



## Role of the nursing professional in the hospital care of burn patients

## Rol del profesional de enfermería en la atención hospitalaria de pacientes con quemaduras

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### ABSTRACT

The objective of the research work is to examine the role of the nursing professional in the hospital care of burn patients. It consisted of a descriptive documentary work with bibliographic design, applying a bibliographic review of the information. Sepsis is the main cause of death in burn patients. Interventions are challenging due to the lack of specific guidelines. All types of burns involve a risk of complications. The main needs associated with the behavioral state are those related to feeding, rest and communication, the same needs for which interventions have been established to reduce problems such as lack of appetite, insomnia and communication problems in general, interventions that are oriented to a professional and humanitarian behavior that will benefit the patient's recovery.

**Descriptors:** clinical medicine; health services; nursing. (Source: UNESCO Thesaurus).

### RESUMEN

El trabajo investigativo tiene por objetivo examinar el rol del profesional de enfermería en la atención hospitalaria de pacientes con quemaduras. Consistió en un trabajo descriptivo documental con diseño bibliográfico, aplicándose una revisión bibliográfica de la información. La sepsis es la principal causa de muerte en pacientes quemados. Las intervenciones son desafiantes debido a la falta de pautas específicas. Todos los tipos de quemaduras implican un riesgo de complicaciones. Las principales necesidades asociadas al estado comportamental como son las referentes a la alimentación, descanso, y a la comunicación, mismas necesidades ante las cuales se han establecido intervenciones direccionadas a disminuir los problemas como inapetencia, insomnio y en general los problemas de comunicación, intervenciones que se orientan a un comportamiento profesional y humanitarias que beneficiaran a la recuperación del paciente.

**Descriptorios:** medicina clínica; servicio de salud; servicio de enfermería. (Fuente: Tesoro UNESCO).

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## INTRODUCTION

The term burn refers to the alteration or deterioration of the integrity of a tissue produced by an external causal agent among which are mentioned heat, chemical substances, radiation, sun and friction; mention is made of the time of exposure to these agents. Among the other characteristics to take into account are the anatomical area exposed, the extension and depth, and the temperature of the causal agent, all of which together condition the evolution and the conduct to be adopted (Ramírez-Meza et al. 2021).

The American Burn Association (ABA) reports that the distribution of burn patients is mainly men and children (68%). The main etiologies of injury include fire (43 %), scalds (34 %), contact (9 %), chemical (7 %) and electrical (3 %). Statistically, events are estimated to occur in the home (78 %), recreational environments (9 %), occupational (8 %) and vehicular (5 %). Regarding mortality, important data shows that worldwide burns cause approximately 265,000 deaths each year. And it places burns among the 10 leading causes of death for all age groups. In a June 2021 study, it is estimated that, in the United States, there are more than 200 patients per year with burn injuries distributed in 130 specialized centers (Carey et al. 2021), (Barrera-Magaña, 2017).

It is possible to verify the intervention performed, according to previous clinical case studies: that the adequate establishment of a nursing care plan, after the initial assessment, supported by the realization of nursing diagnoses through the NANDA (North American Nursing Diagnosis Association) and at the same time that the care that will be provided to the patient should be planned taking into account the specificity of the case in individualizing it, emphasizing the priorities, and visualizing the expected results, through the NOC (Nursing Outcomes Classification). It is worth mentioning the importance of taking into consideration the interventions to be performed to achieve the outcomes, through the NICs (Nursing Interventions Classification) (Kornhaber et al. 2019), (Bayuo et al. 2019).

The Contemporary Burn Survival study of 2018, reports how the reduction in mortality, in burn patients, which can be attributed to the various modifications and evolution of standard protocols of care in the burn center, which has made it possible to improve the outlook for burned persons, taking into account protocols for the management of inhalation injuries, nutrition, resuscitation, and other therapeutic measures such as early excision and grafting, per-surgical care of them, behaviors in which the nursing staff gives a sustained contribution (Capek et al. 2018).

For such reason, it is considered that the intervention of nursing professionals is one of the fundamental tools in the multidisciplinary management of the burn patient. With it facilitated the development of individualized plans for the management of each patient, detecting the main needs. It is worth mentioning that infections of burn injuries are one of the main causes of morbidity and mortality in burn patients. Therefore, it is considered very useful to standardize patient care in order to act in the best possible way and avoid such complications (Vinaik et al. 2020).

The aim of this research is to examine the role of the nursing professional in the hospital care of burn patients.

## METHOD

The research work consisted of a descriptive documentary work with bibliographic design, applying a bibliographic review of the information, from which the synthesis of the most relevant information is elaborated, in a population of 18 scientific articles, located in at least one of the following databases: Scopus, Scielo, WOS, Redalyc, PubMed, Lilacs, Latindex 2.0.

This review will include all articles in which burn patients are included, in both sexes and without distinction of race, ethnicity or age groups. In addition, articles that do not appear in the mentioned databases, undergraduate theses and articles from non-indexed information sources such as newspapers, interviews, etc. will be excluded. All patients with diagnoses other than burns will be excluded from this article.



## ANALYSIS OF RESULTS

Regarding the initial care, the analysis has focused on observing the action approach as nursing staff emphasizing:

Therefore; the premise of developing an individualized approach in the burn patient in order to improve care in patients of older age group is manifested, it mentions in the same way that the risk of mortality simply increases with age, so that even small burns can cause worse outcomes along the axis of aging, so that age correlates negatively with outcome (Jeschke et al. 2016).

As a mention to keep in mind that burn patients need preferential hospital care, for children under 1 year, 1 to 2 years with involvement in more than 5% of the SCT, burns in special anatomical areas such as face, hands, feet, genitalia, perineum or large joints, electrical burns, chemical, inhalation in burns by fire or hot liquids, circumferential burns on the limbs or thorax, with simultaneous trauma, injuries with contaminated, or patients in need of therapeutic measures that exceed the capacity of the health unit, in order to avoid associated complications (Culleiton & Simon, et al. 2014).

For an initial assessment of the burned patient, the body surface area affected (TBSA) is estimated, for which the nursing staff must be able to perform an accurate assessment to estimate the TBSA burned, for which there are numerous resources such as: the "rule of nines", Lund and Browder Charts, and palmar surface area (PSA), however referring to the percentage of involvement, when taking into account that The percentage of PSA in relation to TBSA decreases as the BMI increases (Butz et al. 2015).

Sepsis is the leading cause of death in burn patients. Interventions are challenging due to the lack of specific guidelines. All types of burns carry a risk of complications. Interventions should include burn care, administration of medications, ongoing monitoring for the development of infections, infection prevention measures, and (if necessary) treatment of sepsis. Sepsis in burn patients is different from the non-burn population. Efforts are needed to develop more accurate diagnostic strategies and guidelines to trigger prompt treatment through sepsis-specific bundles (Manning, 2018).

Infection is the most common complication after severe burns and has a propensity to progress to sepsis, then septic shock and multiorgan dysfunction syndrome (MODS). Improved outcomes in acute burn care depend on early detection of infection to allow rapid interventions. The diagnosis of sepsis in severe burns is especially challenging because typical clinical signs are masked by the hypermetabolic state and systemic inflammation induced by the burn itself. Although gold standard methods for early detection of sepsis in burn patients have not yet been identified, a better understanding and proper application of available diagnostic criteria and assays are critical to providing effective care for patients with severe burns (Torres et al. 2021).

Regarding the hospitalized patient and systematized nursing care, the evidence shows us the different approaches to be taken into account which are mentioned: The need for an adequate documentation system for nurses is shown, hence the focus and importance of NANDA. Because the study shows that as nursing staff, care is focused on the needs of physicians, the needs of patients are not evaluated, which was determined by observing the records themselves that are focused on the basis of the procedures that physicians have requested. It also shows the lack of training in this regard, which clarifies the picture of an important field in the growth of our intervention in the area of burn patients (Khajehgoodari et al. 2020).

The main nursing diagnoses for burn patients: impaired gas exchange and ineffective respiration, as a nursing care measure, the focus is on maintaining a permeable airway, adequate oxygenation, aspiration of secretions, and/or observation of tissue filling; deficient fluid volume, adequate fluid replacement, control of excreta intake and monitoring of tissue perfusion are performed as interventions (Lima et al. 2013). Regarding the risk of infections, periodic cures are standardized with asepsis and antisepsis techniques and preventive therapeutic isolation. In



relation to pain support, administer prescribed analgesics, position changes, adequately moisturize exposed areas; assist patients to avoid mobility impairment with position changes and elevation of strict body surfaces if necessary. Establishing a diagnosis is of utmost importance. So it is necessary to re-establish the steps of and recording of the nursing process (Lima et al. 2013).

Burn injuries in children can have a significant psychosocial impact on parents. However, the stress involved in caring for a child after a burn can often go unnoticed and does not necessarily cause parents to seek help (Heath et al. 2019). Knowledge of past trauma can help identify a vulnerable population to ensure successful burn recovery. The ACE burden of parents of burned children may affect the ACE burden of their children. Burned children with more ACE tend to have significantly more needs and more family distress. Knowledge of past trauma can help identify a vulnerable population to ensure successful burn recovery (Ong et al. 2021).

In children, effective first aid for burns will minimize burn progression and alleviate pain. Proper wound care will promote optimal healing and enhance favorable outcomes. Although a minor burn may not meet initial referral criteria for transfer to a specialized burn center, primary care physicians are encouraged to refer if there are any concerns regarding wound healing, pain management, or scarring, or if management advice is required (Tran et al. 2019).

## CONCLUSION

The main needs associated with the behavioral state are those related to feeding, rest and communication, the same needs for which interventions have been established to reduce problems such as lack of appetite, insomnia and communication problems in general, interventions that are oriented to a professional and humane behavior that will benefit the patient's recovery. The disjunctive of all these interventions is aimed at reducing complications, the main ones being, as mentioned in the bibliographic support, infections and sepsis.

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