

STOMATHERAPY IN CRITICAL CARE: THE NURSE'S ROLE IN THE PREVENTION AND MANAGEMENT OF SKIN LESIONS IN THE ICU

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Abstract

This chapter examines stomatherapy as a specialized field of nursing focused on preventing and managing skin injuries in patients admitted to an Intensive Care Unit (ICU). This narrative literature review aimed to analyze the nurse's role, with particular emphasis on the stomatherapy nurse, in preventing and treating the skin injuries most prevalent among critically ill patients, including pressure injuries, moisture-associated skin damage, and medical device-related injuries. The research involved a survey of scientific articles, regulatory documents, and institutional protocols published in the LILACS,

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BDENF, and SciELO databases and retrieved through Google Scholar between 2013 and 2025. The findings show that systematic risk assessment, particularly through the Braden Scale, combined with preventive measures such as scheduled repositioning, the use of appropriate support surfaces, the preservation of skin integrity, and careful medical device management, significantly reduces the incidence of these injuries. The findings also indicate that the work of nurses specializing in stomatherapy enhances the quality of care by improving the technical competence of the multidisciplinary team and supporting evidence-based clinical decision-making. It is concluded that systematized nursing care, together with continuing education and the adoption of institutional protocols, is an essential strategy for ensuring the safety of critically ill patients and reducing healthcare costs arising from preventable skin injuries.

Keywords: Critical Care, Intensive Care Units, Nursing Care, Pressure Injury, Stomatherapy.

INTRODUCTION

The skin is the largest organ of the human body. It covers the body's surface, acts as a protective barrier against intrinsic and extrinsic agents, contributes to thermal regulation and water homeostasis, and performs a sensory function (Marques et al., 2020). In patients admitted to an Intensive Care Unit, however, this barrier is often compromised by hemodynamic instability, the use of sedatives and vasoactive drugs, prolonged immobility, the presence of multiple invasive devices, and the nutritional and metabolic changes typical of critical illness. Taken together, these factors make critically ill patients particularly vulnerable to developing skin injuries, especially pressure injuries, moisture-associated skin damage, and medical device-related injuries.

A critically ill patient is one who presents alterations in one or more vital organs, at risk of hemodynamic instability or already hemodynamically unstable, requiring strict monitoring and more complex therapies, as well as constant surveillance and invasive procedures performed by the multidisciplinary team. This condition substantially increases the risk of skin injuries, which are among the most common and preventable adverse events in hospital settings and have a direct impact on length

of stay, healthcare costs, and the quality of life of patients and their families (Brasil, 2013). In light of the above, the research problem addressed in this chapter is defined by the following question: how does the work of nurses, particularly nurses specializing in stomatherapy, contribute to preventing and managing skin injuries in critically ill patients admitted to an ICU?

The general objective of this study is to analyze the nurse's role in preventing and managing skin injuries in critically ill patients admitted to an Intensive Care Unit from a stomatherapy perspective. The specific objectives were to: a) characterize the stomatherapy nurse's scope of practice and integration into the intensive care team; b) describe the main types of skin injuries affecting critically ill patients and their risk factors; c) discuss the risk assessment instruments used by nursing professionals, particularly the Braden Scale; and d) present the main preventive and therapeutic measures systematized by nursing professionals to reduce the incidence of these injuries.

The relevance of this study lies in the considerable impact of skin injuries, particularly pressure injuries, on patient safety and quality-of-care indicators. The occurrence of these injuries is monitored through institutional patient safety programs and constitutes a sentinel event associated with longer hospital stays, an increased risk of infection, and substantially higher treatment costs (Brasil, 2013). In addition to the physical and emotional suffering caused to patients and their families, this situation reinforces the need to improve the quality of nursing care and strengthen the role of stomatherapy nurses as a source of technical expertise in skin care (Cofen, 2025).

Stomatherapy is a nursing specialty obtained through a specialization course and focused on the care of people with stomas, fistulas, tubes, catheters and drains, acute and chronic wounds, and anal and urinary incontinence, encompassing preventive, therapeutic, and rehabilitative aspects (Coren-PA, 2023). More recently, Cofen Resolution No. 787/2025 specifically regulated the work of the entire nursing team in the promotion, prevention, treatment, and rehabilitation of people with skin injuries, reinforcing the central role of both generalist and specialist nurses in the clinical management of this care (Cofen, 2025). Understanding the role of stomatherapy nurses in intensive care is therefore

strategically important both to clinical practice and to the development of institutional protocols, providing the basis for the discussion presented in the following sections.

METHODOLOGY

This is a qualitative narrative literature review conducted to synthesize and discuss the available scientific and regulatory knowledge regarding the nurse's role in preventing and managing skin injuries in critically ill patients admitted to an Intensive Care Unit. The bibliographic search was conducted in the Latin American and Caribbean Health Sciences Literature (Literatura Latino-Americana e do Caribe em Ciências da Saúde – LILACS), Nursing Database (Base de Dados em Enfermagem – BDENF), and Scientific Electronic Library Online (SciELO) databases, as well as through Google Scholar. The search was supplemented by consultation of regulatory documents issued by the Federal Nursing Council (Conselho Federal de Enfermagem – Cofen) and the Regional Nursing Councils (Conselhos Regionais de Enfermagem – Coren), along with institutional patient safety protocols published by the Ministry of Health and federal university hospitals.

The following descriptors were used individually or in combination with the Boolean operator AND: “stomatherapy,” “pressure injury,” “critical care,” “nursing care,” and “intensive care units,” in Portuguese and in their English equivalents in the Health Sciences Descriptors (DeCS/MeSH). The study included original articles, review articles, undergraduate theses, regulatory documents, and institutional protocols published between 2013 and 2025 and available in full in Portuguese. In addition, the international guideline for the prevention and treatment of pressure injuries (EPUAP; NPIAP; PPPIA, 2019) and the original publication of the Braden Scale (Braden; Bergstrom, 1987) were consulted as theoretical references, regardless of language or publication period. Materials duplicated across the databases, publications not directly related to the proposed topic, and documents whose full versions were unavailable for consultation were excluded. The selected material was analyzed using a

descriptive-interpretive approach, and the content was organized into thematic categories underpinning the results and discussion section presented below.

Regarding ethical considerations, because this literature review was conducted exclusively using scientific texts and publicly accessible documents, without the participation of human subjects, the study was neither registered with nor assessed by the Research Ethics Committee/National Research Ethics Commission System (Sistema CEP/Conep) and did not require a Free and Informed Consent Form, pursuant to Article 1, sole paragraph, items II and VI, of CNS Resolution No. 510/2016 (Brasil, 2016). Copyright was respected through the appropriate citation of all consulted sources.

RESULTS AND DISCUSSION

THE STOMATHERAPY NURSE AND THE SCOPE OF SKIN CARE PRACTICE

A stomatherapy nurse is a nursing professional who holds a specialist qualification in stomatherapy recognized by the Cofen/Regional Nursing Councils System and is qualified to plan, implement, and assess the care of people with acute and chronic wounds, stomas, fistulas, drains, catheters, and incontinence (Coren-PA, 2023). Because the number of these specialists in Brazilian healthcare institutions remains limited, much of the skin care provided to critically ill patients remains the responsibility of generalist nurses, whose practice is supported by the Nursing Professional Practice Act, its implementing decree, and the Code of Ethics for Nursing Professionals (Coren-PA, 2023).

The publication of Cofen Resolution No. 787/2025 represents a significant regulatory advance, as it specifically regulates the work of the entire nursing team in the promotion, prevention, treatment, and rehabilitation of people with skin injuries. It defines professional responsibilities and reinforces the nurse's exclusive authority regarding clinical assessment, care prescriptions, and the selection of dressings and technologies for wound treatment (Cofen, 2025). In intensive care, this regulation strengthens nurses' autonomy in clinical decision-making related to skin care, particularly given the complexity and instability that characterize critically ill patients.

PATHOPHYSIOLOGY AND CLASSIFICATION OF SKIN INJURIES IN CRITICALLY ILL PATIENTS

Pressure injuries are defined as localized injuries to the skin and/or underlying tissues, usually over a bony prominence or associated with the use of a medical device, resulting from intense and/or prolonged pressure combined with shear forces (EPUAP; NPIAP; PPPIA, 2019). These injuries develop from tissue hypoxia caused by the compression of blood vessels between a bony prominence and the support surface and may progress to tissue necrosis within a relatively short period if not identified early. According to the international classification adopted by the reference guideline, these injuries are organized into stages of progressive severity, ranging from erythematous changes in intact skin to exposed muscle, tendon, or bone. The classification also includes deep tissue pressure injury and unstageable pressure injury, whose actual depth cannot be determined because of the presence of devitalized tissue (EPUAP; NPIAP; PPPIA, 2019).

In addition to pressure injuries themselves, critically ill patients are susceptible to other forms of skin damage, including moisture-associated skin damage resulting from prolonged exposure of the skin to urine, feces, perspiration, or secretions, and medical device-related injuries caused by pressure from orotracheal tubes, catheters, tubes, cannulas, and immobilization devices used for life support (Rolim et al., 2013). The frequent coexistence of these factors in intensive care settings reinforces the need for daily, systematized skin assessment by the nursing team, as summarized in Chart 1.

Chart 1

Main types of skin injury in critically ill patients and associated risk factors

Type of injury	Main associated risk factors
Pressure injury	Prolonged immobility, continuous sedation, hemodynamic instability, use of vasoactive drugs, malnutrition, and friction/shear.
Moisture-associated skin damage (incontinence-associated dermatitis)	Urinary and/or fecal incontinence, excessive perspiration, and drainage from wounds or fistulas.
Medical device-related injury	Orotracheal tubes, catheters, tubes, noninvasive ventilation masks, and immobilization devices.

Source: prepared by the authors (2026), based on Brasil (2013) and Rolim et al. (2013).

RISK ASSESSMENT: THE BRADEN SCALE AS A NURSING INSTRUMENT

Systematic pressure injury risk assessment is an essential stage of the nursing process and must precede the planning of any preventive intervention. The Braden Scale, developed by Braden and Bergstrom in 1987 and subsequently adapted and validated for use in Brazil, is the instrument most widely used by nurses in Brazil and worldwide because of its ease of application and sensitivity in predicting risk (Braden; Bergstrom, 1987). The instrument comprises six subscales: sensory perception, moisture, activity, mobility, nutrition, and friction/shear. The sum of their scores produces a total score ranging from 6 to 23 points (HU-UFGD/Ebserh, 2025).

Based on this score, patients are classified into different risk categories, as systematized in Table 1. This enables nurses to determine the intensity and frequency of preventive interventions according to each patient’s individual vulnerability (HU-UFGD/Ebserh, 2025). In intensive care settings, it is recommended that the patient’s skin and risk score be reassessed during every shift because of the rapid changes in these patients’ clinical and hemodynamic status (HU-UFGD/Ebserh, 2025).

Table 1

Classification of pressure injury risk according to the Braden Scale score

Risk classification	Score (total score)
Very high risk	≤ 9 points
High risk	10 to 12 points
Moderate risk	13 to 14 points
Low risk	15 to 18 points
No risk	19 to 23 points

Source: prepared by the authors (2026), based on HU-UFGD/Ebserh (2025).

SYSTEMATIZED PREVENTIVE NURSING MEASURES IN INTENSIVE CARE

Pressure injury prevention is based on a set of interventions that must be individualized according to the identified risk. These include scheduled patient repositioning, with regular position changes whenever possible; the use of pressure-redistributing support surfaces, such as specialized

mattresses and positioning cushions; keeping the skin clean, moisturized, and protected from excessive moisture; attention to nutritional status, with early correction of protein-calorie deficits; and careful medical device management, including periodic rotation of fixation sites whenever clinically feasible (Rolim et al., 2013).

Studies conducted in intensive care units show that, although nurses recognize the importance of these measures, their full implementation is hindered by excessive workloads, inadequate staffing levels, and the limited availability of appropriate support surfaces (Rolim et al., 2013; Veras; Teixeira, 2021). In this context, structured protocols, such as the national protocol issued by the Ministry of Health and those adopted by federal university hospitals, have sought to standardize risk assessment and preventive measures in order to reduce variability in clinical practice and strengthen patient safety (Brasil, 2013; HU-UFGD/Ebserh, 2025).

At the international level, the guideline jointly developed by the European Pressure Ulcer Advisory Panel, the National Pressure Injury Advisory Panel, and the Pan Pacific Pressure Injury Alliance provides evidence-based recommendations for preventing and treating pressure injuries, encompassing risk and skin assessment, repositioning, support surfaces, nutrition, and the prevention of medical device-related injuries (EPUAP; NPIAP; PPPIA, 2019). This framework is consistent with the measures described in national protocols and provides scientific support for standardizing nursing practices in intensive care.

THE STOMATHERAPY NURSE'S ROLE IN THE THERAPEUTIC MANAGEMENT OF EXISTING INJURIES

Once a skin injury has developed, the nurse, preferably a stomatherapy nurse, is responsible for conducting a detailed clinical assessment of the wound. This assessment includes classifying the stage or category of the injury, measuring its dimensions, characterizing the wound bed and edges, and identifying signs of infection, thereby supporting the prescription of the most appropriate dressing and

therapeutic approach (Coren-PA, 2023). Stomatherapy nurses have the technical and legal authority to recommend advanced dressings and, when necessary, perform debridement and other procedures related to the treatment of acute and chronic wounds (Coren-PA, 2023).

CONTINUING EDUCATION AND INSTITUTIONAL PROTOCOLS AS A PATIENT SAFETY STRATEGY

The ongoing training of the nursing team is central to sustaining preventive practices over time. Incorporating protocols into routine care depends on continuing education and the monitoring of care indicators by the institution, responsibilities that also fall within the stomatherapy nurse's scope of practice (Coren-PA, 2023; Cofen, 2025). In this context, stomatherapy nurses play a strategic role as educators and disseminators of knowledge within the multidisciplinary team, contributing to technical and scientific updates and the standardization of practices adopted in the intensive care unit (Cofen, 2025).

CONCLUSION

This chapter aimed to analyze the nurse's role in preventing and managing skin injuries in critically ill patients admitted to an Intensive Care Unit from a stomatherapy perspective. The findings show that critically ill patients are exposed to multiple risk factors for developing pressure injuries, moisture-associated skin damage, and medical device-related injuries. This requires the nursing team to conduct systematic and continuous assessments based on validated instruments, particularly the Braden Scale.

The findings indicate that the work of stomatherapy nurses, although limited by the relatively small number of these professionals in Brazil, contributes to improving the quality of care by enhancing the team's technical competence, supporting clinical decisions regarding dressings and therapeutic approaches, and strengthening the implementation of institutional prevention protocols. It is concluded

that systematized nursing care, combined with continuing education and the adoption of quality indicators, is an essential strategy for ensuring the safety of critically ill patients and reducing healthcare costs arising from preventable skin injuries.

Nevertheless, this study has limitations. Because it is a narrative review, no systematic search protocol, formal assessment of the methodological quality of the studies, or quantitative synthesis was undertaken, which may entail selection bias. Restricting the review to materials available in Portuguese and published between 2013 and 2025, together with the substantial presence of regulatory documents, institutional protocols, and academic papers among the sources, limits the generalizability of the findings to other care settings.

As a contribution, this study reinforces the need to increase the number of nurses specializing in stomatherapy in Brazilian intensive care units and to strengthen institutional patient safety policies focused on skin integrity. Future research should include intervention studies assessing the impact of stomatherapy nurses on objective indicators of skin injury incidence in different intensive care settings throughout the country.

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