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The Practicing Physicians' Guide To Pressure Ulcers in 2008

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A 78 year-old woman is sent to the emergency department (ED) from a nursing home for evaluation following a fall. She has a medical history of hypertension and osteoporosis, and takes metoprolol XL, HCTZ, and calcium carbonate with vitamin D. After spending 7 hours in the ED, she is admitted to the orthopedic floor with a right hip fracture. The admitting nurse finds a stage 2 **pressure ulcer (PU)** on her coccyx and blisters on her heels. The nursing home record does not document PUs. This article discusses evaluation of patients for risk of PUs and reviews measures for PU prevention. Evaluation and treatment will be addressed in a future column.

BACKGROUND

Hospitalized patients have an incidence of PUs as high as 30%; more than half of those ulcers occur in older adults. Beginning in October 2008, CMS stopped reimbursement to hospitals for treatment of hospital-acquired PUs .[1] As a result, it is hoped that hospitals will focus on early evaluation of patients at risk to assess for preexisting ulcers and take preventive measures. Similar measures should follow in nursing homes.

PU prevention and management have been mandated for years in nursing homes that receive Medicare funding. The regulations became more stringent in 1994.[2] Prevalence of PUs in **long term care facilities (LTCF)s** is as high as 23.9%.[3] Medicare dictates that nursing homes which receive federal dollars institute protocols for prevention and management of PUs. Facilities failing to institute wound care procedures risk citation, loss of reimbursement and fines. These procedures include assessment of the patient's skin on admission, a comprehensive risk assessment, creation of a plan of care based on that individual's risks, and on-going monitoring. Early assessment is critical to establish where the ulcer developed—the nursing home or the hospital—for reimbursement purposes. The initial assessment should include a skin examination in the ED for hospitalized patients as part of the admission diagnosis list to up-code for PU treatments, which average $18,688 per ulcer.[6] If a PU is not recognized and documented on admission, even though present, the PU will be considered hospital-acquired, and the hospital will not be reimbursed.

RISK ASSESSMENT

Standardized assessment tools will stratify an individual's risk of developing a PU. The Norton[4] and Braden[5] Scales rate patients based on mental status, mobility, nutrition, activity, moisture/continence, and sensory perception. Raising awareness of the individual's risk can allow preventive measures to be implemented in a timely fashion. Assessment needs to occur early and often during hospitalization. As a patient's condition changes, interventions need to be adapted.

Assuming that the patient's skin is intact at the initial examination, a risk assessment on admission should be obtained using those scales. The score will dictate interventions for prevention of hospital-acquired PUs.

ADDRESSING RISK FACTORS OF MOBILITY AND PRESSURE

A common PU risk for patients in the hospital or nursing home is decreased mobility, resulting from either illness or treatment modalities. It is important to encourage and facilitate mobility in patients able to ambulate. Avoiding sedation and restraints, and eliminating IVs and Foley catheters enable patients to be active. Initiating physical therapy early in the admission can be invaluable for mobilizing patients. For patients unable to ambulate or position themselves in bed, it is necessary to assist them to change position at frequent intervals. Tissue ischemia occurs in areas compressed between bony prominences and support surfaces in a short time, and permanent injury can occur in as little as two hours.[7]

Most hospitals and many nursing homes use pressure reduction mattresses on all their beds. For prevention of PUs, such mattresses may be sufficient for patients at average risk. For patients at high risk, alternative surfaces should be ordered. Inexpensive options, such as egg crate mattresses, sheepskins and water or gel-filled overlays, do not provide pressure relief. They may even increase moisture, compounding the problem. More advanced surfaces include low air loss mattresses, which allow slow leakage of air through a system of small holes, causing the patient to "float."[8] Air-fluidized mattresses and alternating pressure mattresses are more costly, and generally are reserved for patients with an existing PU or with unusually high risk.

Shear

Shear adds injury to pressure. Shearing occurs when gravity acts to cause internal opposing motion of tissue against bone. The classic example is the patient who is positioned in bed with the head of the bed up too high: they will gradually slide down toward the foot of the bed, causing movement of tissue planes. This force will contribute to pressure ulcers just as the pressure effect itself will. Shearing can stretch tissues and produce tears in capillaries.[9] Prevention of shearing injury is achieved by maintaining the angle of the head of the bed elevation or lateral rotation of the body at 30 degrees or less.

Moisture

Moisture increases the risk of PUs. Perspiration, urine, feces and wound exudates alter the pH of the skin, strip away

the acid mantle and make the skin more prone to breakdown.[10] Superimposed candidiasis or cellulitis is also more likely in the face of excessive moisture, and encourages skin breakdown. Minimizing moisture and protection of intact skin is important to PU prevention. Incontinence is best managed by scheduled toileting. Urinary catheters should be avoided. Multiple barrier products are available for skin protection.

Nutrition

A patient's nutritional status has substantial impact on prevention and healing of PUs. A serum albumin of less than 3.5 increases pressure ulcer risk. Other factors associated with the risk of under-nutrition and weight loss include the need for assistance with eating; consumption of less than half of meals or snacks; oral pain; poorly fitting dentures; dysphagia; vegetative signs of depression; mental status deficits; and certain diseases—diabetes, COPD and cancer. Consultation with a dietician and speech therapist will help prevent and address nutritional deficits.[11]

Conclusion

The recent CMS quality improvement initiatives provide strong encouragement to hospitals and hospital practitioners to improve assessment and prevention of patients' risk for PUs or face lower reimbursement rates for treatment of the ensuing PUs. In the future, nursing home practitioners are likely to see similar incentives for PU prevention. Documentation of preexisting ulcers, PU risk assessment and measures in place for prevention of PUs will facilitate reimbursement for the costly and important care provided to patients.

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Resources

Braden Scale: http://www.hartfordign.org/publications/trythis/issue05.pdfmedpac.gov
Norton Scale: http://www.woundcarehelpline.com/NortonScale.pdf

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