Getting under their skin

By: JO CIAVAGLIA Bucks County Courier Times

Over 18 months, one state patient safety group received more than 10,000 reports of hospital patients with pressure ulcers. About one-third developed them in the hospital.

Every two hours at St. Mary Medical Center, colored lights flash outside the 24 patient rooms on the cardiovascular care floor, where some of the sickest of the sick are recovering.

No emergency here, though, just a reminder for nurses and aides to reposition patients.

While flashing lights sound like overkill for such a routine task, U.S. hospitals are facing new pressure to reduce incidences of pressure ulcers - better known as bed sores - among patients during hospital stays.

The often preventable complication is common among people with limited mobility, resulting in pain, disfigurement, infection, increased health care costs, longer hospitalizations and higher death rates. Traditionally, health care quality groups regard pressure ulcers as a medical care quality marker and more recently a patient safety indicator.

The Centers for Medicare & Medicaid Services and Pennsylvania's Medicaid program last year ended reimbursement for treating hospital-acquired pressure ulcers. Private health insurance companies have implemented similar rules.

Pressure ulcers are caused by constant pressure against the skin that reduces the blood supply to an area causing the tissue to die. The condition starts as reddened skin, usually over bony areas like elbows and heels, but gets progressively worse, forming a blister, then an open sore, and last a crater.

Over 18 months in 2004-05, the Pennsylvania Patient Safety Authority received 10,913 reports of pressure ulcers in hospital patients. Most reports noted the sores were present at admission, though about one-third developed during the hospital stay.

Most cases were stage one or two, the low end of a common classification system that uses a one to four (least to most severe) scale based on the depth of soft tissue damage. But a "significant number" of hospital reports did not document any patient risk assessment or provide ulcer staging information, the patient safety authority noted.

Last year, most local hospitals initiated new prevention programs in anticipation of the Medicare and Medicaid reimbursement changes, which they report significantly reduced pressure sore incidents.

Most use similar protocols such as avoiding adult diaper use, frequent skin assessments and visual or audio cues to remind nursing staff to check and regularly reposition patients.

Every two hours, Aria Health hospitals play a series of beeping tones as a reminder for nurse teams to take patients out of bed for bathroom breaks, nurse manager Kelly Herninko said. Aria has three campuses, including one in Bucks County.

The three-person teams also perform pain and skin checks on all patients, a process that typically takes about 15 minutes for each floor, Herninko said. Since implementing the protocols, no patients have developed pressure ulcers during hospital stays.

Last summer, Doylestown Hospital started posting colored "turning schedules" in the rooms of immobile patients as a reminder to reposition them every two hours.

The hospital uses sturdier foam-turning wedges, rather than folded pillows for repositioning. Air overlay mattresses also are placed on emergency room stretchers for at-risk patients.

"Every intervention helps," added Jeanette Delaney, a Doylestown wound, ostomy and continence nurse. "You have to think about ways to stress the importance of it, making it a priority to staff."

Recently, Abington Memorial Hospital - where up to 20 percent of patients are admitted with a pressure ulcer - spent $2.5 million to replace all mattresses, except pediatric and maternity beds, with special pressure redistribution mattresses.

Abington also uses patient nutrition assessments as part of its prevention strategy, wound care program manager Jamie Tamburino said.

Healing wounds require proteins, vitamin C, zinc and copper; people who are malnourished are at a higher risk for skin breakdown.

In the last 18 months, Abington's pressure ulcer rates among patients at highest risk have been consistently below the state average of 4 percent, Tamburino said.

She added that preventing all pressure ulcers is challenging; for instance, turning over some patients with low or no blood pressure may be life-threatening.

Exactly how fast pressure ulcers develop is unclear, since they start near the bone and work their way toward the skin surface, said Patty Gilbert, director of nursing performance improvement and development at St. Mary Medical Center.

But without proper interventions, ulcers can deteriorate quickly, especially if a patient has additional risk factors such as poor circulation, she added.

St. Mary's prevention efforts are part of a yearlong study it's conducting into the use of bundled nursing interventions, rather than individual treatment methods.

The cardiovascular unit patients were picked for the research project since they are among the highest risk for pressure ulcers.

Heart patients typically have limited mobility and other chronic health problems such as diabetes that affect circulation and skin condition.

The Middletown hospital started using new protocols, including assessments every 12 hours following admission, daily nutritional evaluations and no adult diapers.

For patients who cannot be turned every two hours for medical reasons, nurses massage underneath their bodies to improve circulation.

The colored light reminders were installed last summer, replacing previous paper charts in patient rooms that required nurses to sign off after patients were turned.

One year after St. Mary started using the bundled interventions, heart patients with pressure sores dropped from an average of five out of 22 with various stages of skin breakdown to a single stage 1 case in January, said Florie Ragasa, a heart unit nurse manager and lead researcher.

Last November and December no ulcers were reported; more recent data was unavailable, Gilbert said.

The pilot project has been so successful the hospital plans to expand it.

The new colored light system installed during recent renovations in the oncology and medical-surgical units soon will be activated.

Under pressure

Pressure sores are categorized by severity

Stage I: A reddened area on the skin that, when pressed, is "non-blanchable" (does not turn white). This indicates that a pressure ulcer is starting to develop.

Stage II: The skin blisters or forms an open sore. The area around the sore may be red and irritated.

Stage III: The skin breakdown now looks like a crater where there is damage to the tissue below the skin.

Stage IV: The pressure ulcer has become so deep there is damage to the muscle and bone, and sometimes tendons and joints.

Factors that increase the risk for pressure ulcers

Being bedridden or in a wheelchair

Fragile skin

Having a chronic condition, such as diabetes or vascular disease, that prevents areas of the body from receiving proper blood flow

Inability to move certain parts of your body without assistance, such as after spinal or brain injury or if you have a neuromuscular disease (like multiple sclerosis)

Malnourishment

Urinary incontinence or bowel incontinence

Did you know?

In 2004, about 159,000 U.S. nursing home residents (11 percent) had pressure ulcers. Stage 2 pressure ulcers were the most common. Residents aged 64 years and under were more likely than older residents to have pressure ulcers.

U.S. hospitals treat about 2.5 million pressure ulcers annually, and as many as 15 percent of patients may have one at any time, according to the Institute for Healthcare Improvement.

Nearly 60,000 U.S. deaths are attributed to hospital-acquired pressure ulcers; the annual estimated cost of treating them is $11 billion.

The most common places pressure ulcers develop are over bony areas like the elbow, heels, hips, ankles, shoulders, back, and the back of the head.

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