

Care line for users with skin lesions in a clinical ward: quality experience

Línea de atención a usuarios con lesiones cutáneas en sala clínica: experiencia de calidad

Linha de cuidado para usuários com lesões de pele em uma enfermaria clínica: experiência da qualidade

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Abstract

The aim of this study was to present the results of the implementation of a quality management model for the management of pressure injuries in a clinical ward. This study aimed to improve quality by implementing quality management tools and indicators in a clinical ward of a university hospital located in the city of Rio de Janeiro, a ward with 12 (twelve) beds distributed in 2 wings: 6 (six) male and 6 (six) female beds, with patients over 18 years of age. The study followed the guidelines of the Standards for Quality Improvement Reporting Excellence. The risk of PI according to the Braden scale was 18.2 points on average, configuring a low risk of PI in the unit; the male ward alone had an average of 18.8 and the female ward was 18.30. The overall average of users with a high risk of LP (below 13 points) was 5.04% for the year 2023, with an incidence of 10.3% and a prevalence of 16.15%. The user experience assessment, using the NPS, is 82 points, which indicates a zone of excellence. The interrelationship between the adopted work process, the resource structures provided, and the results presented in this study form a triad from which an improvement in quality can be inferred. The use of simple but effective work processes described in the study, as well as the measurement of these results, favored a positive user experience.

Descriptors: Quality Improvement; Quality of Health Care; Nursing Education; Patient Care Planning; Pressure Injury.

Resumén

El objetivo de este estudio fue presentar los resultados de la implementación de un modelo de gestión de calidad para el manejo de lesiones por presión en una unidad de cuidados intensivos. Este estudio buscó mejorar la calidad mediante la implementación de herramientas e indicadores de gestión de calidad en una unidad de cuidados intensivos de un hospital universitario ubicado en la ciudad de Río de Janeiro, una unidad con 12 (doce) camas distribuidas en 2 alas: 6 (seis) camas para hombres y 6 (seis) camas para mujeres, con pacientes mayores de 18 años. El estudio siguió las directrices de los Estándares para la Excelencia en la Elaboración de Informes de Mejora de la Calidad. El riesgo de LP según la escala de Braden fue de 18,2 puntos en promedio, configurando un bajo riesgo de LP en la unidad; solo la unidad de cuidados intensivos de hombres tuvo un promedio de 18,8 y la de mujeres de 18,30. El promedio general de usuarios con alto riesgo de LP (por debajo de 13 puntos) fue del 5,04% para el año 2023, con una incidencia del 10,3% y una prevalencia del 16,15%. La evaluación de la experiencia del usuario, según el NPS, es de 82 puntos, lo que indica una zona de excelencia. La interrelación entre el proceso de trabajo adoptado, las estructuras de recursos proporcionadas y los resultados presentados en este estudio forman una tríada de la que se puede inferir una mejora en la calidad. El uso de procesos de trabajo simples pero efectivos, descritos en el estudio, así como la medición de estos resultados, favorecieron una experiencia de usuario positiva.

Descriptores: Mejora de la Calidad; Calidad de la Atención Sanitaria; Educación de Enfermería; Planificación de la Atención al Paciente; Lesión por Presión.

Resumo

Objetivou-se apresentar os resultados da implementação de um modelo de gestão de qualidade no manejo de lesões por pressão em uma enfermaria clínica. Estudo de melhoria de qualidade a partir da implementação de ferramentas e indicadores de gestão de qualidade em uma enfermaria clínica de um hospital universitário localizado na cidade do Rio de Janeiro, uma enfermaria com 12(doze) leitos distribuídos em 2 alas: 6 (seis) leitos masculinos e femininos, tendo como clientela usuários maiores de 18 anos. O estudo seguiu as diretrizes do Standards for Quality Improvement Reporting Excellence. O risco de LP segundo a escala de Braden foi de 18,2 pontos na média geral configurando baixo risco de LP na unidade; isoladamente a enfermaria masculina teve média geral 18,8 e a enfermaria feminina foi de 18,30. A média geral de usuários com alto risco de LP (abaixo de 13 pontos) foi de 5,04% para o ano de 2023 com a incidência de 10,3% e a prevalência de 16,15%. A avaliação da experiência do usuário, utilizando o NPS, é de 82 pontos, o que indica zona de excelência. A inter-relação existente entre o processo de trabalho adotado, as estruturas de recursos dispensadas e os resultados apresentados neste estudo formam uma tríade da qual se infere uma melhoria da qualidade. O uso de processos de trabalho simples, entretanto efetivos, descrito no estudo, bem como a mensuração desses resultados favoreceram a experiência positiva do usuário.

Descriptores: Melhoria de Qualidade; Qualidade da Assistência à Saúde; Educação em Enfermagem; Planejamento de Assistência ao Paciente; Lesão por Pressão.



Introduction

The increase in demand for care for people with skin lesions has become a challenge faced by every multidisciplinary health team. Maintaining skin integrity is considered an indicator of the quality of care, as the presence of lesions can lead to increased hospital stays, infections, high hospital costs, increased workload for the health team, social changes for the patient and family members, and result in a high incidence of morbidity and mortality¹. Among skin injuries, there are pressure injuries resulting from pressure applied to a certain area of the body in combination with intrinsic and/or extrinsic factors, resulting in localized damage to the skin and/or underlying soft tissues, usually over a bony prominence or related to a medical device or other artifact².

They are classified into stages from 1 to 4, representing the extent of damage caused to the skin, defined by intrinsic and extrinsic factors. The determining concept for intrinsic factors is linked to the reduction or loss of sensitivity, muscle strength and mobility, while extrinsic factors refer to friction, shear and changes in the microclimate offered by the external environment³.

This occurrence is associated with the length of hospital stay linked to skin conditions, age and multiple comorbidities, representing the main cause of skin lesions in elderly people, creating a significant risk of developing them¹⁻³.

It is worth noting that hospital care in the Unified Health System (SUS) is challenging given the volume of care offered, the number of financial resources and the territorial size of the country. Most hospital services are part of private medical care, with the SUS being responsible for mixed or combined use with these entities, as evidenced by Viacava et al (2018), in which "most hospitals in the country are private, but their use is mostly through the SUS or shared between the public and private systems (...). The participation of establishments with mixed care has grown, reinforcing the articulated nature between the public and private sectors". The cost of financing for the cost of medium and high complexity outpatient and hospital actions provided by the National Health Fund in its data transparency portal shows that more than R\$60 billion reais were spent on maintaining such a system in gross values⁴.

The National Hospital Care Policy (PNHOSP) consolidated in 2017 within the scope of the SUS based on the consolidation ordinance of September 28 of the same year, has as one of its general provisions "X - clinic management: care and management practices developed based on the characterization of the profile of users through bed management, co-responsibility of teams and evaluation of care indicators; and as one of the guidelines "VIII - guarantee of the quality of hospital care and patient safety" it is certain to state that the management and handling of indicators and good care practices are necessary for the development of a safe, effective and quality hospital ecosystem^{5,6}.

According to the National Health Surveillance Agency, pressure injuries are the second most reported type

of incident in the city of Rio de Janeiro with 2,409 reports in 2022, being one of the main causes of notification in the hospital axis and with 411 moderate and serious events in the state⁷.

The aim of this study was to present the results of the implementation of a quality management model in the management of pressure injuries in a clinical ward.

Methodology

Quality improvement study based on the implementation of quality management tools and indicators in a clinical ward of a university hospital located in the city of Rio de Janeiro. It is a component of the research project "Development of Health Management Tools and Indicators in a Clinical Ward of a University Hospital" authorized by the Research Ethics Committee of the Pedro Ernesto University Hospital under CAAE number: 61798022.8.0000.5259 and Opinion Number: 5,590,032 dated August 18, 2022, as determined by Resolution No. 466/2012.

The scenario is a clinical ward of a tertiary care hospital located in the city of Rio de Janeiro, under state management, and currently has more than 500 beds in operation. The clinical unit in question is a ward with 12 (twelve) beds distributed in 2 sectors: 6 (six) male and 6 (six) female beds, with a clientele of users over 18 years of age.

The nursing team in this sector is made up of 37 nursing professionals and one administrative professional, including: one unit head nurse, one routine nurse, six on-call nurses, three resident nurses, 26 nursing technicians, in addition to a floating population of students undergoing training in the practical field, such as nursing students and mid-level interns.

The quality improvement implementation process followed the methodological path: identification of the prevalence and incidence of pressure injuries in the unit, obtaining images of pressure injuries being monitored in the unit, cataloging the images by patient profile and proposing treatments, using the Braden predictive scale to assess the risk of injury in hospitalized patients, monitoring and reporting pressure injuries (new and/or acquired in the unit) to the Patient Safety Center and treatment in conjunction with the hospital institution's Dressing Committee with the following chronological steps:

- In November 2021: monthly notification of pressure injuries identified in the unit for calculations of sectoral prevalence and incidence.
- August 2022: monitoring the risk of pressure injury in patients admitted to the unit using the Braden predictive scale to build a monitoring indicator.
- November 2022: photographic record of all images being monitored and treated in the unit
- March 2023: screening and cataloging of collected images and creation of a photographic portfolio with proposed treatment, evolution and outcome of LP management.
- March/2023: start of monitoring via Nursing navigation of a patient with extensive LP.



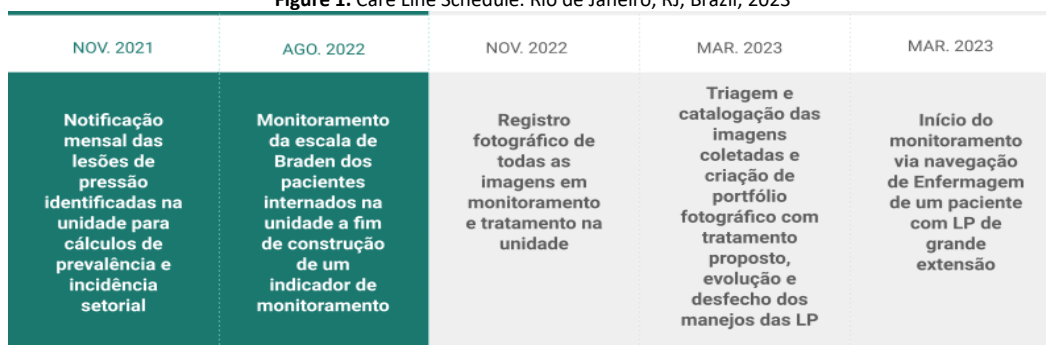
All assessments and prescribed procedures were aligned with the hospital's Dressing Committee. The study participants were 37 ward users, who signed the Free and Informed Consent Form (FICF) in accordance with current legislation, including authorization for the use of images for scientific production purposes.

The improvements presented were developed from new work processes with other functionalities and/or characteristics of the current processes in force, therefore a

technological innovation, as defined by the Coordination for the Improvement of Higher Education Personnel in its report of the Technological Innovation and Knowledge Transfer Working Group of 2019⁸.

The study followed the guidelines of the Standards for Quality Improvement Reporting Excellence (SQUIRE) version 2.0, Portuguese version, for writing quality improvement studies⁹.

Figure 1. Care Line Schedule. Rio de Janeiro, RJ, Brazil, 2023



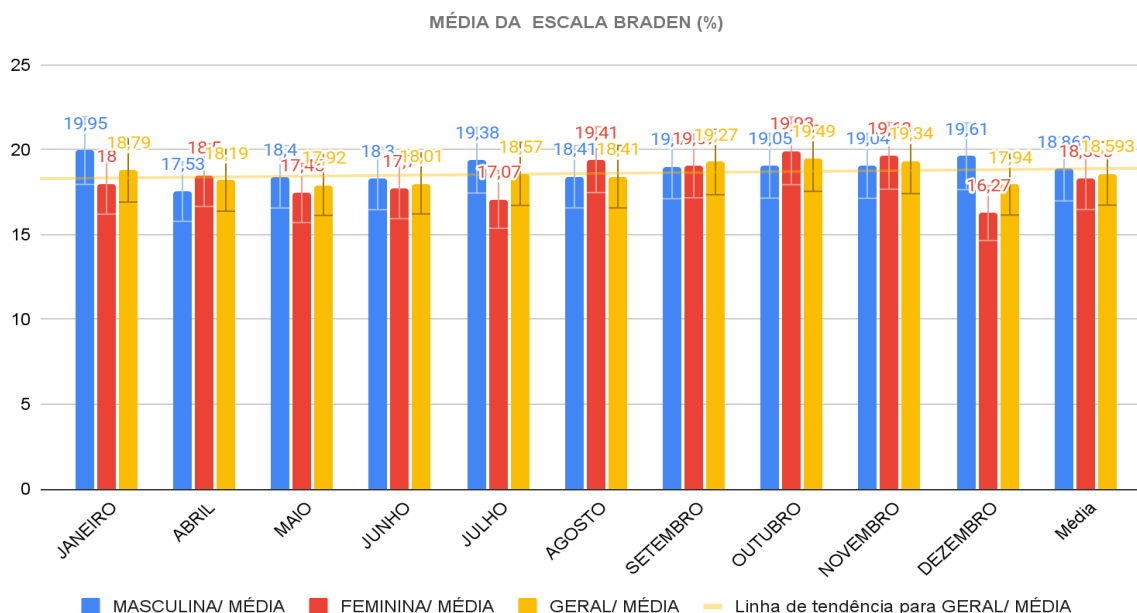
Note: LP – pressure injury (PI).

Results

The Braden Scale (Scale for Predicting Pressure Ulcer Risk) is an instrument that, through its specific score, guides the assessment and detection of risks for the development of PI, enabling the professional to outline a care plan for users, with the objective of minimizing the risks for the development of these types of injuries. This scale has

the following variation: low risk - above 15 points, moderate risk - between 13 and 14 points, high risk between 10 and 12 points, and very high risk with values below 9 points. This predictive scale is internationally known as a guideline that guides the assertiveness of nursing care in preventing risks throughout the user/patient journey^{10,11}.

Graph 1. Mean Variation of the Braden Scale. Rio de Janeiro, RJ, Brazil, 2023



The risk of PI according to the Braden scale in the investigated unit was 18.2 points on the general average, configuring a low risk of PI in the unit; the male ward alone had a general average of 18.8 and the female ward was 18.30. The general average of users with a high risk of PI

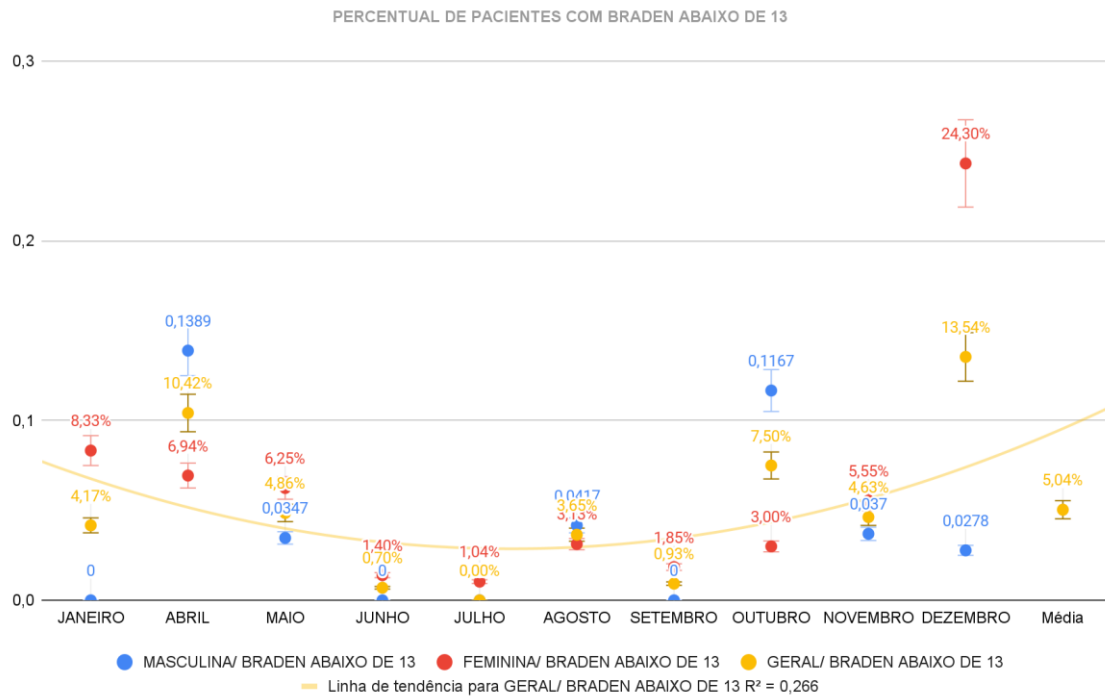
(below 13 points) was 5.04% for the year 2023 when the hospital unit had the number of 4,120 patients/day/year accumulated in the period, therefore having an average of 11.11 patients/day for both wards and an occupancy rate of 92.54%.



The incidence of 10.3% and prevalence of 16.15% indicate that nursing care in this unit has been able to meet the sixth international patient safety goal, which, among the challenges of providing safe and quality care in hospitals, consists of preventing health problems and incidents for users, and is a key point for the sustainability of services. A study on the prevalence of pressure injuries (PI) in a private hospital in the state of Minas Gerais showed that the prevalence of PI in the unit was 5.9% in a sample of 169 patients investigated during the study period; and another

study conducted in the state of Pernambuco showed a prevalence rate of 69% of patients admitted to intensive care¹²⁻¹⁴. An average prevalence of 21.2% was detected in patients admitted to a clinical ward in a study at a university hospital in Paraíba, which was considered a high prevalence by the authors¹⁵. The result presented in this article corroborates a positive signal that the quality actions presented can contribute to minimizing the indicators of prevalence and incidence of PI.

Graph 2. Percentage of Users with Braden below 13. Rio de Janeiro, RJ, Brazil, 2023



The statistical analysis of the data, using Pearson's correlation, between the average monthly variation of the Braden scale and the variation in the percentage of users with a Braden scale below 13, presented a value of -0.24, which is interpreted as a weak negative relationship, contributing to the validation of the database developed and the initiatives presented in this study¹⁶.

The differential proposed by the unit was the development of a line of care for patients with pressure injuries that involves using a catalog of images obtained during the admission phase, therapeutic management based on the feedback from the institutional dressing committee, and images throughout the patient's hospitalization period. The catalog of images helped the multidisciplinary team to respond to the treatment of pressure injuries, optimizing adherence to the dressings and medications used, providing the patient and family with a perception of improvement. It is worth mentioning that the entire unit adopts daily skin assessment as a care practice from Monday to Friday, covering 100% of the unit's patients.

This linear set of actions proved to be proactive and distinct from what is commonly used. The image catalog

created provided a total of 288 images from 37 users, 55% of which were male patients and 45% of which were female patients, with an average of 7.8 images/patients and the average age of the users listed in the catalog being 63 years old for the year 2023.

The current context of a high-demand hospital institution brings with it a scenario of constant changes, activities and responsibilities assumed by nurses. In this sense, bringing innovations such as navigation can contribute to a better outcome. Until April 2024, four patients are being monitored remotely by nursing navigation, whose goal was to assist the user, family and primary care professionals in the home management of the proposed treatment for the injuries, as shown in Figures 2 and 3.

In terms of evaluating the user experience, using the Net Promoter Score, the value attributed by the unit's users regarding the care plan carried out by the nurses is 82 points, which indicates a zone of excellence, which can be pointed out as one of the results of the improvements introduced in the line of care¹⁷.



Figure 2. Injury care line of care conducted in the unit. Rio de Janeiro, RJ, Brazil, 2023

Paciente Homem, Negro, 54 anos, Diagnóstico clínico de Mieloma Múltiplo e Complicações Pós-covid



Figure 3. Injury care line of care conducted in the unit. Rio de Janeiro, RJ, Brazil, 2023

Paciente Mulher, Branca, 55 anos, Diagnóstico clínico: Artrite Reumatóide + Linfoma MALT



Discussion

Patient safety is a major global health challenge. The set of actions to avoid, prevent or improve the results of adverse events or injuries originating in the hospital care process is urgent and necessary^{7,9-12,18,19}.

Although the concept of quality in health is permeated by numerous definitions, models and applications, understanding it as a right to be offered to users of health systems is one of the ways to apply tools that measure, prevent and satisfy all actors involved in the Nursing care chain^{17,20}.

With the establishment of the National Patient Safety Program (PNSP-2013), there was greater clarity in organizing the systematization of nursing regarding care and therapy in the line of care for the treatment of individuals with skin lesions, and especially pressure injuries. However, introducing new tools that are easy to use and accessible to nursing professionals is to ensure the quality of care. The nurse's skills permeate the different levels of complexity in hospital care, requiring innovation in relation to the

activities and responsibilities required by the health care ecosystem.

Considering the theme and its significant relevance in clinical practice, the actions demonstrated in this study are easy to implement and low cost; and when systematized within a line of care, they are capable of positively impacting the quality of care provided to the user; and no less importantly, they are sustainable. When comparing the data presented in this study with those published in the literature, positive results are observed in the tools used in the unit, and both in the management of clinical care for the patient with the injuries and in the satisfaction of this user with the care plan. The interrelationship between the work process adopted, the resource structures provided, and the results presented in this study form a triad from which an improvement in quality can be inferred.

Conclusion

The presented nurse navigation prototype enabled the continuity of the care plan developed by nurses after hospital discharge and provided tools for the actions of



health professionals at other levels of care. The actions developed made the patient's journey more feasible and more effective, speeding up treatment and improving the quality of life and well-being of the patient and their family members.

The use of simple yet effective work processes described in the study, as well as the measurement of these results, favored a positive user experience. Therefore, a new quality improvement model can be affirmed, contributing to the formation of the care line for users with skin lesions.

The implementation and development of this study will contribute to deepening the discussion on quality improvement through the implementation of quality management tools and indicators in a clinical ward of a university hospital, so that health can be preserved by preventing and/or reducing pressure injuries. It is also believed that it may contribute to the production of knowledge to be used in the care practice of professionals who care for patients with skin injuries, including pressure injuries, especially in nursing. In addition, it may favor the reduction of the length of hospitalization of patients,

allowing for the speedy integration of their family and social life. The limitation of the study is understood to be that it was carried out in a single hospital clinical ward, which is a reduced scenario, but with the intention of publicizing and disseminating technological innovation, the importance of implementing quality management tools and indicators in the prevention and treatment of pressure injuries.

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