Turning and repositioning patients who are morbidly obese

Training, teamwork, and the right equipment can prevent pressure injuries.

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Pressure Injuries (PIs) are associated with increased length of hospital stay, high healthcare costs, and poor patient outcomes. Although many factors contribute to PI risk, morbid obesity (body mass index [BMI] > 40) is a significant and independent risk factor. Simple steps—such as turning and repositioning—that effectively reduce PI development in most patients are more challenging with patients who are obese.

Barriers to adopting new technology as well as a lack of resources, training, and special equipment to aid in turning and repositioning large patients can prevent nurses and other healthcare workers from providing the best possible care. However, a willingness to analyze the gaps in care and push for needed tools can help nurses keep these patients safe.

Understanding the pathophysiology

Patients who are morbidly obese are at risk for tissue injury, infections, and altered skin integrity because of abnormal adipose tissue distribution and skin physiologic changes. As adipose tissue grows and multiplies, the density of the capillaries supplying the tissue doesn't proportionally increase. Vascular insufficiencies that develop throughout the undernourished tissue can lead to tissue necrosis.

The increased size and weight of patients who are obese is strongly correlated to mobility limitations and predisposes them to remain sedentary for extended periods. These functional limitations contribute to prolonged compression of skin and underlying tissue with an already weakened vascular status. Without repositioning relief, significant skin and tissue damage results.

Patient care challenges

Adhering to turning and repositioning schedules is difficult in busy inpatient settings, but the weight and size of patients who are morbidly obese can make turning them even more difficult. In some cases, nurses have tried to do the best they can with limited resources and equipment. However, these “MacGyver” solutions can be harmful. (See A damaging “solution.”)

Reducing PI risk

Using ad hoc solutions and inappropriate equipment is unacceptable. Clinicians are charged with using best practices to deliver quality care. For PI prevention, this means adopting proven techniques (such as proper-size beds and turn wedges) and using new technologies (such as wearable sensors) that are proven to reduce PI incidence. (See Checklist: What you need to care for obese patients.) PIs are largely preventable if hospitals do three things:

- Train staff to take a team approach to caring for and repositioning patients who are obese.
- Make special equipment (bariatric beds, lifts, and
Training and teamwork
Nursing staff must be informed of the best practices and current evidence-based guidelines for PI prevention. Patient turning to prevent PIs has evolved through research and clinical practice into a tried-and-true standard of care and is a key recommendation in all major PI guidelines, including those from the National Pressure Ulcer Advisory Panel, the Institute for Healthcare Improvement, and the American College of Physicians. Repetition is the best way to keep these guidelines top of mind. Emphasize the information in safety huddles, with refresher training, and in staff meetings.

Mobilizing patients who are morbidly obese requires teamwork. Repositioning a large patient alone isn’t safe. Dedicated turn teams charged with regularly repositioning intensive care unit patients have shown a dramatic decrease in hospital-acquired pressure injury (HAPI) incidence. Hospitals that aren’t able to dedicate a turn team have found it helpful to have nurses and aides team up regularly throughout the shift to help each other turn patients. Appropriate equipment should be used for turning and lifting to avoid injury to both patients and staff. Brainstorming best practice strategies can help care teams get this important work done safely and effectively while fostering a culture of teamwork.

Equipped for success
Appropriate equipment, combined with adequate-size patient rooms and necessary personnel, is essential for safe and effective repositioning. A ceiling lift system with slings allows for safe patient handling and saves space. Bariatric beds provide enough space for safe and comfortable turning. Patients with a BMI > 35 who are unable to laterally reposition themselves should be placed on a wide bed. All patients whose BMI exceeds 45 should be placed on a wide bed, regardless of their mobility.

Specially surfaces, such as low-air-loss beds or pressure-reducing mattresses, can help reduce PI risk, but they don’t adequately offload tissues that have been exposed to pressure-induced ischemia; additional manual repositioning is necessary. Large patients need bariatric wedges in conjunction with a high-quality turn to ensure continued offloading for tissue reperfusion. Without the wedges, patients who have been turned are likely to return to their former position, reinjure ischemic tissue, and negate the time and effort the staff put into achieving the turn.

When choosing which wedges to use, note that not all bariatric wedges are created equal. Hospitals should stock bariatric wedges with increased height not length to facilitate a sufficient turn angle without putting more pressure on the sacrum. Sometimes, this may entail turning the wedge to the steeper angle to achieve the recommended 30-degree turn for tissue reperfusion.
Monitoring technology
A patient-monitoring system with wearable, wireless sensors has been shown to increase turning performance and significantly decrease HAPI occurrence in critical care patients. This technology helps clinicians track patient movement and alerts them when patients need assistance turning. It takes the guesswork out of turning by notifying staff when a turn is adequate for offloading and how long a patient must remain off tissue that’s been exposed to pressure.

No substitute for good communication
Regardless of what tools are available, clear and effective communication among staff and between staff and patients is critical to protecting patients who are morbidly obese from HAPIs.

Periodic meetings to reevaluate safe handling procedures specifically for large patients and timely staff updates help maintain an evidence-based HAPI prevention program. If few patients who are morbidly obese are admitted, staff might benefit from periodic refresher courses to practice and review safe patient handling skills.

Effective solutions
PIs are the most costly hospital-acquired conditions throughout the U.S. healthcare system, and the unreimbursed, incremental cost of treating just one average partial- to full-thickness PI can exceed $100,000. The consensus among experts is that most HAPIs are preventable. When considering the challenges of mobilizing patients who are morbidly obese, effective PI prevention solutions require taking a team approach and addressing equipment, resources, and training issues.

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Selected references