

SEGURANÇA DO PACIENTE EM UNIDADES BRASILEIRAS DE MÉDIO E ALTO RISCOS: REVISÃO SISTEMÁTICA DE LITERATURA

PATIENT SAFETY IN BRAZILIAN HEALTH CARE UNITS OF MEDIUM AND HIGH RISK: SYSTEMATIC LITERATURE REVIEW

SEGURIDAD DEL PACIENTE EN UNIDADES BRASILEÑAS DE MEDIO Y ALTO RIESGO: REVISIÓN SISTEMÁTICA DE LA LITERATURA

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RESUMO

Objetivo: avaliar a implantação de ferramentas, para a segurança (protocolo do programa nacional de segurança do paciente), na assistência ao paciente adulto e idoso internado em unidades brasileiras de médio e alto risco. **Método:** trata-se de uma revisão sistemática de literatura baseada na ferramenta Prisma (2015). As bases de dados PubMed, *Scientific Electronic Library On-line* (SciELO) e biblioteca virtual de saúde (BVS) foram utilizadas para a busca dos artigos. **Resultados:** A análise conjunta dos estudos mostrou que as ferramentas, para a segurança, na assistência aos pacientes adultos e idosos internados, variaram entre as instituições brasileiras de médio e alto risco e são pontuais, não sendo identificada nenhuma unidade que adota todas as ferramentas de segurança do paciente. **Conclusão:** Os protocolos do programa nacional de segurança do paciente são ferramentas implantadas de forma pontual pelas unidades brasileiras de média e alta complexidade.

Descritores: Segurança do Paciente; Assistência de Enfermagem; Instituições de Saúde.

ABSTRACT

Objective: to evaluate the implementation of safety tools (protocol of the National Patient Safety Program) in the care of adult and elderly patients admitted to Brazilian units of medium and high risk. **Method:** this is a systematic literature review based on the Prisma tool (2015). The PubMed, Scientific Electronic Library Online (SciELO) and Virtual Health Library (VHL) databases were used to search the articles. **Results:** the joint analysis of the studies showed that the tools for safety in the care of hospitalized adult and elderly patients varied between the medium and high risk institutions analyzed, and they are punctual; no one unit that adopted all patient safety tools was identified. **Conclusion:** the protocols of the national patient safety program are tools implemented in a timely manner by medium and high complexity units in Brazil.

Keywords: Patient Safety; Nursing Care; Health Facilities.

RESUMEN

Objetivo: Evaluar la implementación de herramientas de seguridad (protocolo del Programa Nacional de Seguridad del Paciente) en la atención de pacientes adultos y ancianos ingresados en unidades brasileñas de riesgo medio y alto. **Método:** Esta es una revisión sistemática de la literatura basada en la herramienta Prisma (2015). Las bases de datos PubMed, *Scientific Electronic Library Online* (SciELO) y *Virtual Health Library* (VHL) fueron usadas para buscar los artículos. **Resultados:** El análisis conjunto de los estudios mostró que las herramientas para la seguridad en la atención de pacientes adultos y ancianos hospitalizados variaron entre las instituciones brasileñas de riesgo medio y alto y son puntuales, y no se identificó ninguna unidad que adopte todas las herramientas de seguridad del paciente. **Conclusión:** Los protocolos del programa nacional de seguridad del paciente son herramientas implementadas de manera oportuna por las unidades brasileñas de media y alta complejidad.

Palabras clave: Seguridad del Paciente; Cuidado de Enfermería; Instituciones de Salud.

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INTRODUCTION

The care provided to humans, inherent in nursing, has numerous benefits, but is also susceptible to the occurrences of many errors. The complexity of new treatments and care technologies, as well as the increased burden of disease in the population, without proper planning and appropriate risk management, can contribute to the emergence of important damage to patients that results in increased hospital stay, injuries, infections and even the death of the sick ones⁽¹⁾. These damages are consequences of the so-called Adverse Events (AE), which are characterized as incidents that result in health damage⁽¹⁻³⁾.

In order to prevent and reduce the frequency of AE and promote patient safety, the National Patient Safety Program (NPSP) was instituted in Brazil in 2013, with mandatory actions for all health facilities and, among them, the implementation of patient safety protocols⁽²⁾. These protocols are tools for implementing patient safety measures and were grounded on international goals of the World Health Organization (WHO). The Ministry of Health (MOH) developed six protocols: hand hygiene practice in health facilities; safe surgery; safety in prescribing/using and administering medications; patient identification; fall prevention; and pressure ulcers. In addition to these Protocol themes, the NPSP encompasses measures for communication in the environment of health facilities and the safe use of equipment and materials^(2,4).

Taking as reference the protocols of the MOH and the performance of the team of nursing professionals, it is understood that these professionals have a very important and direct participation in achieving quality care, based on safe procedures for patients. The position occupied by nurses in care and, consequently, the decisions on the approach during care provision have a great impact on the quality and excellence of the services provided; such decisions may be assertive or not, and will ultimately influence the risk of occurrence of AE⁽¹⁻⁵⁾.

Health care institutions that do not use tools to promote safety present higher risks of occurrence of AE, and the longer the hospitalization time of patients, the greater the risk of the damage caused by care-related AE⁽⁶⁾.

Given the above, it is confirmed that the application of tools to promote patient safety must be inseparable from the clinical care

practice. However, the literature, especially in Brazil, about the actual implementation and application of these tools for the reduction/prevention of AE in Brazilian institutions is still scarce. Thus, the objective of this study was to evaluate the implementation of tools for safety in the care of adult and elderly patients hospitalized in Brazilian health care units of medium and high risk.

METHOD

Study design: this is a systematic literature review based on the Prisma tool, which recommends the following steps: formulation of the problem, literature review, selection of articles, data analysis, and presentation of the review⁽⁷⁾.

Eligibility criteria: the eligibility criteria were elaborated based on the research question created, considering the "PICOS" strategy: "P" (patients): adult and elderly inpatients of both sexes; "I" (intervention): hand practice hygiene in health facilities; safe surgery; safety in prescribing/using and administering medications; patient identification; communication in the environment of health facilities; fall prevention; pressure ulcers; transfer of patients between points of care; and safe use of equipment and materials⁽²⁾; "C" (control): patients who were not treated with safety actions; "O" (outcomes): adverse events; "S" (study design): randomized and observational clinical trials (Cross-sectional, Cohort and Case-Control). Guiding question: "What safety tools advocated by the MOH in the care of hospitalized patients are actually implemented in Brazilian health institutions?".

Thus, the search included articles from randomized clinical trials and observational studies conducted in Brazil until September 14, 2018. There was no language or time restriction in order to cover as many studies as possible, including even those with more than five years. The exclusion criteria were publications in editorial format, case reports, expert opinions, and review articles and publications that addressed patient safety in primary care.

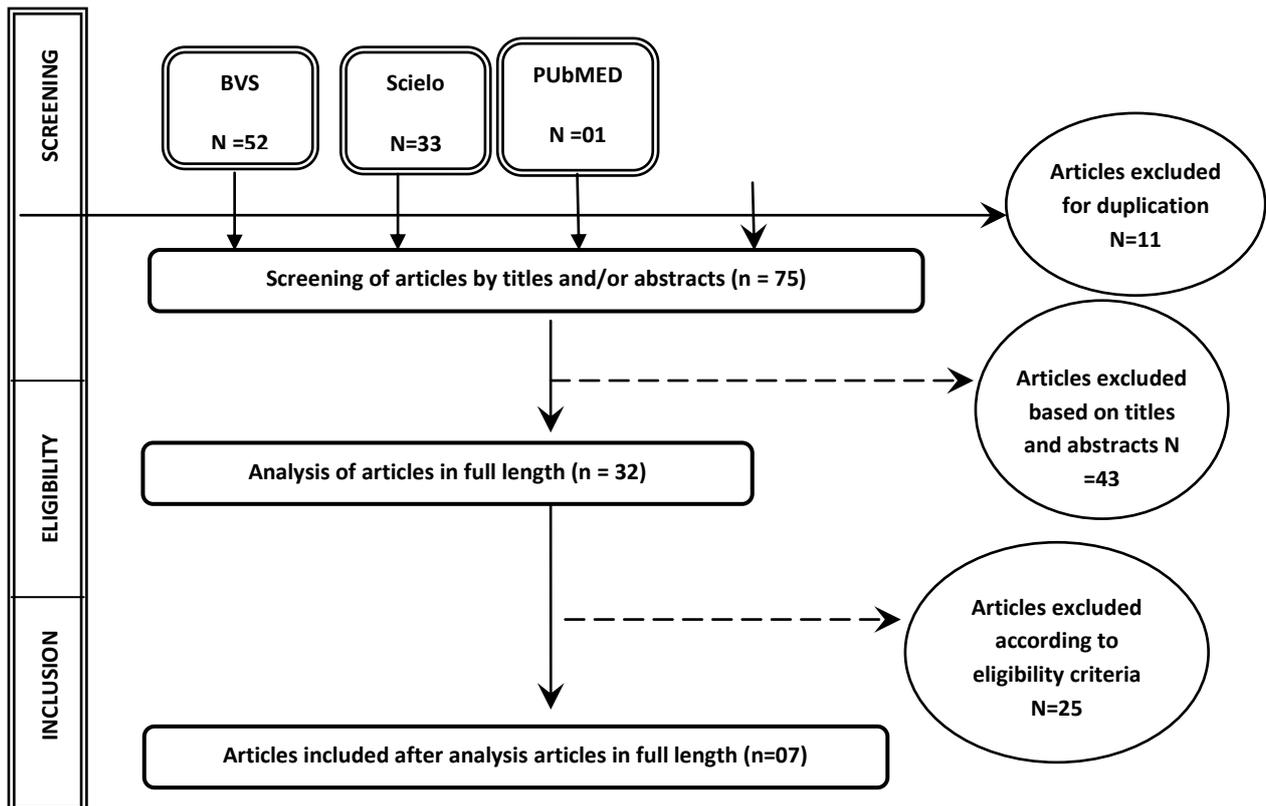
Sources of Information: systematic research was performed using PubMed, Scientific Electronic Library Online (SciELO), and the Virtual Health Library (VHL) databases. Search: the search strategy used the descriptors registered in MeSH and DeCs, and the Boolean operator "AND" to associate the terms in all databases: (1)

"Patient safety" (MeSH) AND "nursing"; (2) "patient safety" AND "nursing care".

Data extraction: all articles were evaluated by two reviewers (J.S.S and P.S.D.L). At first, duplicated articles were removed. Then, in the phase of evaluation of the articles, the titles and abstracts were read. Articles that did not meet the eligibility criteria were excluded and those

selected were submitted to the second phase of analysis, when each reviewer read the full texts and provided a new opinion for inclusion or exclusion in the current article. In cases of disagreement about inclusion or exclusion, the articles were read again and a consensus between the two reviewers was reached as to keeping or excluding the work (FIGURE 1).

Figure 1 - Selection of articles by search strategy in the databases. Divinópolis (MG), Brazil, 2019.



Source: Research Data, 2018.

The following variables were extracted from the articles selected for analysis: (1) author, year of publication, country of publication; (2) participants and sample size; (3) Criteria for defining patient safety actions; (4) main results (TABLE 1).

RESULTS AND DISCUSSION

In total, 86 articles were selected from all databases described. After removing the duplicates, a total of 75 articles remained and had their titles and abstracts evaluated. After

applying the proposed eligibility criteria, seven articles were selected and read in full length. Among them, one of the articles was of the action-research type, one was a cohort study, one was an exploratory research, and four were descriptive studies (one with a descriptive-analytic-qualitative approach, one with a cross-sectional approach, one with a retrospective descriptive approach, and one with a qualitative descriptive approach). Table 1 presents the synthesis of the information of the articles.

Table 1 - Studies on safety tools in the care of adult and elderly patients in Brazilian institutions of medium and high risk ("N" of Health Professionals = 67; "N" of university teachers and students = 162; "N" of patients = 2,256; total "N" of the review = 2485 individuals)

Author/Year/Country	Participants/Sample size	Criteria for defining patient safety actions	Main results
1 Paranaguá, et al., 2014	Patients = 735	Structured instrument containing assertions about the researched theme	Among the incidents related to care, those related to medication and omission of care stood out.
2 Paixão, et al., 2018, Brazil	Patients = 377	Basic safety check instrument validated by Brazilian experts	The absence of systematic identification of patients, assessment and signaling of the risk of falls and development of pressure injuries was evidenced.
3 Belela-Anacleto, et al., 2013, Brazil	Professors = 53 Students = 109	Structured instrument containing assertions about the researched theme	Internship activities take place in spaces where there is no adequate infrastructure for recommended HH* practices, a fact that contributes to the occurrence of failures in the care process and compromises patient safety.
4 Oliveira, et al., 2017, Brazil	Patients = 96	Application of the "Fall Risk Score" scale to identify high risk for falls	Psychological status, use of orthosis, and cognitive impairment were identified as risk factors for falls in hospitalized elderly.
5 Sakai, et al., 2016, Brazil	Patients = 1408	The collection was performed, through operational audit, to evaluate 15 indicators of quality of care, including the indicator "Risk of Fall".	The high risk of falls score was more prevalent in medical-surgical units. Prevention measures were adequate in 91.0%. Knowing the risks of falls and the indicators of quality, associated with raising the awareness and training professionals are essential measures in the prevention of incidents and adverse events.
6 Oliveira, et al, 2014, Brazil	Nurses = 37	Semi-structured interview script composed of guiding questions about concepts, evaluation criteria of the physical, human and organizational structure necessary to promote patient safety, in addition to the risks related to nursing care.	The participants identified physical/chemical, clinical, assistance and institutional risks, as well as barriers and opportunities that imply lack of patient safety. On the other hand, they mentioned practices based on international goals, published by the World Health Organization.
7 Pancieri, et al., 2013, Brazil	Health professionals = 30	Application of the Safe Surgery Checklist	The professionals did not notice changes in interpersonal communication with the use of the checklist, but indicated that it provided more safety to the procedure. They also pointed to the need for changes in the checklist to ensure safe surgeries.

Source: Research Data.

* HH: hand hygiene.

Of the seven studies selected, the population involved was 67 health professionals, 53 teachers, and 109 university students and also 2,256 patients undergoing care in health facilities. Adult and elderly participant of both sexes were included, totaling a population of 2485 people.

Rescuing the first selected article, a cross-sectional study developed by Paranaguá et al.⁽⁸⁾, the objective was to estimate the prevalence and factors associated with the occurrence of medication-related incidents, notes in the medical records of patients admitted to the surgical clinic of a teaching hospital. In this study, it was found that the highest occurrence of failure in the application of the safety protocol in prescription, use and administration of drugs was related to dose omission and absence of drug checks. Death was the most serious consequence.

Paixão et al.⁽⁹⁾ conducted an important exploratory study with 377 participants in 2018 to investigate the compliance with national patient safety protocols in an Emergency Care Unit (ECU) in Paraná. In the results, the categories a) identification of patients; b) evaluation of patients susceptible to falls and the development of pressure injuries; and c) identification of adopted solutions were the ones that most presented weaknesses regarding adherence to basic patient safety actions. It is also noteworthy that individuals who belonged to the geriatric and pediatric groups showed higher risk and probability for the occurrence of AE.

Belela-Anacleto et al.⁽¹⁰⁾ developed a study aimed at identifying the perspective of health professors and university students on aspects related to hand hygiene and healthcare-related infections in their daily practice. Their study evaluated a population of 109 university students and 53 teachers from a public university in São Paulo, Brazil. From their results, they could identify that the best way to prevent health care-related infections (HCRI) was the application of the hand hygiene (HH) safety protocol.

Even so, according to the authors, in the opinion of health professors and university students, although the importance of HH as a safety measure is clear, internship activities still take place in places where there is no adequate infrastructure to the recommended practices of HH, a fact that contributes to the occurrence of failures in the care process and compromises

patient safety. Oliveira et al.⁽¹¹⁾ and Sakai et al.⁽¹²⁾ investigated the safety protocol "risk of falls and preventive measures". Both studies found that older individuals are more vulnerable to the risk of falls. Oliveira et al.⁽¹¹⁾ pointed out that, among the elderly who presented falls, most were female, with an average age of 74.81 years. Psychological status, use of orthosis, and cognitive impairment were identified as risk factors for falls in hospitalized elderly. Sakai et al.⁽¹²⁾ identified that patients older than 60 years had a higher risk of falling (33.9%). The individuals classified as at high risk were those who were connected to venous devices (90.1%), those who had a history of previous falls (59.9%) and those with disoriented mental status (34.0%). Prevention measures were adequate in 91.0%.

Another study by Oliveira et al.⁽¹³⁾ whose objective was to identify and analyze strategies to promote patient safety, from the nurses' perspective, identified that physical-chemical, clinical, healthcare and institutional risks were the factors that led to lack of patient safety and that therefore would need to be worked on to make care safe. In addition, they revealed that there was a need for managers' attention to encourage and train health professionals for the prevention, notification and effective management of risks of AE during the performance and assessment of care provided.

Pancieri et al.⁽¹⁴⁾, in their field study conducted in a teaching hospital, applied a "safe surgery checklist" to analyze its contribution to the safety of the surgical process. The results identified the instrument as viable to ensure safe surgeries and implement effective communicative processes in these environments. They also made clear that the application of the "safe surgery checklist" in the Surgical Center (SC) showed better efficacy, providing greater safety during the procedures, as well as favoring interaction and communication between the team. One of the difficulties encountered in implementing the checklist was the acceptance of the method by all professionals.

In the studies listed for this review, it was evident that the tools for patient safety vary between medium and high risk Brazilian institutions, with no standard profile for their implementation. The data available in the literature were limited to confirm the implementation of "all" care safety tools in medium and high risk units, as recommended by RDC 2013⁽³⁾. Although this is a topic discussed for

several decades, it was only regulated by the responsible bodies six years ago, with more precise definition of actions to ensure safe care. Following these six years of regulation of specific measures for safe care, it is believed that there is a greater experience with the implementation of safety tools in medium and high risk institutions and, therefore, the number of studies showing, in a more standardized way, the practical applications of safe care in medium and high risk institutions is expected to increase.

In the study developed by Paranaguá et al.⁽⁸⁾, the greatest safety flaw in care was centralized in a routine activity of the nursing team: the administration of drugs. In this study, not only drug dose errors were identified, but also the lack of checking after administration, something that significantly compromised patient safety. The identification in this study of deaths as a consequence of unsafe care practices was very important, too. These results demonstrate that this type of impairment of patients' health, due to the unsafe practice of care, are very impacting and need to be rethought in the clinical practice of nursing care. Besides identifying safety goals not applied, Paranaguá et al.⁽⁸⁾ also discussed the lack of notification of AE as a hindering factor in decision making for corrective measures and guidelines for future conduct. Alternatively, in order to minimize the situation found, they suggested the creation of standard instruments that would facilitate such notifications, as well as the application of non-punitive measures to provide security to the professionals when they need to report AE in rich detail, which would allow the correction of failures in the service. The patient safety context in this study was compromised, basically, by the conducts adopted by the nursing team, which apparently did not feel safe to report the occurrence of AE. When an adverse event is identified, which endangers the patient's life, it takes a lot of professional maturity and ethical attitude to expose the situation and cooperate with sequential actions, seeking learning, so that that event no longer occurs. However, it is understood that, even in view of the possible administrative and professional consequences, notification of AE should be, rather, the standard conduct of the nursing team, and these events should not be seen as "natural" in the professional practice.

Still, when it comes to drug administration, although Paixão et al.⁽⁹⁾ did not classify which goals would be evaluated, in their study at an

ECU, when they describe the lack of identification in adopted solutions among the categories, this was an indicator of the lack of safety, and suggested the failure to comply with the protocol "safety in the prescription, use and administration of medications" as a weakness in the application of safety measures to patients assisted at the ECU. These types of healthcare institutions treat patients considered to be at more severe, acute and life-threatening situations and, therefore, the assistance without the use of appropriate safety tools can have very serious consequences for the patients in most cases. The basis of the planning of care should be patient safety; in fact, patient safety cannot be viewed as a complementary action to care at all.

A theoretically simpler safety measure but with the potential to impact the physical integrity of patients is hand hygiene. Belela-Anacleto et al.⁽¹⁰⁾ evaluated the perspective of university teachers and students of the health area, in the internship fields, about hand hygiene aspects and health care-related infections in the daily practice of care. Very clearly, the results of this study showed that teachers and students again confirmed what modern nursing precursor Florence Nightingale said about the topic since the last century: hand hygiene can prevent the installation of infectious conditions and the non-realization of this safety action significantly compromises the physical integrity of the assisted patients. This finding seems almost impossible or even unrealistic, ie the identification of patient care without HH. However, without justifying, but rather explaining, the authors said that lack of HH may occur in many situations not necessarily due to the lack of commitment of professionals, but due to the lack of minimal infrastructure in the places where the internships take place (availability of sinks, for example). Perhaps this lack of minimal infrastructure is thought to be a consequence of a national culture on the part of our public managers that health is not a prime asset to be preserved and therefore not seen as a priority for public money investment. This scenario of "health crisis" to which Brazil has been historically exposed seems to foster unfavorable behaviors that range from administrative issues to direct care itself.

Two other authors studied in this review, Oliveira et al.⁽¹¹⁾ and Sakai et al.⁽¹²⁾, investigated the safety protocol "prevention of falls" and preventive measures. For Oliveira et al.⁽¹¹⁾, individuals connected to venous devices, those

who already had a history of previous falls, and those who have neurological changes are more predisposed to this event. Sakai et al.⁽¹²⁾ pointed out that individuals with cognitive impairment, those diagnosed with depression or those with orthosis are more susceptible to falls. In this sense, it can be stated that these authors identified a pattern of patients more susceptible to falls, which is another indicator of patient safety. Recognizing the risks of falls is the best way for the multidisciplinary team to establish strategies to maintain the health of these individuals, reducing AE in their case. For this reason, it is so important that all health professionals who promote care have a close interaction in order to recognize the reality, including the risks to which the patients are exposed, so that appropriate prevention measures can be worked according to the profile of each patient.

Oliveira et al.⁽¹³⁾ corroborate the aforementioned authors and emphasize that the best way to provide safe and harm-free care is by assessing the risks to which individuals are exposed during nursing assistance. Thus, strategies that collaborate to extinguish the risk of AE must be worked. However, all these safety actions also depend on the working conditions of the health professionals. It is necessary to ensure adequate conditions for the efficient development of routine activities, preserving professional dignity, and thus favoring excellence of care.

The protocol "safe surgery" was identified in the study by Pancieri et al.⁽¹⁴⁾, in which the researchers showed that 50% of the causes of AE in surgical procedures could have been prevented by properly working safety measures. It was shown that the application of the safe surgery checklist in surgical centers favored the success of surgical procedures performed, and facilitated interaction and communication between team members. Interestingly, they pointed out that one of the difficulties encountered in implementing the checklist was the acceptance of the method by the professionals involved. Again, it seems paradoxical that people involved in care have resistance to implementing measures that will ensure the well-being and physical integrity of the patients. It is understood that nurses, at this moment, have a fundamental role as managers, in raising the awareness of staff members that working with safety measures is not a choice of

healthcare professionals, but an inherent duty to any care practice.

Finally, although this review demonstrated the reality of safety measures in hospital units, contributing to a current unveiling of this reality, the study has limitations inherent to the development of some reviews: it was not possible to standardize the design of the studies to be included, precisely due to the scarcity of scientific publications in this area.

In addition, it was not possible to assess the methodological quality of the studies, as there was no validated instrument that allowed the evaluation of all types of designs included in this review. Anyway, it is believed that this study brought important results that could be used to improve nursing care for hospitalized patients.

CONCLUSIONS

The protocols of the national patient safety program are tools implemented in a punctual manner by Brazilian institutions of medium and high risk, and no institution was identified that registered the implementation of all patient care safety tools. It is worth considering that the scarcity of specific patient safety articles in Brazilian units of medium and high risk is still quite prominent and, for this reason, articles older than five years had to be included in this review.

In any case, it became clear that the best way to provide care without AE is by managing the risks to which the sick individuals are exposed. It is noteworthy that the protocols are guiding tools that aim to assist in the mitigation and prevention of the occurrence of AE. It is also recommended that health institutions be aware and understand the importance of the correct notification of the cases occurred in the care units and, through these notifications, carry out educational and non-punitive actions, emphasizing how significant it is for both the patients and for the professionals to provide harm-free care.

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