

A Framework for a Successful Pressure Injury Prevention Program in a Regional Burn Center

**Sunday, November 11, 2018
8:00 – 8:15 am**

Author and Co-authors: Lauren E. Cox, BSN, RN, CCRN; Jennifer E. Kesity, MSN, RN, FNP-BC, CWS; John Griswold, MD
UMC Health System, Timothy J. Harnar Burn Center, Lubbock, TX

Objective: Upon completion of the lecture, attendees should be better prepared to:

- Define the impact of hospital-acquired pressure injury in the burn population
- Describe prevention initiatives for patients with burn injuries to decrease rates of hospital-acquired pressure injuries

Introduction: Burn centers take care of complex patients with a multisystem insult. Burn-injured patients are inherently at-risk for pressure injuries. Little evidence exists regarding pressure ulcer prevention practices specific to burn centers. The lack of an adequate assessment tool to help predict pressure injury in the burn population is also a concern.

Our verified burn center sought to decrease the incidence of hospital-acquired pressure injury (HAPI) through a multimodal approach. Our approach includes methods to reduce device and positioning related pressure injuries as well as strategies for prevention specific to the burn population. A key component of our plan includes education for all staff and ownership of pressure injury prevention.

Abstract: **Methods:** We conducted the study at a verified regional burn center covering a 300-mile radius geographical region serving adult and pediatric populations. The hospital system housing the burn center has recently become a Magnet Designated facility. While on the journey to Magnet Designation we tracked National Database of Nursing Quality Indicators (NDNQI) data quarterly. Preliminary data indicated we had a high rate of pressure injury above the national benchmark. The burn center now shows remarkably low rates of pressure injury.

We historically utilize the industry standard interventions such as proper turning every 2 hours, padding of bony prominences, use of pressure reduction or air circulating beds, proper skin care, nutritional assessment, measures to decrease the length of stay, and mobilization. We have additionally elevated some of these practices by utilization of catheter securement to prevent mucosal injury, elimination of supine laying in turning schedule, aggressive and improved nutritional management, and frequent repositioning of invasive devices. The risk reduction strategy includes an improved method for securing nasogastric tubes, moisture management of wounds, standardizing heel protection, padding for tube securement ties, restricted use of touch fasteners on all ace bandages, regulating c-collar care and repositioning,

directing splint checks and repositioning, and integration of a stretch bandage training protocol.

We collected data reported to NDNQI for a total of 8 quarters. The data our hospital presents to NDNQI is collected monthly during a hospital-wide survey. The nurse managers and staff nurses in each unit are responsible for the examination of all patients present in the unit during survey time. All pressure injuries are reported to NDNQI specifically as the total number of pressure injuries, number of patients with a pressure injury, and pressure injuries identified per patient.

Findings: Our findings demonstrate a decrease in the overall number of pressure injuries occurring in our unit since the introduction of our pressure injury prevention program ($p= 0.037$). The number of patients with pressure injuries and the number of pressure injuries adjusted for unit census also dropped ($p= 0.021$ and $p= 0.040$ respectively). Overall our findings indicate our pressure injury prevention program has led to a significant decrease in the number of pressure injuries occurring in our burn center and historically low incidence of HAPI.

Conclusions: The burn center has experienced a dramatic improvement in the incidence of hospital-acquired pressure injury due to focused prevention initiatives and risk reduction strategies. Burn centers should adopt programs to prevent hospital-acquired harm rather than maintain a reactive approach. Involving bedside nursing staff in the improvement process increases buy-in and effectiveness of programs.

Implications for Future Research: Research is ongoing to evaluate the impact of various prevention strategies for hospital-acquired pressure injury specific to the burn population. A coalescence of practices is needed to establish industry standards of care. There is a need for an assessment tool to appropriately determine pressure ulcer risk for the burn-injured patient.

References and Resources:

Coyer, F., Gardner, A., Doubrovsky, A., Cole, R., Ryan, F. M., Allen, C., & McNamara, G. (2015). Reducing Pressure Injuries in Critically Ill Patients by Using a Patient Skin Integrity Care Bundle. *American Journal of Critical Care*, 24 (3), 199-209.

Disclosure:

Lauren E. Cox – No Relevant Financial Relationships to Disclose
Jennifer Kesey – No Relevant Financial Relationships to Disclose
John Griswold – No Relevant Financial Relationships to Disclose