Hospital-acquired pressure ulcers (HAPUs) are a challenging concern for nurse administrators. Not only are pressure ulcers painful for patients, but they can also be painfully costly for hospitals. The introduction in 2008 of the Centers for Medicare and Medicaid Services (CMS) policy for nonpayment of Stages III and IV HAPUs places an additional burden on nursing administration to aggressively prevent these ulcers from developing.1 Heel pressure ulcers are the second most common pressure ulcer location, yet there’s little research focused on the prevention of these ulcers.2 This article reviews the current literature related to preventing HAPUs and provides guidance on the critical role of nurse managers to decrease the incidence of heel ulcers.

Incidence, mortality, and costs
The National Pressure Ulcer Advisory Panel (NPUAP) has noted pressure ulcer incidence ranges from 0.4% to 38% in hospitals, from 2.2% to 23.9% in skilled nursing facilities, and from 0% to 17% for home health agencies.3 Interestingly, the NPUAP 10-year retrospective review (1990 to 2000) of published data on pressure ulcers found that heel ulcers rose from the sixth most common anatomical location to the second most common anatomical location, followed only by sacral pressure ulcers. Moreover, every year approximately 60,000 patients die from complications of pressure ulcers.4 The significant increase in incidence warrants greater focus on the prevention of heel pressure ulcers.

The cost associated with caring for patients with pressure ulcers varies greatly, depending on the economic models that are used. For instance, do the models include only material costs or do they also include nursing and ancillary staff time associated with providing care? Pressure ulcers are the second most common cause of hospital readmissions, with treatment costs ranging from $20,000 to $70,000 per wound.5 In addition, the costs of treating the associated complications of pressure ulcers during a single hospital stay often exceed $200,000 per patient (this occurs in select cases in which the ulcer isn’t recognized initially and complications from the wound develop).6 Consequently, the costs related to pressure ulcers place a tremendous financial burden on the healthcare system.

An assessment of cost-of-illness of pressure ulcers in the Netherlands ranged from a low of $362 million to a high of $2.8 billion, which accounted for approximately 1% of the total Dutch healthcare budget.7 An analysis by the CMS found that the average charge per stay for a patient with a Stage III or Stage IV pressure ulcer was $43,180.4 The CMS also determined that 257,412 beneficiaries admitted to hospitals developed Stage III and Stage IV pressure ulcers, for a total CMS payout to hospitals of over $11 billion.8 It should be noted that only one-third of all hospitalized patients are Medicare beneficiaries, thus the true cost of managing pressure ulcers in hospitals remains elusive. States that publicly report their adverse events can further shed light on the potential costs at the state level. For example, comparing California with Maryland related to pressure ulcer development in 2008 indicates that California hospitals would have lost more ability to bill at $47,000,000 (1,668 cases at $28,272) compared with Maryland’s $17,652,455 (1,009 cases at $17,495).9 These figures...
clearly indicate that pressure ulcers can present a serious financial dilemma for hospitals. Litigation associated with pressure ulcers continues to rise in hospitals. One U.S. retrospective study investigating jury awards in pressure ulcer cases found financial awards ranging from $5,000 to $82,000,000, with a median award of approximately $250,000. Given the potential revenue that can be garnered through such law suits in the United States, attorneys are now placing ads on billboards, newspapers, and even on TV seeking pressure ulcer cases. So, what’s the bottom line? A lack of wound-care knowledge can have a significant negative impact on both healthcare providers and institutions alike.

Pressure ulcers often lead to pain, loss of function, infection, extended length of stay, and increased hospital costs. Both the CMS and several private health insurance companies have stopped paying for Stage III and Stage IV HAPUs. Thankfully, most HAPUs are preventable. These actions by the government and private insurance companies have forced hospitals to develop more aggressive programs related to pressure ulcer prevention. The fact that the CMS is no longer paying for HAPUs also places the onus on hospital personnel to prove that the pressure ulcer was unavoidable. Thus, considerable attention to prevention is warranted, especially with regard to heels, a vulnerable area for hospitalized patients.

Preventing heel pressure ulcers
There’s a lack of research related to the efficacy of heel protectors to prevent heel pressure ulcers. One of the earliest studies in 1991 investigating the effectiveness of heel protectors to decrease interface pressure on the heels found that if the patient was on a support surface (low air loss, foam mattress overlay, or air flotation mattress), the use of heel protectors didn’t necessarily reduce interface pressure on the heels while the patient was lying supine. It should be noted that the sample size was very small (N = 7). Another study investigating the efficacy of six heel pressure reducing devices didn’t find significant differences in inter-

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- The recommended guidance for (b) and (c) are based on expert opinions. A review of the literature suggests that there’s a scarcity of clinical data, including randomized controlled trials and cost-effectiveness studies regarding optimal heel protectors.

- Despite the paucity of studies, heel protectors should be considered for optimal prevention of heel ulcers. Clinical considerations in selecting an optimal heel protector device should include:
  - whether the device elevates the heel off the underlying support surface while protecting the foot drop and rotation of the leg
  - the ability to decrease friction/shear
  - whether the device allows the patient to be ambulated
  - the ability to be cleaned
  - the ability to remain in place while the patient may be moving the leg
  - decreasing heat to the heels
  - cost.

- Perhaps no other population is more vulnerable to heel ulcers than...
that a plan to protect the heels of hospitalized patients is a priority.

It remains critical for the nurse manager to ensure that a plan to protect the heels of hospitalized patients is a priority.

Challenge for the most vulnerable populations. Implementing this universal guideline may significantly decrease the overall presence of heel ulcers in CCUs.

Documentation

The assumption that pressure ulcers result from poor care of the nursing and/or medical staff has led to a flood of litigation. Heel pressure ulcers can develop independent of good nursing care and/or medical care. These lawsuits often lead to significant financial outlays by healthcare providers and/or institutions. A retrospective study investigating the lawsuit judgment in cases of patients developing pressure ulcers on admission to hospitals found that a significant number of medicoegal cases of pressure ulcer development could have easily been avoided with little expense to the healthcare institution. Thus, if the healthcare institution had provided systematic and comprehensive preventive measures, it could have potentially avoided many costly lawsuits.

The following case study highlights elements of how healthcare providers and institutions can easily be exposed to litigation: “83-year-old male was admitted to hospital with history of congestive heart failure, right cerebral vascular accident, early-stage dementia, and urinary and fecal incontinence. A pressure ulcer risk assessment scale was completed indicating that the patient was at mild risk for pressure ulcers. The patient was placed on a standard mattress with a 4-inch solid foam overlay, turned every 2 hours while in bed and chair. On Day 2 of hospital admission, a nurse indicated an ‘erythematous’ area on left hip and heel. She intervened by gently massaging the two erythematous areas with lotion and turned the patient on the right side. By Day 5, a Stage II pressure ulcer was noted on the left hip and a Stage I pressure ulcer was noted on the left heel. A hydrocolloid dressing was placed on the Stage II pressure ulcer, and nothing was ordered for the Stage I pressure ulcer. The charts noted that a wound nurse would be consulted. By Day 8, a Stage III pressure ulcer was noted on left hip and heel.”

This case highlights some common errors made by the hospital staff. To identify the areas of concern, the patient was at extreme high risk for pressure ulcers because he had multiple health conditions that made him immobile (congestive heart failure, right cerebral vascular accident, early-stage dementia, and urinary and fecal incontinence). Moreover, the risk assessment tool placed him at mild risk. This is an important factor, indicating that the tool may have been utilized incorrectly. Furthermore, no pressure ulcer risk assessment tool has 100% sensitivity and specificity. The patient was only placed on a standard mattress with a foam overlay. Given the patient’s risk level, a dynamic surface (such as an alternating air mattress) may have been more appropriate. Further complicating this patient’s condition was the massaging of the erythematous area on the left hip and heel. Research indicates that massaging a red spot may actually deepen the devitalized area. Although a hydrocolloid dressing was ordered for the Stage II pressure ulcer, nothing was ordered for the Stage I ulcer (such as offloading the heel). There was no indication of a heel protector being used. In this case study, it was obvious that additional preventive measures weren’t instituted that may have avoided the pressure ulcers.

One major factor in decreasing the exposure to litigation appears to be the adequacy of documentation. Comprehensive documentation is also requisite for reimbursement of services and products. Moreover, good documentation justifies the medical necessity of services and products. Regulatory agencies independent of healthcare providers require documentation to justify continuation of pressure ulcer care. Good documentation should reflect the care required in the prevention and/or treatment of pressure ulcers. Essential documentation should include the following related to heel pressure ulcers:

- Daily skin assessment of the heels
- Use of an offloading device (such as heel protectors)
- Moisture and heat controls on the heels
- Educating the patient and family about the importance of protecting the heels
- Decreasing friction and shearing forces on the heels
• education of the patient and family about the importance of heel protection.

Prevention is everything

The prevention of heel pressure ulcers is challenging. Although there remains a scarcity of large-scale clinical data related to the use of heel protectors, there have been a number of smaller-scale studies conducted, the results of which appear quite promising. One such study demonstrated that utilizing heel protectors and an evidence-based prevention protocol resulted in zero heel ulcers among the intervention group. In a 555-patient skilled nursing facility, another research study utilized a heel protector and a preventive protocol to reduce heel ulcers incidence by 95%. In the subsequent 11 months of this study, the development of two heel pressure ulcers was noted: one in a patient who hadn’t been identified as being at risk and a second in a patient who had refused to wear the protector during the day. Hence, the heel ulcer rate during the 11-month period was actually zero among patients who were identified as being at risk and who were compliant with the intervention.

Many clinical experts believe that quality heel protectors should be a part of any aggressive pressure ulcer prevention program. It remains critical for the nurse manager to ensure that a plan to protect the heels in hospitalized patients is a priority. With the implementation of the CMS hospital-acquired conditions policy, nurse managers are increasingly held accountable for aggressive prevention plans to reduce the incidence of pressure ulcers. Moreover, nurse managers must ensure that the nursing staff is accurately and consistently documenting interventions to protect the heel, thus reducing the hospital’s liability. If these measures are diligently followed and a heel pressure ulcer still develops, the healthcare provider can be relatively certain that the ulcer was most likely unavoidable.

REFERENCES


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