Innovative Seated Positioning Device: Improves Safe Patient Handling While Reducing Risk Factors for Pressure Ulcers and Falls

Author: Craig Golden, MPT

BACKGROUND

Prolonged bed rest and immobility are associated with complications such as venous thromboembolism, increased morbidity, and prolonged recovery or hospital admission.1-7 One of the evidence-based interventions for preventing complications associated with prolonged immobility is early mobility. Balas et al (2012) published a bundle of care for early practice, called The Awakening and Breathing Coordination, Early Mobility (ABC), and identified 3 stages of early mobility:1 1) Sitting on edge of bed; 2) standing at bedside and sitting in chair; and 3) walking a short distance.8 Additional research has been conducted by Fashashih and Iron,9 who focused on the benefits of early mobility efforts in the medical/surgical patient population. Early mobility efforts were found to be associated with improved outcomes in medical/surgical patients, including improved outcomes associated with deep venous thrombosis, length of hospital stay, and functional status after discharge.9

Although early mobility has been documented to be feasible and effective, many patients do not receive early mobility because of perceived barriers, fear of injury, or healthcare worker (HCW) adverse reactions.9 Assistive devices and tools to help overcome barriers to early mobility are important for enhancing patient and HCW safety and improving patient outcomes.9

MATERIALS

A single patient-use seated positioning device is designed to assist HCWs during early mobility efforts by reducing required effort for safe and effective seated patient positioning in the neutral position. The goals of the device are:1

- Reduction of HCW effort required to move patients back to chair in a neutral seated position
- Maintaining patients in the neutral seated position to help facilitate easier breathing and digestion, prevent skin shear and friction, excessecal and spinal pressure, and reduce potential for accidental fall
- Pressure relief and redistribution

INTERVENTION

HCWs were instructed to utilize the single patient-use seated positioning device in patients with any of the following independent criteria:1

- Braden-4:0 or Braden scale subscale score of <1
- Incipient ulcer or ischial pressure ulcer
- Braden mobility subscale score of <2
- Braden sensor/peri-peronal subscale score of <2
- Pre-existing sacral pressure ulcers
- Inability to achieve a sustained chair position related to comfort or lack of postural control
- Chair use after bed immobilization >3 days

PAIN SAFETY PRECAUTIONS

HCWs were instructed that the device was to be used with standard hospital chairs or rolling chairs with brakes and not to be utilized for lifting patients. Standard of care safe patient handling policies and procedures did not change during the 3-month intervention. Additional guidance was provided as part of in-service training, including constant monitoring in patients with high pressure ulcers or immobility/medical restriction to sitting up in a chair 90 degrees.

SURVEY

A 3-month trial (April 2012–June 2012) was conducted in a suburban hospital, and survey administered to understand HCW perceptions on the seated positioning device for patient positioning compared with standard of care.9


REFERENCES


STAFF SATISFACTION SURVEY RESULTS (N=15)

RESULTS

HCWs using the seated positioning system felt the product was better than current standard of care for helping to reduce risk factors for pressure ulcers, patient falls, and injury related to immobile patients in bedside chairs. Specifically, HCWs felt the product helped minimize downward migration, thus reducing the potential for friction and shear forces on the skin—the two key risk factors for pressure ulcers. In addition, HCWs felt the product helped reduce patient fall risk as the patient was less likely to slide down the chair and onto the floor. Finally, HCWs felt the device made it easier to move patients with less physical effort, thus reducing the risk of macromuscular injury.

Clinical Implications: Additional research is needed to demonstrate how reduction in these risk factors affect pressure ulcer incidence, patient falls, and HCW injury related to immobile patients in bedside chairs.

CLINICAL IMPLICATIONS


Prevalon® Seated Positioning System (Sage Products, Cary, NC) was designed to assist HCWs during early mobility efforts by reducing required effort for safe and effective seated patient positioning in the neutral position. The goals of the device are:1

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