Cultural Article

The Importance of a Comprehensive Burn Nursing Team Approach: Experience from the Zagreb Burn Unit

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Introduction

Health professionals encounter serious challenges in burn units, as caring for the burned patient requires greater responsibility than in most types of serious illness. Nurses are an integral part of the burns multidisciplinary team as they spend more time caring for burned patients compared to any other member of the burn team.[1,2] As nurses are at the core of the multidisciplinary team, they play a vital role in the care of burn-injured patients and may experience greater challenges. This crucial role is typically accompanied by several issues that require further consideration. Burn nurses may experience physical, emotional, and environmental challenges which are linked to the nature of burn injuries. Caring for patients with extensive burns often means long periods of standing and manual work, especially during wound care and dressing changes. These tasks can last many hours and require lifting, holding limbs in position, and repetitive movements, which strain the back, shoulders, and arms. Frequent dressing changes, wound debridement, and patient handling contribute to musculoskeletal injuries (e.g., back pain, shoulder and neck strain). Burn nurses face intense emotional challenges because of the severity of injuries, prolonged patient relationships, and high-stress environment of burn units. Burn patients often experience severe pain, repeated procedures, and long recoveries. Witnessing this daily can lead to emotional exhaustion, sadness, and helplessness. Burn nurses work in some of the most challenging clinical environments in healthcare. The environmental challenges they face are related to unit design, infection control, patient needs, and safety demands, all of which add to physical and emotional strain. Burn units are kept warm (often above normal room temperature) to prevent patient hypothermia. Prolonged exposure leads to heat stress, sweating, dehydration, and fatigue, especially during long procedures. Burn patients are extremely vulnerable to infection, requiring sterile or near-sterile environments. Nurses must follow rigorous hygiene protocols, which increase workload and stress. Frequent and extended use of gowns, gloves, masks, face shields, and shoe covers is required. Personal protective equipment contributes to discomfort, restricted movement, heat retention, skin irritation, and exhaustion. Burn wounds can produce strong odors from necrotic tissue and dressings. Continuous exposure to graphic

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injuries can make the environment physically and psychologically distressing. Constant alarms from monitors, ventilators, infusion pumps, and emergency equipment create a noisy, high-alert environment. This can lead to sensory fatigue, headaches, and reduced concentration. Wound care, debridement, and dressing changes can take several hours in one room. Nurses must maintain focus and sterile technique in uncomfortable conditions for extended periods. The unit atmosphere is often heavy due to patient pain, family distress, and poor prognoses, which influences the overall work environment. The burn unit is recognized as a stressful workplace for nurses and can affect the burn nurses psychosocial well being. Unpredictability of workload in burn unit can also increase the tension in nurses, which can lead to physical, psychological, and emotional problems, incompetency, burnout, and depersonalization.[3,4] Nurses who care for the burned patients may encounter unique issues that may require support. Burn nursing sits at two extremes, and both ends of the spectrum are challenging in very different ways. This tension is part of what makes burn nursing so complex, demanding, and unlike most other specialties. When burn units experience low admissions or lower acuity patients, the environment can appear calmer on the surface but it brings its own risks. Burn care is a highly specialised skill set. Complex wound assessment, graft care, infection recognition, fluid balance in major burns, pain and sedation management, and scar prevention all require regular hands-on practice. When exposure is infrequent, nurses can begin to feel their skills dull, not because of incompetence, but because burn nursing relies on pattern recognition, confidence, and muscle memory. This creates a paradox - a calm unit can still feel professionally unsettling. Nurses may worry about being unprepared when a high-acuity burn arrives suddenly, which it often does. At the opposite extreme, burn nurses care for patients with extensive, life-altering injuries that demand relentless physical, emotional, and pscychological energy. Nurses must maintain constant vigilance, knowing that a small change in vital signs, urine output, or wound appearance can be life-threatening. Burn wound care is one of the most distressing aspects of the role. Dressing changes can take hours and involve removing adhered dressings, cleaning raw, exposed tissue, managing bleeding and exudate and balancing effective care with minimising pain. Nurses often have to inflict pain in order to heal, even when patients are crying, pleading, or visibly distressed. This creates deep moral and emotional conflict, especially when procedures must be repeated day after day.[3,4]

Burn injuries don't just affect the patient, they shatter families. Burn nurses become witnesses to shock, guilt, anger, and grief. They interprete medical information during moments of crisis and represents emotional anchors for families watching a loved one suffer or change permanently. Families may be present for weeks or months, and nurses often support them. Holding this emotional space while continuing highly technical care is immensely draining.

The importance of comprehensive burn nursing team approach in Burn unit, Zagreb

In the period from January 1st 2024 to December 31st 2024, 111 patients were hospitalized in the Burn unit in Zagreb. 29 patients required intensive care treatment due to a severe burn injuries, and 82 had burns less than 30 percent TBSA and were in the surgical part of the burn unit. 218 patients were treated on an outpatient basis. Nurses have an important role from the beginning of patient preparation.Nurses of the Burn unit participate in preoperative preparation of patients, in which communication with the surgeons and critical care team is crucial in order to manage perioperative care in a manner that is compatible with treatment goals of the Intensive Care Unit. Details of the surgical plan are also essential to estimate blood loss in order to plan appropriate vascular access, invasive monitors, and to order appropriate blood products.

Nurses play a critical role during surgery by preparing specialized equipment, maintaining a controlled operating environment, managing specialized pre-operative, intra-operative, and post-operative protocols, and providing specialized wound care.[5,6] This includes ensuring patient safety, managing the intricate surgical needs of burn patients, and assisting with procedures such as debridement and grafting. Their specialized skills are vital for patient outcomes, though all OR staff need to have a baseline competency in burn surgery to handle mass-casualty events.

The role of a nurse in postoperative burn care is comprehensive, involving not only the physical

management of wounds, pain, and vital signs but also providing emotional and psychological support for the patient and their family. Nurses are essential in promoting healing, preventing complications, and helping patients through one of the most challenging recovery processes in medicine.[2,4]

Nurses in outpatient burn care are responsible for ongoing wound management, pain control, rehabilitation support, and patient education, while preventing complications and promoting long-term physical and emotional recovery.

Nurses work twelwe- hour shifts while caring for outpatients and all the in-patients on the Burn unit.

A burn nurse must know burn assessment, wound care, fluid management, pain control, infection prevention, rehabilitation, nutrition, and psychosocial support, along with excellent communication and patient-education skills. These competencies ensure safe care and optimal recovery for burn patients.

In 2018 Sestre milosrdnice University Hospital Center was included in the project "Education of mentors for nurses and midwives in health system in Croatia and full implementation of the educational curriculums".[7,8] Burn nurses actively participated in education of mentors and started to implement mentorship in the Burn unit. To become a mentor for nurses and midwives at Sestre milosrdnice University Hospital Center, first, trainees had to complete a mentorship course, which typically involves a mix of classroom instruction, e-learning, and portfolio work over a period of about 12 weeks. Once qualified, mentors are added to the local mentor register, and are required to maintain their registration by attending annual updates and a triennial review, which is often part of their standard appraisal process.

Mentoring burn nurses involves a structured process for experienced nurses to guide and support less experienced colleagues in areas like clinical skills, critical thinking, and stress management to prevent burnout and improve patient care.

Nurses in Zagreb Burn unit also work with nursing students which helps attract junior nurses to start working in the Burn unit. Burn units are highly specialized and can be intimidating for students, but if effective teaching consists of structure, supervision, safety, and gradual skills exposure, then it is an ideal place for learning. Burn units can be intense and intimidating, but they can also be inspiring, highly specialized, and deeply rewarding. To draw the novice nurses to this area, experienced nurses must focus on support, education, culture, and career growth.

Burn care is complex and multidisciplinary.[1] In a regional center such as the Burn Unit in Zagreb, a comprehensive, coordinated burn nursing team approach improves outcomes by ensuring consistent, evidencebased care across the acute, reconstructive, and rehabilitation phases. The multidisciplinary team at the burn unit consists of surgeons, anesthesiologists, physiatrists, physiotherapists, microbiologists, infectious disease specialists, and a nurse for hospital infections. Although the Burn Unit in Zagreb does not have constant supervision by a psychiatrist, when a patient is assessed to be in need of an examination, they are invited for a consultation.

Nurses form the backbone of burn care - providing continuous assessment, wound management, pain control, psychological support, education, and care coordination. A team approach matters because of the complexity of burn survivors' needs- burn patients require simultaneous attention to airway management, fluid resuscitation, wound care, infection prevention, metabolic support and psychosocial needs.

It is important to emphasize that burn nursing is one of those specialties where the real work happens in the spaces no policy or job description can fully capture. Burn nurses don't just provide care, they inhabit multiple roles simultaneously, often within the same hour, sometimes within the same interaction. Conversations between nurses and patients often happen quietly, at the bedside late at night, when defenses are down. Nurses hold these truths without judgment and without always being able to fix them.

They absorb tears, anger, silence, and despair, often while still performing highly technical tasks. This emotional presence is rarely measured, documented, or acknowledged, yet it is central to healing. No single provider can reliably manage all these aspects alone. Also a standardized team approach reduces variance in practice, prevents missed care, and improves early detection of complications (sepsis, compartment syndrome, graft failure). The importance of integrating physiotherapy, nutrition, pain specialists, psychologists, social

work and discharge planners with nursing care supports faster functional recovery and better longterm outcomes.[1,9]

Although in Croatia, the idea of multidisciplinary burn care exists, but the structure, resourcing, and coordination needed to make it work consistently, are often missing.

Burn care is not a single episode of treatment - it is a long recovery journey. When multidisciplinary care is poorly organised the burden shifts to nurses, patients, families, and community providers. Long-term outcomes suffer, even when acute survival is good. Recognising these gaps is not failure - it is the first step toward improvement. Strengthening formal multidisciplinary team structures, early allied health involvement, clear discharge pathways, communication with community services would align Croatian burn care more closely with international best practice and better support both patients and the nurses who hold the system together.

Clear roles and protocols in the burn unit improve workflow, reduce length of stay, and optimize use of ICU and operating theatre resources. Our future goal is to establish a clear burn team structure with well-defined roles. This includes specialist burn nurses responsible for wound care, graft monitoring, and complex dressing changes, and acute care or ICU nurses dedicated to ventilated and critically ill burn patients. Nurse case managers would coordinate discharge planning, outpatient follow-up, and continuity of care.

Clear triage and transfer guidelines are needed for prehospital and interfacility referrals. Standardised wound care and graft surveillance routines, defined dressing change schedules, and evidence-based pain and sedation algorithms - including nurse-led titration parameter would support consistent, safe care. Preplanned pathways for reconstructive surgery and outpatient rehabilitation would further improve long-term outcomes.

Daily multidisciplinary rounds with active nursing representation are essential. Close integration with physiotherapy, occupational therapy, psychology, and social services would support early mobilisation, functional recovery, and psychosocial wellbeing throughout the patient journey.

Ongoing education is required to maintain specialist burn skills. This includes regular in-service training on burn pathophysiology, dressing techniques, graft care, and emergency scenarios, as well as simulation drills for mass-casualty or chemical and thermal exposure incidents. Competency checklists and annual validation for key procedures would reduce the risk of de-skilling.

Care should be centred on patients and families, with structured education on wound care, infection signs, pain management, and scar care. Psychological screening and early intervention for PTSD, anxiety, and body image disturbance should be routine. Discharge planning must be culturally sensitive and adapted to local social supports in Zagreb, ensuring smooth transition to community-based wound care, rehabilitation, and follow-up services.

Despite many obstacles, we have clear goals to strive for. We are fighting with the resources we have. Given the emotional and physical strength of all burn nurses, there is no question of failure.

Conclusion

A comprehensive burn nursing team approach is essential for high quality care in the Burn Unit, Zagreb. When nurses are empowered with clear roles, standardized protocols, multidisciplinary collaboration, and ongoing education, patient safety and recovery improve measurably. Investing in nursing leadership and structured team processes yields better clinical outcomes, shorter stays, and higher patient and family satisfaction. Burn nursing team approach relies on collaboration, specialized skills, clear communication, and holistic care. Burn nurses play the central role in connecting all disciplines and ensuring safe, compassionate, and effective treatment for burn patients.

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