future challenge to guarantee safe care for hospitalized elderly.

● CONCLUSION

The literature studied demonstrated the importance of the elderly's co-participation in planning their health care, the influence of environmental factors in communication and nursing care. In addition, the importance of the adverse events the elderly are subject to in the hospital environment was highlighted, particularly adverse drug events and falls. Finally, the challenges in the implementation of safety programs are focused on.

The existence of articles from other knowledge areas in this review should be underlined, which discussed the importance of multidisciplinary team activities, including the fundamental role of nurses in actions that promote safe and high-quality care for hospitalized elderly.

Further research on this theme is needed, emphasizing the importance of investing in the preparation of nurses with expertise in gerontology in the promotion of an environment suitable to the elderly's singularities. Care improvement programs can be elaborated, in which health professionals use AE prevention and monitoring as strategies to achieve the safety of these patients and improve the quality of care at Brazilian health services.

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