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EXPERIENCE REPORT
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Hospital care practices for burn patients: an experience report of resident nurses

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ABSTRACT

Burns are traumatic injuries that, in many cases, are of high severity and may have significant physical and emotional impact, requiring a multidisciplinary approach in addition to immediate care to prevent complications such as infections. This experience report presents the perspective of nurse residents in management working in medical and surgical clinical areas, focusing on the care of patients with burns. The study was conducted in a teaching hospital in the state of Paraná, Brazil, between September and October 2024. It was reported that the etiology of burns ranges from accidental to self-inflicted, and that hospital care for burn patients is based on institutional protocols, which include fluid resuscitation according to the Parkland formula, analgesia, removal of foreign bodies adhered to the lesions, and performance of dressings, as well as the development of an individualized and interdisciplinary care plan aimed at a comprehensive and humanized approach. Contributions are offered regarding the challenges and best practices in this type of care, which contribute to improving the quality of care by allowing the identification of effective strategies and areas for improvement, in addition to encouraging research and innovation in the field of nursing, enabling professionals to reflect on their practices.

Keywords: burns; teaching hospitals; nursing practice management; hospital.

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Scientific contribution:

Sharing professional experience provides valuable insights into the challenges and best practices in this type of care, contributing to improvements in healthcare quality and enabling the identification of effective strategies and areas for improvement. Furthermore, the dissemination of practical experiences fosters research and innovation in the field of nursing.

INTRODUCTION

Burn injuries are traumatic lesions that, in many cases, present high severity and may generate impacts on both physical and emotional aspects. These injuries generally occur due to exposure to different agents, such as thermal, chemical, electrical, or radioactive sources (1).

Apart from being devastating events, burns result in high morbidity and mortality rates, constituting a major public health challenge. They most frequently occur due to scalding, contact with fire and heated surfaces, exposure to chemicals, excessive sun exposure, and electricity (2,3).

Most patients affected by burns present injuries so extensive that they require intensive care in a hospital setting. The severity is so significant that it is estimated that approximately 130,000 individuals suffer some type of burn each year, and between 2% and 3% of them die, either due to direct consequences of the injury or associated complications (4).

These data highlight the importance of continuous investment in awareness strategies, prevention, and proper management of patients with extensive burns. In Brazil, it is estimated that 10% of burn accidents result in hospital care, and the initial management of these patients—often in critical condition—faces challenges related to hemodynamic support and stabilization, pulmonary management, airway management, and vascular access (3,4).

In the Brazilian context, burns rank among the leading external causes of morbidity and mortality, behind traffic accidents and homicides. Eight years ago, studies such as this one already highlighted a significant number of burn-related cases. The research indicated that burns represent a significant public health concern, with data showing the severity and frequency of this type of injury in Brazil.

Burn injuries constitute an important public health burden, ranking among the main external causes of mortality worldwide, with estimates of approximately 300,000 deaths annually. In Brazil, data from 2010 recorded 21,472 hospitalizations and 313 fatal cases. Although the Northern region generally shows fewer occurrences, the state of Pará, Brazil, stood out with some of the highest indicators during the period (5).

This information is supported by research indicating the need for public policies addressing safety in domestic environments and the use of electronic products, contributing to the reduction of burn incidence and associated impacts (6,7).

Data emphasize the seriousness of burns as a major global public health challenge. Addressing these fatalities requires implementing effective prevention and awareness strategies, as well as improving the care process for survivors. According to estimates from the World Health Organization (WHO), approximately 180,000 people die each year from burns, with fires, scalding, and electrical accidents being the main contributing factors (8).

It is important to mention that burns are among the most costly non-fatal injuries, generating significant socioeconomic impact, directly affecting individuals and burdening healthcare systems (8–10).

Moreover, burns affect not only the physical body but also the emotional, psychological, and spiritual well-being of those who experience them. Despite advances in treatment, burns are considered a severe aggression to the human being, as they may cause physical and psychological sequelae, in addition to emotional impact resulting in life changes and social limitations. Therefore, healthcare professionals must rely on scientific evidence to provide safe, high-quality, and effective care (11,12).

Nurses play a fundamental role during the treatment of burn injuries, being responsible from the moment the patient is admitted to the hospital until the transition of care to Primary Health Care (PHC) and home care. They are responsible for developing care plans for the treatment of injuries, which must be structured based on injury assessment, classification, and healing processes (13). In this perspective, the objective of this report is to present the practical experience of nursing residents in the care of burn patients.

METHODOLOGY

This is an experience report presenting the practical experience of first-year residents in nursing management in medical and surgical clinical settings, in the care of burn patients at a teaching hospital in Paraná, Brazil, between September and October 2024.

It is important to mention that the study complied with the standards established in Resolutions 466/2012 and 510/2016 of the National Health Council, and since it is an experience report, submission to a Research Ethics Committee was not required.

The hospital where the experience took place is a public institution affiliated with a state university in Paraná, Brazil. The service allocates all its beds to care provided through the Unified Health System, serving as a referral center for approximately two million in-

habitants across 25 municipalities belonging to the Regional Health Authority.

The institution provides medium- and high-complexity care, including Intensive Care Units (adult, neonatal, and pediatric), Neurology, Orthopedics, Cardiology, Surgical Center, Obstetric Center, Maternity, Pediatric Rooming-In Unit, and Emergency Department (ED).

This setting serves as the training environment for the practical activities of the Multiprofessional Healthcare Residency Program (MHRP), with emphasis on Nursing Management in Medical and Surgical Care. The program lasts two years, with a weekly workload of 60 hours, approximately 80% dedicated to practical clinical activities and 20% to theoretical training.

EXPERIENCE REPORT / DISCUSSION

Considering this scenario, the experience includes the approach to burn patients in a hospital setting, as described below. To mitigate damage, the first step in the care of patients with major burns involves nursing planning based on assessment of vital signs and estimation of the affected body area, since prognosis is closely related to the extent of the burned body surface area (BSA), the location of the injuries, and their depth.

When this type of patient is admitted to the Emergency Room (ER) of the hospital, immediate care is provided in accordance with institutional protocols established for the management of patients with severe burns. These protocols are essential to ensure evidence-based practice, providing rapid and effective responses in critical situations.

The rigorous implementation of procedures such as fluid resuscitation following the Parkland formula, which estimates the amount of fluids needed to achieve hemodynamic stability in burn patients, analgesia and pain management with opioids, removal of foreign bodies adhered to the lesions, four-layer occlusive dressing, cleaning with 2% chlorhexidine detergent solution and abundant 0.9% saline irrigation, followed by non-adherent coverage with 1% silver sulfadiazine, initially contributes to the stabilization of the patient's clinical condition and is essential for minimizing complications associated with burns.

Among patients admitted with burn injuries, the etiology varies between accidental and self-inflicted burns. Most of these patients have a history of depressive disorder and, often in response to the end of a marital relationship, attempt suicide, resulting in second- and third-degree burns, affecting more than 35% of the BSA. The most affected regions include the anterior and posterior thorax, upper limbs, and face, requiring intensive intervention and multidisciplinary follow-up for the clinical management of injuries and mental health support.

In Brazil, accidental burns are estimated at approximately one million cases annually. About 10% require hospital care, and approximately 40,000 evolve into more severe conditions. In such cases, the initial approach must be rapid, accurate, and technically appropriate, as it is decisive for therapeutic definition and prognosis (4). Self-inflicted burns, on the other hand, were identified in smaller numbers and are part of a range of self-harming behaviors, which can range from minor self-inflicted injuries to acts classified as attempted suicide.

Patients who attempt suicide by self-immolation—characterized by the use of fire as an extreme self-harm method—represent events with high social visibility and strong emotional impact. These situations tend to present high clinical severity, often associated with extensive BSA involvement, increased susceptibility to wound infection and sepsis, and high mortality rates, especially when preexisting psychiatric disorders coexist. Given the complexity surrounding these cases, it is common for healthcare teams to encounter difficulties in fully understanding the particularities of these experiences and their implications for care (14).

Psychiatric disorders such as depression, along with factors such as unemployment and marital, financial, or personal difficulties, have been identified as predictors of recurrent suicide attempts. Conversely, stable relationships may act as protective factors (15).

Given the complexity involved in treating patients with extensive burns, nursing residents develop specific and advanced competencies in managing these critical cases. This practical learning is essential, as it involves both physiological stabilization and psychological support, particularly in cases of self-inflicted burns.

Care for burn patients requires a multiprofessional approach. All professionals involved must integrate care beyond emergency physical treatment, including psychosocial assistance with individualized care plans involving plastic surgery, psychology, and psychiatry teams, aiming for comprehensive and humanized care.

Practical experience allows residents to observe that treatment extends beyond physical stabilization techniques. They must act to mitigate the emotional and social impacts of self-inflicted burns, overcoming communication barriers often present in patients with psychiatric disorders. This process promotes the development of interpersonal skills and empathy,

essential aspects of humanized care, particularly in suicide-related burns, where emotional burden and challenging prognosis require a broader care perspective.

Clinical practice and management of patients with extensive burns have proven to be a differential factor in resident training, improving competencies in critical care and strengthening response capacity in complex cases. Exposure to emotionally intense scenarios and challenges associated with self-inflicted burns highlights the importance of emotional support, effective communication, and evidence-based practice as pillars of nursing performance.

In this sense, nursing management contributes to adequate care planning and team coordination, ensuring that human and material resources are used efficiently and aligned with patient needs.

Nursing management in high-complexity contexts such as burn care requires a strategic vision integrating clinical, operational, and administrative aspects, ensuring implementation of evidence-based protocols and maintenance of quality care.

Within this scenario, nursing residents develop leadership and coordination skills, learning to articulate actions with different members of the multidisciplinary team, including plastic surgeons, psychologists, psychiatrists, and physical therapists. Additionally, care management requires identification of priorities, problem-solving, and rapid and accurate decision-making—fundamental competencies in critical situations.

CONCLUSION

The practical experience of nursing residents in caring for burn patients constitutes a fundamental stage in developing competencies for managing complex cases, often associated with psychiatric disorders. Training is strengthened through exposure to an environment requiring technical rigor, protocol application, and interdisciplinary collaboration.

Direct patient contact allows residents to understand the emotional and social dimensions involved in the rehabilitation process, developing relational skills and sensitivity for humanized care. In this context, clinical practice becomes a distinguishing educational factor by preparing them to work in critical scenarios, reinforcing the importance of integrated interventions and team collaboration.

Furthermore, burn patient care contributes to the development of management competencies by enabling understanding of organizational dynamics, required resources, and the importance of planning, leadership, and decision-making in highly complex situations. Therefore, resident performance in this context expands not only their technical training but also strategic skills for integrating clinical, administrative, and human aspects in healthcare delivery.

Conflict of interest:
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VRT: data curation, research, validation, supervision, writing of original draft.
ARZ: data curation, research, validation, writing of original draft.
SBF: formal analysis, research, methodology, writing of original draft.
TAC: formal analysis, methodology, project administration, supervision, validation, writing of original draft.

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