Pressure Ulcer Dilemma in the Emergency Department Environment

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The Emergency Department (ED) environment has changed considerably over the past 30 years, bringing about an increased awareness of pressure ulcers that develop in the ED. The diversity of patients treated in the ED ranges from those with life threatening events to non-emergent outpatient problems. This variance in the patient's level of acuity creates a triage sensitive environment.

The need to triage patients is beneficial for addressing the acuity of the problem, but sometimes it creates the need to defer care for the less severe conditions. This selection process creates a problem for the patient at risk for pressure ulcer development who may not require immediate care. This disconnect could delay recognition, assessment and communication about the potential for pressure ulcer development.

The specific risk factors relating to pressure ulcer prevention and treatment may not be considered serious enough to be addressed in the ED setting. This is potentially very dangerous as a pressure ulcer can develop in as little as two hours if proper precautions and/or treatment are not initiated. The magnitude of the problem is better illustrated given that 40% of hospital admissions are through the ED and the average stay in the ED is three hours, but can, on occasion, be 24 hours or more. "Boarding" is a practice often used when

overcrowded conditions require a patient to remain in the ED until a bed is available in the hospital. These patients are left on a gurneys for up to 48 hours, compromising a patient's skin as well as their overall care.

The most important component of pressure ulcer prevention and treatment is simply awareness of the problem by the ED staff. Every patient, regardless of how life threatening or routine their problem may be, must be evaluated for pressure ulcer risk factors. The key to beginning this evaluation in the ED is education. The risk analysis should address each risk factor separately. Risk factors include: limited mobility/ambulation, malnutrition/dehydration, moisture/incontinence, existing/closed pressure ulcer, chronic general medical conditions and medication that predispose patients to pressure ulcer development or delayed healing. The skin and soft tissue in and around bony prominences, especially the sacrum, heel, trochanter, elbow, ischial tuberosity and cranium should be visually inspected and palpated. This will determine if the skin and the soft tissue trapped between the bony skeleton and surface has been damaged. Many ED personnel believe that if skin ulceration is not evident immediately following an ED stay, then soft tissue injury has not occurred. This thought process is dangerous to the patient and must be corrected.

Unfortunately, mobility and ambulation is often not promoted in the ED. Life threatening situations will necessitate immobility and no ambulation. Patients who can ambulate are instructed to remain on carts or in chairs to prevent

disruptions in the ED. Nutritional restrictions secondary to medical necessity or availability of food service complicate the malnutrition risk factor for pressure ulcer prevention and treatment. Dehydration is usually addressed timely by either oral intake or IV therapy. Excessive skin moisture and/or fecal and urinary incontinence may be missed in patients with limited communication but without life-threatening conditions. The presence of an existing wound or a closed pressure ulcer can be easily missed during the initial triage history and physical. Records relating to the medical conditions and medication in use are sometimes unavailable to ED personnel for a significant period of time. When medical records, medical conditions and medications are available, a patient still may not be identified as having a risk for pressure ulcer development or a healing delay of an existing pressure ulcer.

Compounding the above scenarios is the fact that the support surfaces in the ED environment are ineffective in preventing and treating pressure ulcers. The surfaces range from back boards, to firm covered foam pads, to firm chairs. There are no commonly used surfaces in the ED that will deliver equalized volumetric support to the soft tissue at risk. Due to horizontal positioning of the patient, the heels are at great risk to develop pressure ulcers. Risk heightens when no attention is given to the foot-ankle-heel complex or loading of the heel, malleolus or side of foot occurs.

It is imperative, in my opinion, that health care professionals understand deep tissue injuries and how they can develop in as little as two hours time, but not be recognized for two to seven days.

Understanding pressure ulcer pathophysiology means understanding that tissue at risk is three dimensional and must be volumetrically supported to avoid soft tissue distortion. If distortion occurs, there is an increased likelihood of an ischemic necrosis to develop in the soft tissue. It is not generally recognized that an ischemic event can occur with no skin involvement. In other words, the skin looks intact but it is masking subcutaneous, or deep tissue injury. And, to make matters worse, the deeper the ischemic injury, the longer it takes to be diagnosed. NPUAP's proposed definition of deep tissue injury is "A pressure-related injury to subcutaneous tissues under intact skin. Initially these lesions have the appearance of a deep bruise. These lesions may herald subsequent development of Stage III-IV pressure ulcer even with optimal treatment." The pathophysiology of pressure ulcer development, along with the recognition of deep tissue injury, must be understood before hospital acquired pressure ulcers can be prevented. This will not only have an impact on the overall pressure ulcer problem approach in the general medical/surgical arena, but will also significantly impact patient care in the ED environment.

If the patient is considered to be at risk or in need of treatment for a pressure ulcer, then a support surface that delivers equalized redistribution of pressure

and shear should be used. Those who are at risk and have limited ambulation/mobility also require an appropriate lower extremity device. This device should totally unload the heel while maintaining the calf's normal configuration. The other specific risk factors should be addressed following appropriate medical standards of care.

The recommended clinical treatment plan specific to each risk factor must be communicated to the patient or legal advocate. The clinical treatment plan along with the patient choice of care determines the individualized care plan. This individualized care plan must have goals determined for a specific time frame, re-evaluated on a scheduled basis and changed if no improvement occurs or if risk factors change. This process must be documented in real time.

This comprehensive approach, along with a simple visual alert prompt (such as a bracelet) placed immediately on the at-risk patient will promote a seamless continuum of care. This approach is not only good medical care, but also fulfils regulatory and legal requirements.

In conclusion, awareness must occur through education, promotion and visual prompts. The individual care plan needs to be implemented timely, documented and communicated to the professional caregiver, as well as the patient and their legal advocate. Only by accomplishing this task can we properly address the

pressure ulcer prevention and treatment issue. If we succeed, the patient, clinician and facility or agency involved will all benefit.

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