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REVIEW

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Safety of the elderly in the hospital environment: international scientific production

Segurança da pessoa idosa no ambiente hospitalar: produção científica internacional

Seguridad del anciano en el ambiente hospitalario: producción científica internacional

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ABSTRACT

Introduction: Reducing the risk of unnecessary harm associated with the health care process to an acceptable minimum is configured as patient safety in the hospital environment. **Aim:** To analyze the international scientific production on the safety of the elderly in the hospital environment. **Method:** Bibliometric research, performed on the ISI Web of Knowledge/Web of Science™, in the time frame between the years 1995 and 2021, using the descriptors: “patient safety” and elderly* and “hospital environment”, carried out from the export of these data for the HistCite™ bibliometric analysis software. **Results:** 172 publication records were found, in 59 different journals, written by 218 authors who have links with 200 institutions, located in 113 countries. In the analysis of counting the number of citations, the h-index value is equal to 36 and the average number of citations per article is 48.25. The articulation between the 15 publications with the highest impact factor on the subject and the 06 International Patient Safety Goals of the World Health Organization, shows that Goal 3 - improve the safety of high-alert medication- was highlighted with 46.6% of the studies. **Implications:** The analysis of the indicators on the dynamics and evolution of scientific and technological information showed that there is a gap in knowledge on the subject, presented in a broad and diversified way without demonstrating the existence of an articulation between studies, authors and institutions from all over the world. There is a need to build knowledge networks in the area that allow more studies capable of contributing to the improvement of the safety of the elderly in the hospital environment.

DESCRIPTORS

Patient safety; Elderly; Hospital environment.

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INTRODUCTION

Reducing the risk of unnecessary damage associated with the health care process to an acceptable minimum is configured as patient safety in the hospital environment. Non-treatment or other adopted therapies can also become a health risk.¹⁻² For the quality of health care, patient safety is essential, as it comprises attitudes that are intended to manage and prevent risks that patients are exposed to.³

In the last decades, patient safety has become a constant debate, which demonstrates how much the engagement between well-being, patient's quality of life and assistance provided is necessary. In health services, there are transformations and advances that allow improvements in processes and services offered to the public and patient safety has been highlighted.⁴

Population aging is highlighted in the current century. About 962 million people are 60 or older in the world, which corresponds to 13% of the total population. By 2050, all regions of the world except Africa will have nearly a quarter of their populations made up of people in this age group.⁵

The augment in life expectancy directly reflects on health conditions, morbidity, and functional limits of the elderly, increasing the incidence of illnesses and disabilities, with possible changes in physical, cognitive and emotional dependence, often generating the need for permanent care and hospitalizations.⁶ Associated with aging, multimorbidity is characterized by a combination of diseases with a variety of implications, including the high use of health care, hospitalization, high public spending on health and mortality.⁷

Especially in the hospitalization unit, there is a high use of health care by the elderly, which is evidenced by the increase in the average age in these units, which requires health professionals to pay greater attention to the real effectiveness of the treatment and care provided to this age group.⁸⁻⁹

These environments require more technology for taking care of severe patients, complex ones, and the ones underwent to invasive procedures.¹⁰ Thus, the concern with the safety of the elderly patient is notorious and growing, generating the increase of studies on the subject.¹⁰⁻¹¹

The Adverse Events (AE), such as incidents that affects the patient during the health care, resulting in harm or injury, may represent temporary or permanent loss, with emphasis on falls, errors in medication administration, withdrawals unscheduled use of therapeutic devices and pressure injuries, which are more common among hospitalized adult and elderly patients.¹¹⁻¹²

In the hospital environment, innovations and breakthroughs are necessary for both safe and better-quality care. Thus, patient safety, related to the six International Patient Safety Goals of the World Health Organization - WHO,¹³ aims to promote improvements in health care and prevent harm to the patient, reducing the negative consequences of unsafe care.

Before this problem, it is opportune that the scientific production of studies on the safety of the elderly in the hospital environment be analyzed and expanded. The questions that guide the study are: What are the sources of value on the safety of the elderly in the hospital environment recognized through authorship and citation metrics? What is the analysis of the indicators on the dynamics and evolution of scientific and technological information on the safety of the elderly in the hospital environment?

Thus, considering these questions and the importance of promoting the safety of elderly patient who needs care during hospitalization, the study aims to analyze the international scientific production on the safety of elderly people in the hospital environment.

METHOD

Bibliometric exploratory and descriptive research carried out in the Main Collection of the ISI Web of Knowledge/Web of Science™ database, of studies published from 1945 to 2021. The descriptors were defined from the MeSH catalog (Medical Subject Headings), the following search terms being selected: “Patient safety”, Elderly* and “Patient safety, Hospital environment”. The asterisk means the possibility of the plural form of the descriptor and the quotation marks indicate the exact representation of terms with more than one word.

After applying the “type of document” filter, offered by the search engine of the main collection of *Web of Science™*, 172 articles were found. There was no refinement filter for areas of knowledge, countries, or languages of the studies, covering all records of publications that had the three terms in association. Articles from events or considered still being edited (Conference Proceedings) and records from “proceedings papers”, “editorial material” and “letter” were excluded from the results, resulting in only final and complete works “article” and “review” (articles and revisions). In this way, the studies were identified and used as a set of articles for the proposed bibliometric analysis.

The processing and analysis of the material was carried out by exporting these data to the HistCite bibliometric analysis software package, in order to organize the information and facilitate the analysis. The analysis of the selected articles followed the three suggested procedures: the definition of the database and the criteria to be used for the collection; data collection; and their representation and analysis.¹⁴⁻¹⁵ The trajectory of annual evolution of publications, the journals with

the highest number of records, the authors with the highest number of publications and the number of articles distributed by country of origin of the authors were analyzed.

In addition to these data generated by the software, the sources of value on the safety of the elderly in the hospital environment recognized through authorship and citation metrics were identified, an analysis of the citation count, an analysis of the count of the number of citations, by the h-index value, based on a list of publications sorted in descending order and an analysis of the indicators on the dynamics and evolution of scientific and technological information on the subject. Further, the average citation per article and the sum of the number of citations for all items in the result set were sought.

Aspects of the texts of the 15 most cited articles on the *Web of Science™* were elucidated in order to identify their main contributions to the topic of safety of the elderly in the hospital environment. The results of these analyzes were presented in a graph, tables and charts.

The ethical principles recommended for research of this nature were adopted, respecting the ideas, citations, authors, and their publications.

RESULTS

The search of the studies in the *Web of Science* database was carried out for the 1945 to 2021 period. However, the first result of the published article was in 1995. For this, the temporal space evaluated in the results of this study is 1995 to 2021 period. In the analysis of counting the number of citations, the h-index value is equal to 36 and the average number of citations per article is 48.25.

Table 1 - General results of the bibliometrics on the safety of the elderly in the hospital environment (1995-2021). João Pessoa - PB, 2021.

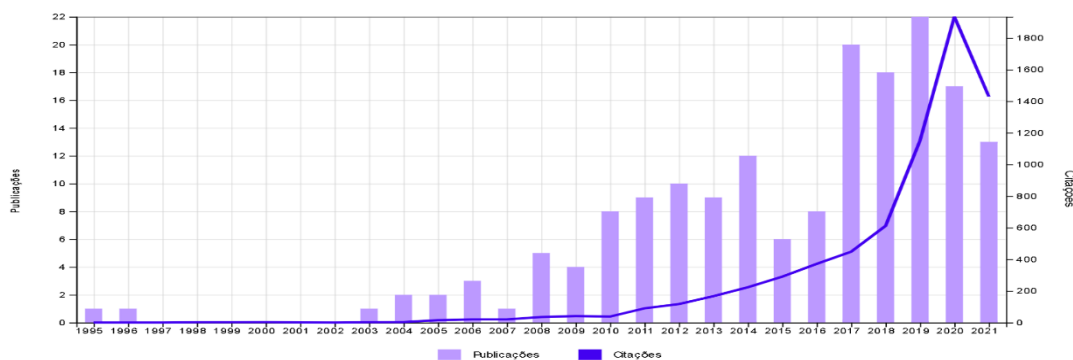
Bibliometric Data	Amount
Publications	172
Indexed journals	59
Authors	218
Institutions (authors' links)	200
Countries	113

Source: Own elaboration based on data from Web of Science.

The evolution of the scientific production on the safety of the elderly in the hospital environment, demonstrated by the annual number of publications in the period studied, points out that international interest in the subject began in 1995, with the

publication of a study. In the 1997 to 2002 period, no study on the subject matter was published. From the year 2017, the studies increased with 90 studies published in the period from 2017 to 2021.

Figure 1 - Distribution of publications and citations on the safety of the elderly in the hospital environment (1995-2021). João Pessoa - PB, 2021.



Source: Own elaboration based on data from Web of Science.

With the aim of identifying the more representative international journals on the aforementioned research field, the 10 main journals were analyzed as to the number of published articles on the theme and the corresponding percentage.

Table 2 displays the list of the 10 more representative journals in terms of the number of

publications on the theme studied, and the percentage of published articles in each of the journals. Through this indicator, it is possible to have an initial information regarding the impact of the articles identified in these journals over the total of received citations.

Table 2 - Journals with more published productions (1995-2021). João Pessoa - PB, 2021.

Journals	Number of Articles	%
BMC Health Services Research	6	10.16%
Health Science Reports	4	6.77%
International Journal of Gerontology	4	6.77%
Lancet	4	6.77%
Plos One	3	5.08%
Cancer	2	3.38%
Drugs Aging	2	3.38%
European Journal of Clinical Pharmacology	2	3.38%
European Journal of General Practice	2	3.38%
Hong Kong Journal of Emergency Medicine	2	3.38%

Source: Own elaboration based on data from Web of Science.

To deepen the representativeness of the origin countries of the link institutions of the 218

authors of the 172 works mapped in this bibliometric study, the countries with more productions in the

field of elderly person safety in the hospital environment, what can be observed in Table 3.

Table 3 - Analysis of the multinomial logistic regression of factors associated with DPI. Teresina, Piauí, 2019 (n=206).

Country/Regions	Record count /Percentage of 172 productions
England	36/20.93%
USA	36/20.93%
Australia	23/13.37%
Japan	23/13.37%
Taiwan	19/11.04%
Germany	17/9.88%
Italy	17/9.88%
Netherlands	17/9.88%
Spain	17/9.88%
Canada	16/9.30%

Source: Own elaboration based on data from Web of Science.

Chart 1 presents the Top 15 most cited articles on *Web of Science*TM in the period 1945-2021, the number of citations of each article and the

average number of citations per years, indicating the most representative studies on the subject, presenting seminal works and those later that have also been heavily referenced.

Chart 1 - Top 15 most cited Productions in the Web of ScienceTM from 1995 to 2021.

N ^o	Title	Authors	Relationship with International Patient Safety Goals	Year	Magazine	Number of citations	Average citations per year
1.	Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980-2017: a systematic analysis for the Global Burden of Disease Study 2017	Roth et al. ¹⁶	Goals 1, 2, 3, 4, 5, 6	2018	Lancet	1.592	398
2.	International Society of Geriatric Oncology Consensus on Geriatric Assessment in Older Patients with Cancer	Wildiers et al. ¹⁷	Goal 1	2014	Journal of Clinical Oncology	763	95.38
3	Low intensity transcranial electric stimulation: Safety, ethical, legal regulatory and application guidelines	Antal et al. ¹⁸	Goal 3	2017	Clinical Neurophysiology	318	63.6
4.	Prescriber barriers and enablers to minimising potentially inappropriate medications in adults: a systematic review and thematic synthesis	Andersone t al. ¹⁹	Goal 3	2014	BMJ OPEN	305	38.13
5.	Posthospital care transitions: Patterns, complications, and risk identification	Coleman et al. ²⁰	Goal 3	2004	Health Services Research	275	15.28
6.	Preventing Falls and Fall-Related Injuries in Hospitals	Oliver et al. ²¹	Goal 6	2010	Clinics in Geriatri	226	18.83

					c Medicine		
7.	Relevance of a systematic geriatric screening and assessment in older patients with cancer: results of a prospective multicentric study	Kenis et al. ²²	Goal 1	2013	Annals of Oncology	182	20.22
8.	Hospitalizations and emergency department visits due to drug-drug interactions: a literature review	Becker et al. ²³	Goal 3	2007	Pharmacoepidemiology And Drug Safety	160	10.67
9.	In Situ Monitoring of Health in Older Adults: Technologies and Issues	Kang et al. ²⁴	Goal 2	2010	Journal of the American Geriatrics Society	107	8.92
10.	Malnutrition and associated factors in elderly hospital patients: A Belgian cross-sectional, multi-centre study	Vanderwee et al. ²⁵	Goal 5	2010	Clinical Nutrition	95	7.92
11.	Intravenous versus inhalational maintenance of anaesthesia for postoperative cognitive outcomes in elderly people undergoing non-cardiac surgery	Miller et al. ²⁶	Goal 4	2018	Cochrane Database of Systematic Reviews	76	19
12.	What is hormesis and its relevance to healthy aging and longevity?	Calabrese et al. ²⁷	Goal 3	2015	Biogerontology	73	10.43
13.	Nutrition in care homes and home care: How to implement adequate strategies	Arvanitakis et al. ²⁸	Goal 5	2008	Clinical Nutrition	58	4.14
14.	Self-Medication with Over-the-Counter and Prescribed Drugs Causing Adverse-Drug-Reaction-Related Hospital Admissions: Results of a Prospective, Long-Term Multi-Centre Study	Schmiedl et al. ²⁹	Goal 3	2014	Drug Safety	47	5.88
15.	Structured nursing communication on interdisciplinary acute care teams improves perceptions of safety, efficiency, understanding of care plan and teamwork as well as job satisfaction	Gausvik et al. ³⁰	Goal 2	2015	Journal of Multidisciplinary Healthcare	45	6.43

Source: Own elaboration based on data from Web of Science.

DISCUSSION

The theme safety of the elderly in the hospital environment is approached in the international literature, with emphasis on the Top 15

most cited articles on the *Web of Science*TM in the 1995 to 2021 period, with an average citation per article equal to 48.25.

The articulation between the 15 publications with the highest impact factor on the subject and the 06 International Patient Safety Goals of the World Health Organization - WHO¹³ -Goal 1: Identify patients correctly; Goal 2: Improve effective communication; Goal 3: Improve the safety of high-alert medication; Goal 4: Ensure correct-site, correct-procedure, correct-patient surgery; Goal 5: Reduce the risk of health care-associated infections; and Goal 6: Reduce the risk of patient harm resulting from falls, shows that Goal 3 was highlighted with 46.6% of the studies.

Of the 15 publications, the article entitled Global, regional, and national age-sex-specific mortality for 282 causes of death in 195 countries and territories, 1980-2017: a systematic analysis for the Global Burden of Disease Study 2017¹⁶ is related to all Goals.

The articles entitled International Society of Geriatric Oncology Consensus on Geriatric Assessment in Older Patients With Cancer¹⁷ and Relevance of a systematic geriatric screening and assessment in older patients with cancer: results of a prospective multicentric study,²² are related to Goal 1: Identify patients correctly.

The articles In Situ Monitoring of Health in Older Adults: Technologies and Issues²⁴ and Structured nursing communication on interdisciplinary acute care teams improves perceptions of safety, efficiency, understanding of care plan and teamwork as well as job satisfaction³⁰ are related to Goal 2: Improve effective communication between health professionals.

The articles Low intensity transcranial electric stimulation: Safety, ethical, legal regulatory and application guidelines,¹⁸ Prescriber barriers and enablers to minimizing potentially inappropriate medications in adults: a systematic review and thematic synthesis,¹⁹ Posthospital care transitions: Patterns, complications, and risk identification,²⁰ Hospitalizations and emergency department visits due to drug-drug interactions: a literature review,²³ What is hormesis and its relevance to healthy aging and

longevity?²⁷ and Self-Medication with Over-the-Counter and Prescribed Drugs Causing Adverse-Drug-Reaction-Related Hospital Admissions: Results of a Prospective, Long-Term Multi-Centre Study,²⁹ are related to Goal 3: Improve the safety of high-alert medication.

The article entitled Intravenous versus inhalational maintenance of anesthesia for postoperative cognitive outcomes in elderly people undergoing non-cardiac surgery,²⁶ is related to Goal 4: Ensure correct-site, correct-procedure, correct-patient surgery.

The articles entitled Malnutrition and associated factors in elderly hospital patients: A Belgian cross-sectional, multi-centre study²⁵ and Nutrition in care homes and home care: How to implement adequate strategies,²⁶ are related to Goal 5: Reduce the risk of health care-associated infections. The article Preventing Falls and Fall-Related Injuries in Hospitals,²¹ is related to Goal 6: Reduce the risk of patient harm resulting from falls.

Falls and fall-related injuries in hospitals are a widespread concern in hospital environments, with rates between 3 and 5 falls per 1000 day-bed, accounting for approximately one million inpatient falls in the United States each year. Between 1% and 3% of falls in hospitals result in a fracture, but even minor injuries can cause distress and delay rehabilitation. Risk factors most consistently found in the inpatient population include a history of falling muscle weakness, agitation and confusion, urinary incontinence or frequency sedative medication, and postural hypotension. International approaches intended to develop and maintain a fall preventing program suggest that the commitment of the board and an assortment of clinical and support professionals is crucial for the success.²¹

Communication in the hospital environment has shown influence on the health and safety of the elderly, with emphasis on the identification of the elderly during the hospitalization period.

Studies about the consensus of the International Society of Geriatric Oncology on geriatric assessment in elderly patients with cancer and on the relevance of screening and systematic geriatric assessment address themes that are close to identify patients correctly, in the sense of making a good screening through detailed geriatric evaluation of elderly diagnosed with cancer, for the safety of the elderly in the hospital environment.^{17, 22}

Study on a systematic geriatric screening and evaluation in elderly cancer patients with the aim of evaluating the feasibility, utility, on a large scale, of geriatric screening and evaluation in the clinical oncology practice, evaluating the impact on the detection of unknown geriatric problems, geriatric interventions and decisions of treatment, carried out with 1,977 patients in 10 hospitals who had a malignant tumor, aged 70 years, to make a decision about treatment. The evaluation detected unknown geriatric problems in 51.2% of the patients. When the physician was aware of the assessment results at the time of decision making, geriatric interventions were planned in 286 patients (25.7%) and the treatment decision was influenced in 282 patients (25.3%). Geriatric screening and assessment in elderly cancer patients is feasible on a large scale and has a significant impact in detecting unknown geriatric problems, leading to geriatric interventions and tailored care.²²

Study identifies and discuss the important questions related to the use of technologies for screening of elderly patients as: some emerging technologies which can enhance the lives of the elderly and the care; potential applications of the technology in geriatric settings are discussed, with a focus on acute falls, dementia and cardiac conditions; real and perceived concerns in the use of monitoring technology are identified and addressed, including adoption of technology by older people; stigma; and the reduction of social contact; ethical concerns of privacy, autonomy and consent; physician concerns, including information overload, licensing,

and liability; current reimbursement schemes for technology use; and the reliability and infrastructure needed to monitor the technology.²⁴

Nursing communication structured in interdisciplinary intensive care teams improves perceptions of safety, efficiency, understanding of the care plan and teamwork, as well as job satisfaction. Efficient, accurate and timely communication is necessary for quality health care and is strongly linked to health team job satisfaction. Developing ways to improve communication is critical to increasing the quality of care, and interdisciplinary care teams allow for better communication among healthcare professionals. This study examines the patient- and family-centered use of structured interdisciplinary bedside rounds in an Intensive Care Unit for the elderly in a 555-bed metropolitan community hospital. Nurses' job satisfaction is an important marker of retention and recruitment and improving communication can be an important aspect to increase this satisfaction. Additionally, improved communication is critical to maintaining a safe hospital environment with quality patient care.³⁰

When it turns to improve the safety of high-alert medication, a study shows that low-intensity transcranial electrical stimulation in humans, its safety guidelines, ethics, and legal regulations, covering transcranial direct current, transcutaneous direct current spinal stimulation, transcranial alternating current, and transcranial of transcranial random noise or combinations thereof, appears to be safe. The study shows that no serious adverse events were reported in over 18,000 sessions administered to healthy subjects, neurological and psychiatric patients. Moderate adverse events requiring intervention are rare and include skin burns due to the contact with the electrode. Mild symptoms include headache and fatigue after stimulation, as well as tingling and burning sensations occurring during electrical stimulation.¹⁸

A systematic review on the barriers perceived by medical and non-medical prescribers and

facilitators to minimize potentially inappropriate medications for older adults showed four analytical themes: awareness of the problem; secondary inertia to the proposition of value perceived as inferior to cease *versus* to go ahead with the prescription; self-efficacy in relation to the personal ability to change the prescription; and feasibility of changing the prescription in routine care settings, given external constraints. The first three themes are intrinsic to the prescriber, for example, beliefs, attitudes, knowledge, skills, behavior and the fourth is extrinsic, for example, patient, work environment, health system and cultural factors. The study concluded that a myriad of highly interdependent factors shape prescribers' behavior regarding continuation or discontinuation of prescriptions. A thorough understanding of prescriber's barriers and enablers to changing prescribing behavior is critical to developing targeted interventions aimed at prescribing potentially inappropriate medications and reducing the risk of iatrogenesis.¹⁹

The description of the transition patterns of post-hospital care, with the characterization of these patterns as either simple or tricky and the identification of the higher risk patterns was described in a study with elderly people aged 65 years or more who were discharged from an intensive care hospital in 1997-1998. The patterns of post-hospital transfers were described over a 30-day period after the initial hospital discharge. Between 13.4% and 25% of the post-hospital patterns in the sample of 1998 were ranked as tricky. The transitions of post-hospital care are common among the Medicare beneficiaries and the care patterns vary greatly. A significant number of beneficiaries experienced complicated care transitions - a finding that has important implications for patient safety and cost containment efforts. Patients at risk of tricky care patterns can be identified using data available at the time of hospital discharge.²⁰

Drug interactions that lead to hospitalizations and emergency room visits are a subject studied in

patient safety in the hospital environment, with the aim of assessing the incidence of adverse outcomes in patients due to drug interactions, the types of drugs involved and the underlying reason. The study shows that drug interactions are causes of adverse patient outcomes, although there is still uncertainty about the impact on adverse patient outcomes. The study suggests that there are a limited number of drugs involved in most cases and that can minimize the problem.²³

The substantial degradation of some hormonal processes in the elderly can deeply reduce the ability to respond effectively to several environmental/ischemic and other stressors, leading to impaired health, disease, and, ultimately, setting the limits of longevity.²⁷

Self-medication with both over-the-counter and prescription medications can lead to hospital admissions related to adverse drug reactions. Over-the-counter drugs and the use of previously prescribed drugs taken without the current physician's recommendation is a public health concern. This study aims to analyze adverse drug reactions related to self-medication that led to hospitalization. In the general population, self-medication plays a limited role leading to hospitalization. However, prevention strategies focused on elderly patients and patients receiving interactive prescription drugs would improve patient safety.²⁹

Regarding the safety of surgical procedures, a study shows that intravenous versus inhalation maintenance of anesthesia for postoperative cognitive outcomes in elderly patients undergoing non-cardiac surgery, was studied through research to compare the maintenance of general anesthesia for elderly people undergoing non-cardiac surgery with propofol-based total intravenous anesthesia or inhalational anesthesia on postoperative cognitive function and to verify mortality, the risk of hypotension, length of stay in the post-anesthesia care unit and hospital stay. The study showed that it

is not certain whether the maintenance with total intravenous anesthesia based on propofol or with inhaled agents affects the incidences of postoperative delirium, mortality or length of hospital stay because the certainty of the evidence was very low. The authors state that studies in future review updates may provide more certainty for the review results.²⁶

Food safety has an important relationship with the safety of the elderly in the hospital environment. A cross-sectional, multicenter study on malnutrition and associated factors in elderly patients in hospitals, with the aim of verifying the prevalence of malnutrition assessed using the Mini Nutritional Assessment, showed that of the 2,329 elderly patients, 33% suffered from malnutrition. Nearly 43% of patients were at risk of malnutrition and 24% were well nourished. Having swallowing difficulties, taste difficulties and being transferred from a nursing home were aspects strongly associated with malnutrition. The prevalence of malnutrition in hospital wards for the elderly in Belgium is similar to international figures. Elderly people with difficulties in swallowing, tasting, or coming from a nursing home may need adequate nutritional care. Given the negative impact of malnutrition on mortality and morbidity, an effective nutrition policy must be emphasized.²⁵

The implementation of appropriate nutrition strategies in nursing homes and home care was studied, considering that malnutrition in home care and home care settings is an unrecognized problem with significant consequences. A study shows that the prevalence of malnutrition in both home care and domiciliary environments varies between 15% and 65%. The causes of malnutrition are many: medical, social, environmental, organizational, and financial. The lack of vigilance of people, their relatives and health professionals play an important role. Malnutrition increases the risk of infection, hospitalization, mortality and alters the quality of life. Furthermore, diseases related to malnutrition

are an economic burden in most countries. Nutritional assessment should be part of routine overall management. Nutritional support combined with physical training is recommended. Awareness, information, and collaboration with all stakeholders should facilitate the implementation of nutrition strategies. The study concludes that malnutrition in care environments in nursing homes and domiciliary is a considerable problem and measures must be taken to prevent and treat it.²⁸

Amongst the Top 15 studies on the safety of the elderly person in hospital environment published in the 1995-2021 period, only one involves all goals and only one study of the Goal 4 and only one study of the Goal 6 were published, which corresponds to 6.6% of the studies of each Goal. Studies related to Goals 1 - Correct identification of the patient, Goal 2 - Improve communication between health professionals and Goal 5 - Reduction of the risk of infections associated with health care, with 2 studies each, corresponded to 13.3% of the studies of each Goal. Goal 3 - Improve the safety of high-alert drugs was highlighted with 46.6% of the studies.

CONCLUSION

There are few findings on the Web of Science which address safety of the elderly in the hospital environment issue, represented by 172 records of publications as sources of value on the subject, published in the 1995 to 2021 period, recognized through authorship and citation metrics. The analysis of the indicators about the dynamics and evolution of the scientific and technological information on the safety of the elderly in the hospital environment showed that there is a gap in the knowledge on the theme, presented in a broad and diversified way without demonstrating the existence of an articulation between the studies, authors and institutions from around the world.

There is a need to build knowledge networks in the area to allow more studies capable of

contributing to the improvement of the safety of the elderly in the hospital environment.

RESUMO

Introdução: A redução do risco de danos desnecessários associados ao processo assistencial em saúde até um mínimo aceitável, se configura como a segurança do paciente no ambiente hospitalar. **Objetivo:** Analisar a produção científica internacional sobre a segurança da pessoa idosa no ambiente hospitalar. **Método:** Pesquisa bibliométrica, realizada na *ISI Web of Knowledge/Web of Science™*, no recorte temporal entre os anos 1995 e 2021, utilizando-se os descritores: “patient safety” and elderly* and “hospital environment”, efetuada a partir da exportação destes dados para o *software* de análise bibliométrica HistCite™. **Resultados:** Foram localizados 172 registros de publicações, em 59 periódicos distintos, escritos por 218 autores que possuem vínculos com 200 instituições, localizados em 113 países. Na análise da contagem do número de citações, o valor do h-index é igual a 36 e média de citações por artigo de 48,25. A articulação entre as 15 publicações de maior fator de impacto sobre o tema e as 06 Metas Internacionais de Segurança do Paciente da Organização Mundial de Saúde, mostra que a Meta 3 foi destaque com 46,6% dos estudos, sobre melhorar a segurança dos medicamentos de alta vigilância. **Implicações:** A análise dos indicadores sobre a dinâmica e evolução da informação científica e tecnológica, evidenciou que existe uma lacuna no conhecimento sobre o tema, apresentado de forma ampla e diversificado sem demonstrar a existência de uma articulação entre os estudos, autores e instituições de todo o mundo. Há necessidade de construção de redes de conhecimento na área que possibilitem mais estudos capazes de contribuir para melhoria da segurança do idoso no ambiente hospitalar.

DESCRITORES

Segurança do Paciente; Idoso; Ambiente hospitalar.

RESUMEN

Introducción: Una reducción del riesgo de daños desnecesarios asociados al proceso de asistencia en salud con un mínimo de aceptable, se configura como una seguridad del paciente en un ambiente hospitalario. **Objetivo:** Analizar una producción científica internacional sobre la seguridad del niño en el ambiente hospitalario. **Delineación:** Pesquisa bibliométrica, realizada en *ISI Web of Knowledge/Web of Science™*, sin recorte temporal entre los años 1995 y 2021, utilizando-se os descritos: “seguridad del paciente” y ancianos* y “entorno hospitalario”, efectuada a partir de la exportación de estos datos para el *software* de análisis bibliométrico HistCite™. **Resultados:** Foram localizados 172 registros de publicaciones, em 59 periódicos distintos, escritos por 218 autores que posiblemente tengan vínculos con 200 instituciones, localizados em 113 países. Na análise da contagem do número de citações, o valor do h-index é igual a 36 e média de citações por artigo de 48,25. Una articulación entre las 15 publicaciones de mayor impacto sobre el tema y las 06 Metas Internacionais de Segurança do Paciente da Organização Mundial de Saúde, muestra que a Meta 3 foi destaque com 46,6% dos estudos, sobre melhorar a segurança dos medicamentos de alta vigilância. **Implicações:** A análise dos indicadores sobre a dinâmica e evolução da informação científica e tecnológica, evidenciou that exist uma lacuna no conhecimento over o tema, apresentado of form ampla e diversified sem demonstrar a existência de uma articulação between os estudos, autores e instituições of all o mundo. Há necessidade de construção de redes de conhecimento na area que possibilitem mais estudioscapaces de contribuir para melhoria da segurança do idoso no ambiente hospitalar.

DESCRIPTORES

Seguridad del paciente; Anciano; Ambiente hospitalário.

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GMS and MASPM: contributed to article's conception, writing and critical review, and data collection, analysis, and interpretation. **All authors agree and are responsible for the content of this version of the manuscript to be published.**

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CONFLICTS OF INTEREST

There are no conflicts of interest to declare.