

# Nursing care in the prevention of pressure injury in the elderly in the intensive care unit

Cuidados de enfermagem na prevenção de lesão por pressão em idosos na unidade terapia intensiva

Cuidado de enfermería en la prevención de la lesión por presión en el anciano en la unidad de cuidados intensivos

## RESUMO

Objetivo: identificar os principais cuidados de enfermagem para prevenir o surgimento de lesões por pressão em pacientes idosos na unidade terapia intensiva. Método: Trata-se de revisão integrativa da literatura, que foi realizada em três bases de dados: LILACS; MEDLINE e BDNF. A coleta de dados ocorreu no ano de 2021, entre os meses de julho e agosto. Mediante critérios de inclusão e exclusão, foram selecionados 09 artigos na amostra final. Resultados: Os principais resultados se voltaram ao uso de tecnologias e sua importância dentro da UTI no cuidado ao idoso, e ainda, quanto a gestão de enfermagem e saúde, que atua na administração desse processo. Conclusão: Percebeu-se a importância dos cuidados de enfermagem na UTI, diante de lesões por pressão em paciente idosos. Sabendo da necessidade de novos estudos dentro da temática, visando fortalecer cada dia mais as evidências sobre o assunto.

**DESCRIPTORES:** Enfermagem; Idoso; Lesão por pressão; Prevenção.

## ABSTRACT

Objective: to identify the main nursing care to prevent the appearance of pressure injuries in elderly patients admitted to an intensive care unit. Method: The present study is an integrative literature review, which was carried out in three databases: LILACS, MEDLINE and BDNF. Data collection took place in the year 2021, between the months of July and August. Through inclusion and exclusion criteria, 09 articles were selected in the final sample. Results: In this way, the main results will focus on the use of technologies and their importance within the ICU not taking care of the elderly, and also regarding the management of disease and health, which acts in the administration of this process. Conclusion: The study achieved its objective, and realized the importance of nursing care in the ICU, due to pressure injuries in elderly patients.

**DESCRIPTORS:** Nursing; Old man; Pressure injury; Prevention.

## RESUMEN

Objetivo: identificar los principales cuidados de enfermería para prevenir la aparición de lesiones por presión en pacientes ancianos en la unidad de cuidados intensivos. Método: Es una revisión integrativa de la literatura, que se realizó en tres bases de datos: LILACS, MEDLINE y BDNF. La recolección de datos ocurrió en el año 2021, entre los meses de julio y agosto. A través de criterios de inclusión y exclusión, fueron seleccionados 09 artículos en la muestra final. Resultados: Así, los principales resultados se dirigieron al uso de tecnologías y su importancia dentro de la UTI en el cuidado del anciano, así como, en cuanto a la gestión de enfermería y salud, que actúa en la gestión de este proceso. Conclusión: El estudio logró su objetivo, y la importancia del cuidado de enfermería en la UCI, frente a las lesiones por presión en ancianos, sabiendo la necesidad de nuevos estudios en el tema.

**DESCRIPTORES:** Enfermería; Anciano; lesión por presión; Prevención.

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**INTRODUÇÃO**

The occurrence of Pressure Injuries (PI) in hospitalized patients is considered, not only in Brazil, but worldwide, as a serious public health problem, especially in the elderly and in patients with chronic-degenerative diseases.<sup>1</sup> Pressure Injuries (PI) are areas of tissue destruction produced by the compression of the skin against bony prominences, especially the sacral, trochanter and ischium bones, as the contact surface lasts for a long time. Due to this, it impairs the tissue's blood supply and nutrients, leading to vascular insufficiency, tissue anoxia and cell death.<sup>2</sup>

PIs develop within 24 hours or can take up to five days to occur. In view of this, the multidisciplinary health team should be responsible for injury prevention, with this, they must know the risk factors for the formation of PI, which are: tissue perfusion, age, immobility, activity, level of consciousness, some medications, excessive moisture, nutrition, hydration, and some chronic diseases such as diabetes and cardiovascular disease.<sup>2</sup>

Pressure maintained for a period of two hours can lead to an ischemic injury. In addition, patients with severe impairment of their general condition may develop lesions in less than

two hours. When skin pressure is higher than mean capillary pressure (32 mmHg) in healthy individuals, local ischemia occurs, causing edema, erythema, erosion and ulcers.<sup>3</sup>

PI has become a public health problem that is quite common, this occurs mainly when patients in critical condition are hospitalized for a long time and do not have adequate care, that is, they are exposed to complications. In addition, it involves the suffering of people, economic aspects and an interdisciplinary challenge, as it consumes a large amount of health system resources and hours of nursing care.<sup>4</sup> Nurses have autonomy in the exercise of their profession, and among the care, there is the PI, in which this professional is qualified to take care of complex injuries, prescribe, evaluate the wound in an integral way, supervise and perform the dressings.<sup>4</sup>

Therefore, the present work aims to identify the main nursing care to prevent the emergence of pressure injuries in elderly patients in the Intensive Care Unit. Considering the lack of research that determines Identifying the main nursing care to prevent the emergence of pressure injuries in elderly patients in the ICU, it is relevant to answer the research question: Which are the nursing care to prevent

the emergence of pressure injuries in elderly patients in the ICU?

**METHOD**

The present study is an integrative literature review, based on scientific articles. This method aims to group and synthesize research results on a given topic in an organized way so that it contributes to a deepening of knowledge about the issue addressed, it is presented in six described steps.<sup>5</sup> This method has been used in the production of articles, dissertations and thesis in the health area in recent decades. This method allows "[...] the search, critical evaluation and synthesis of available evidence on the investigated topic."<sup>5</sup>

The use of this method allows, as a result, the current situation of knowledge on the topic addressed, the implementation of interventions in health care and the identification of gaps that need further study on the subject.

1st stage: elaboration of the guiding question. Its definition is the most important phase, as it determines the identification of what must be addressed to contemplate the proposed theme.

2nd stage: search or sampling in the literature. The search was car-

ried out in a broad and diversified way in the reliable databases, taking into account that the determination of the inclusion and exclusion criteria for material selection must be carried out in accordance with the guiding question.

3rd stage: data collection. At this stage, what would be extracted from the selected studies was defined through the use of a previously elaborated instrument, with the purpose of organizing the key information in a concise way for the construction of the study.

4th stage: critical analysis of the included studies. In this phase, detailed data analysis will be carried out.

5th stage: discussion of the results. At this stage, the results obtained will be discussed.

6th stage: presentation of the integrative review. This is the phase where the study will be properly prepared.

The search was performed in three databases: LILACS (Latin American Caribbean Literature in Health Sciences), MEDLINE (Medical Literature Analysis and Retrieval System Online) and BDENF (Bibliographic Database Specialized in the Nursing Area). The descriptors used for the crossing in the aforementioned bases were: Nursing; Elderly; Pressure Injury, Prevention, in Portuguese and English, according to the Health Sciences Descriptors (DeCS) and Medical Subject Headings (MeSH), separated by the Boolean operator "AND". In this way, we sought to amplify the research context. Data collection took place in 2021, between the months of July and August.

For the sample, the following inclusion criteria were determined: being available in the selected databases, contemplating the proposed theme, being available in full text and in Portuguese, be article-type publications, in the last 5 years (2017-2021) and that answered the guiding question of

the research. The exclusion of articles covered works that did not address the topic, as well as those that were repeated in the databases, outside the time frame established by the research in the Spanish language.

01 search was carried out in the selected bases, before the cross search with the descriptors, a universe of 750 studies was obtained, using the inclusion criteria, 14 were available in full; in Portuguese and English and within the established time frame; of these 14, 05 articles did not correspond to the guiding question of the work, thus resulting in a final sample of 09 arti-

cles. This entire process was guided by PRISMA. In this way, the search was validated by two researchers.

Data collection was performed using an instrument (form), the information contained in that instrument aims to characterize and contribute to the selected publications, in order to meet the proposed objectives for the investigation. They are: year, title, authors, database, journal, method, location and modality.

## RESULTS

According to the established cri-

Quadro 1 - Distribuição dos artigos selecionados para revisão integrativa:

| ID | TITLE   | DATABASE                | OBJECTIVE  | YEAR |
|----|---|-------------------------|--|------|
| A1 | Pressure injuries related to medical devices in the clinical practice of nurses <sup>6</sup>                        | LILACS, BDENF - Nursing | To investigate the knowledge and care developed by nurses from a hospital institution in relation to pressure injuries related to medical devices.   | 2021 |
| A2 | Minimum viable product for support application: management of nursing care for the skin of the elderly <sup>7</sup> | LILACS, BDENF - Nursing | To describe the stages of construction of a Minimum Viable Product for a decision support application for nurses for prevention, nursing diagnosis and treatment of friction/pressure injury in the elderly. | 2021 |
| A3 | Vaseline gauze for prevention of pressure sores in people with immunobullous dermatoses <sup>8</sup>                | LILACS, BDENF - Nursing | Evaluate the mobility of the client with immunobullous dermatosis before and after application of the Vaseline gauze dressing.   | 2020 |
| A4 | Nursing interventions for neurocritical patients <sup>9</sup>   | LILACS, BDENF - Nursing | To identify Nursing interventions for neurocritical patients in an Intensive Care Unit.  | 2020 |
| A5 | Permanent education for good practices in the prevention of pressure injury: almost-experiment. <sup>10</sup>       | MEDLINE                 | To verify the effectiveness of the educational intervention through the assessment of nurses' knowledge about pressure injury prevention.  | 2019 |

teria, the final sample of this review consisted of 09 articles. Each article is classified in the table by the letter (A) organized in a didactic way according to the table:

**DISCUSSION**

The identification of skin lesions is part of nursing care, in which patient safety is offered, along with risk assessment. In elderly patients, these injuries become more susceptible, the development must be monitored, and it is also pertinent that any appearance of injury is prevented, as it is interesting that the elderly do not have injuries, as healing is also compromised.<sup>6,7,8,9</sup>

Several devices are used in the care of the PI's, such as technologies, for example, applications, guiding instruments, digital planning and other technologies that contribute to the improvement of health care for the elderly. It is necessary to evaluate the specificities of each injury, evaluating the elderly in an integral way. Care strategies need to be developed together with the multidisciplinary team, aiming to expand knowledge and offer qualified care for the elderly.<sup>10,11,12,13,14</sup>

In nursing practice within the ICU, it is important to remember care management, the process of planning, managing and formulating strategies with the team and the elderly's family is extremely important, as it is a practice that results in better implications for care and the continuity of health actions. The assistance provided, guided by good health management, provides quality conduct, new ways of caring and filling gaps and essential needs of patients, including the elderly.<sup>6,7,8,9</sup>

Continuously, it became evident how valid is the investment in health technologies, which support decision-making in the care of PI's.<sup>6,7,8,9</sup> In the context of new technologies, it is un-

|    |  |                         |   |      |
|----|--|-------------------------|---|------|
| A6 | Virtual learning technology: problem-situation distance course as a teaching strategy for pressure injury prevention <sup>11</sup> | LILACS, BDENF - Nursing | Update nurses and nursing students through a virtual learning environment, with a problem-situation teaching strategy, on pressure injury prevention as an innovative educational technology. | 2019 |
| A7 | Nursing adherence to the pressure injury protocol in an intensive care unit <sup>12</sup>  | LILACS                  | Check the adherence of the nursing team to the pressure injury protocol and patient safety in intensive care units  | 2018 |
| A8 | The view of nurses regarding the application of the Braden scale in the elderly patient <sup>13</sup>                              | LILACS, BDENF - Nursing | To identify whether nurses are aware of and correctly use the Braden scale for the elderly in their daily care, a consolidated instrument in the prevention of Pressure Injuries.             | 2018 |
| A9 | Úlcera por pressão em unidade de terapia intensiva: estudo epidemiológico <sup>14</sup>  | BDENF - Nursing         | To analyze the clinical profile of patients with and without pressure ulcers.   | 2017 |

Source: research data, 2021.

derstood that there are several factors that leave the elderly vulnerable to exposure and the emergence of injuries, such as: friction, shear during routine, daily movement, use of diapers and other resources. The fact that the elderly have less mobility is also a factor that leads to lesions and weaknesses in the patient's skin.<sup>10,11,12,13,14</sup>

Thus, it is understood that nursing has an extremely important role in the care of patients with LLP within the intensive care unit (ICU), such as: examining the patient's skin daily; skin hydration, use of pyramidal mattress and cushions, change of decubitus every 2 hours, keep sheets clean and stretched, decrease hospitalization time and use of hydrocolloid plate and transparent polyurethane film.<sup>10,11,12,13,14</sup>

**CONCLUSION**

The study achieved its objective, and the importance of nursing care in the ICU was perceived, in the face of pressure injuries in elderly patients. Knowing the need for further studies on the subject, aiming to strengthen the evidence on the subject, in addition to supporting the professional practice of those involved in the care process.

Thus, the main results focused on the use of technologies and their importance within the ICU in the care of the elderly, and also, regarding the management of nursing and health, which acts in the administration of this process. Therefore, it is pertinent that nursing, a profession that is directly linked to the patient in continuous and intensive care, is based on scientific research to exercise its profession with quality.



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