Driving Hospital-Acquired Pressure Ulcers to Zero

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KEYWORDS

- Hospital-acquired pressure ulcers • Unit-acquired pressure ulcers
- Intensive care unit • Staff nurse accountability • Change process
- NDNQI pressure ulcer education • Bedside report • Braden score

KEY POINTS

- Pressure ulcer formation in the ICU is no longer acceptable.
- Yearly competencies for identification of pressure ulcers may be the key to eliminating hospital-acquired pressure ulcers.
- Stage I pressure ulcers must be identified accurately to stop the progression to open wounds.
- When bedside RNs are given the task of solving problems, positive outcomes occur.
- Collaborative bedside report creates accountability.

A patient admitted into the intensive care unit (ICU) may have a single or even multiple organs failing; be sustained on life-saving equipment, such as ventilators; and is usually hemodynamically unstable and maintained on vasoactive drugs, which divert oxygen-rich blood flow from extremities to major organs. All of these issues make the ICU patient a prime candidate for the development of a pressure ulcer.[1] Because of these issues, many ICU nurses believed that pressure ulcers in the ICU could not be avoided. The issue is to change the mindset, hold individuals accountable, and have a goal of zero pressure ulcers. The new thought needs to be that pressure ulcers are preventable.

Pressure ulcers have mental, physical, and financial implications for the individual and the organization. A loss of confidence in the organization can occur when a patient develops any hospital-acquired condition. Patient and family expectations are focused on healing or maintaining health care issues, not the development of new health care concerns during their hospitalization. Physically, the development of hospital-acquired pressure ulcers creates discomfort and body image distortion while requiring additional treatments and medications. In the world of health care, the

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Crit Care Nurs Clin N Am 26 (2014) 559–567
http://dx.doi.org/10.1016/j.ccell.2014.08.011 **ccnursing.theclinics.com**
0899-5885/14/$ – see front matter

financial implications related to hospital-acquired pressure ulcers have a major impact on a hospital's financial outcome. Each pressure ulcer can add a cost ranging from $2384 to $17,495 per case.[2]

The prevention of hospital-acquired pressure ulcers remains a top priority for health care facilities worldwide. This article discusses a process improvement in an ICU where the unit-acquired pressure ulcer rate was dropped from 30% to 0% by front-line staff nurses. The key areas addressed by the staff were education, creating a process for turning patients during bedside report, and the creation of a documentation tool for accurate skin/wound assessment. Involving front-line staff in the prevention methodology creates a process that is quickly adopted by staff, peer-to-peer accountability in accurate skin/wound assessment, and positive outcomes.

LITERATURE REVIEW

To prevent an event from happening, one must understand why it occurs. The literature is rich with research on pressure ulcers, their potential causes, and possible solutions. However, one research study tends to contradict another. For example, a patient's gender has been identified as a potential risk factor in obtaining a pressure ulcer. A study conducted by Compton and colleagues[3] identified males as having a significantly higher rate of pressure ulcers, whereas other studies found females were at higher risk[4,5]; however, another study did not find gender to be a factor.[6] Age was also identified as a potential predictor of obtaining a pressure ulcer. In several studies patients older than 65 years of age were identified as being at a higher risk of developing a pressure ulcer,[4,7,8] yet a study completed in Tokyo found, when looking at pressure ulcer development, age was not a risk factor.[9]

Another contradictory factor discussed in the literature is body weight and body mass. Although obese patients have been identified as having a higher risk of pressure ulcers while hospitalized,[3,10,11] body mass was not a valuable variable because of fluid accumulation and body wasting that occurs in the ICU.[6,11]

In some studies, nutritional status within the ICU is also a potential contributor of pressure ulcers. Because of the level of illness, feeding patients is frequently delayed, which can create a loss of subcutaneous tissue and can increase pressure on bony prominences, thereby increasing the risk of a pressure ulcer.[12] However, the laboratory data usually used in identifying a patient's nutritional status, such as serum albumin and protein, do not show statistically significant differences in patients that developed pressure ulcers compared with those patients that did not.[6]

More consistent risk factors in the literature associated with pressure ulcers include patients with multiple chronic illnesses, especially vascular disease and congestive heart failure; patients with low arterial and systolic pressure; and patients receiving vasopressors.[4,7,10,11,13–15] The consistent reasoning for this was a lack of oxygen and nutrients to the capillary beds that supply the skin.

As previously noted, the literature is full of contradictory information about pressure ulcers and their potential physiologic causes. Within the intensive care setting, additional issues also exist that can contribute to the increased risk of pressure ulcers. If a patient is intubated, or has a tube feeding infusing, the head of the bed is elevated to prevent aspiration. This elevation increases the risk of shearing and friction, which contributes to pressure ulcer development.[6,7,12] Nurses within the intensive care should also consider the length of time the patient may have been laying on a surgical, ambulance, or hospital stretcher awaiting testing and admission.[4,9]

All of these issues could help explain why a patient in the ICU is twice as likely to leave the unit with a pressure ulcer as is a patient in the acute care setting.[14,15]