

Perioperative Pressure Ulcer Prevention Program (PPUPP): *An innovative effort to prevent pressure ulcers in surgical patients*

The Challenge:

Pressure ulcers, or bedsores, are painful and potentially life-threatening injuries that can develop when people rest on one part of the body for too long. As of October 2008, Medicare no longer pays hospitals to treat bedsores and several other preventable problems that develop after hospitalization. Some private insurers are following Medicare's lead.

Millions of surgeries are preformed each year. With technology advancements and an aging population, it is not uncommon for patients in their 80s to undergo major surgery. Surgical patients account for 42% of all hospital-acquired pressure ulcers; the most common location is the heel. Annual treatment costs nationwide are estimated at up to \$1.5 billion, with some studies showing the incidence of heel ulcers alone reaching more than 50% of surgical patients.

Where To Learn More

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The Goal:

Drastically reduce the incidence of pressure ulcers in surgical patients through aggressive prevention methods.

An Innovative Solution:

Aggressive measures to prevent pressure ulcers, including:

- **Special pressure redistribution pads under patient during surgery, and specialty air surfaces in the ICU and acute post-op settings.**
- **Protocols for nurse assessment, reassessment and care of post-op patients.**
- **Collaboration among wound, ostomy, continence and perioperative nurses to track and trend the incidence.**

What It Is

- A Perioperative Pressure Ulcer Prevention Program (PPUPP) covering staff education and awareness, assessment of environment and patient population served, skin and risk assessment, universal pressure precautions, equipment selection, positioning competencies, nurse specialty collaboration, quality improvement, and tracking of complications, care plans based on research.
- Supplements traditional methods to prevent pressure ulcer development (such as turning and repositioning) to incorporate new surfaces, padding, heel offloading devices, head cradles, ulnar pads and the skill of the staff in positioning, prepping and draping.
- Uses "Scott Triggers" – a set of evidence-based factors (named for nurse/program founder Suzy Scott-Williams) identified as predictors of highest risk for pressure ulcer development in the study (e.g., age 62 or older, Albumin level below 3.5 and ASA score 3 or greater). However, *any* surgery patient can be at risk. The Scott Triggers are the first reported evidence-based factors used to predict the likelihood of perioperative pressure ulcers. Work is underway to develop a formal validated risk assessment tool.

What It Does

- Pressure redistribution is one way to maintain proper blood flow to tissues, reducing tissue distortion, tissue death and the formation of deep tissue injuries, nerve injuries and pressure ulcers.
- Operating table pads, heel protectors, positioning devices, hospital mattresses can either prevent or contribute to pressure ulcer development based on the risk of the patient.

How It Stands Out

- In an experiment involving 323 patients between 2000 and 2004, 38% of patients who had the standard pad during surgery developed the sores. But only 7% of patients who had the pressure-relieving pad developed pressure ulcers.
- The Memphis Veterans Affairs Medical Center now uses the pressure-redistribution pads in all operating rooms, and integrated air surfaces in all acute care clinical areas. More recently, the VA has bought for its spinal cord injury unit newer "Fluid Immersion Simulation" mattresses that mimic water's natural buoyancy.
- Aggressively focusing on prevention, reduces both the incidence and severity of pressure ulcers. Over a five year period at the VA in Memphis – using 100% integrated air beds, and implementing a nursing protocol and tracking – the nosocomial pressure ulcer rate was dropped by 65%, saving more than \$3.4 million on care.
- In the case of hip or knee replacement – common surgeries for Medicare patients – Medicare pays hospitals \$10,300 for the surgery itself but has paid up to an additional \$3,500 to treat pressure ulcers or other complications. Now that Medicare will not provide additional payment to treat pressure ulcers, a hospital where 4,000 patients suffer from the ulcers each year could lose \$14 million on treatment.
- In addition to these reimbursement issues, other savings factors include:
 - Risk of litigation which is ranging from around \$250,000 to \$1 million per verdict.
 - Cost of treatment \$50,000 - \$70,000 to heal a full thickness ulcer
 - Risk of infections and death. Christopher Reeve best known as "Superman" developed complications from a pressure ulcer that lead to his death.
 - Increased length of stay.