

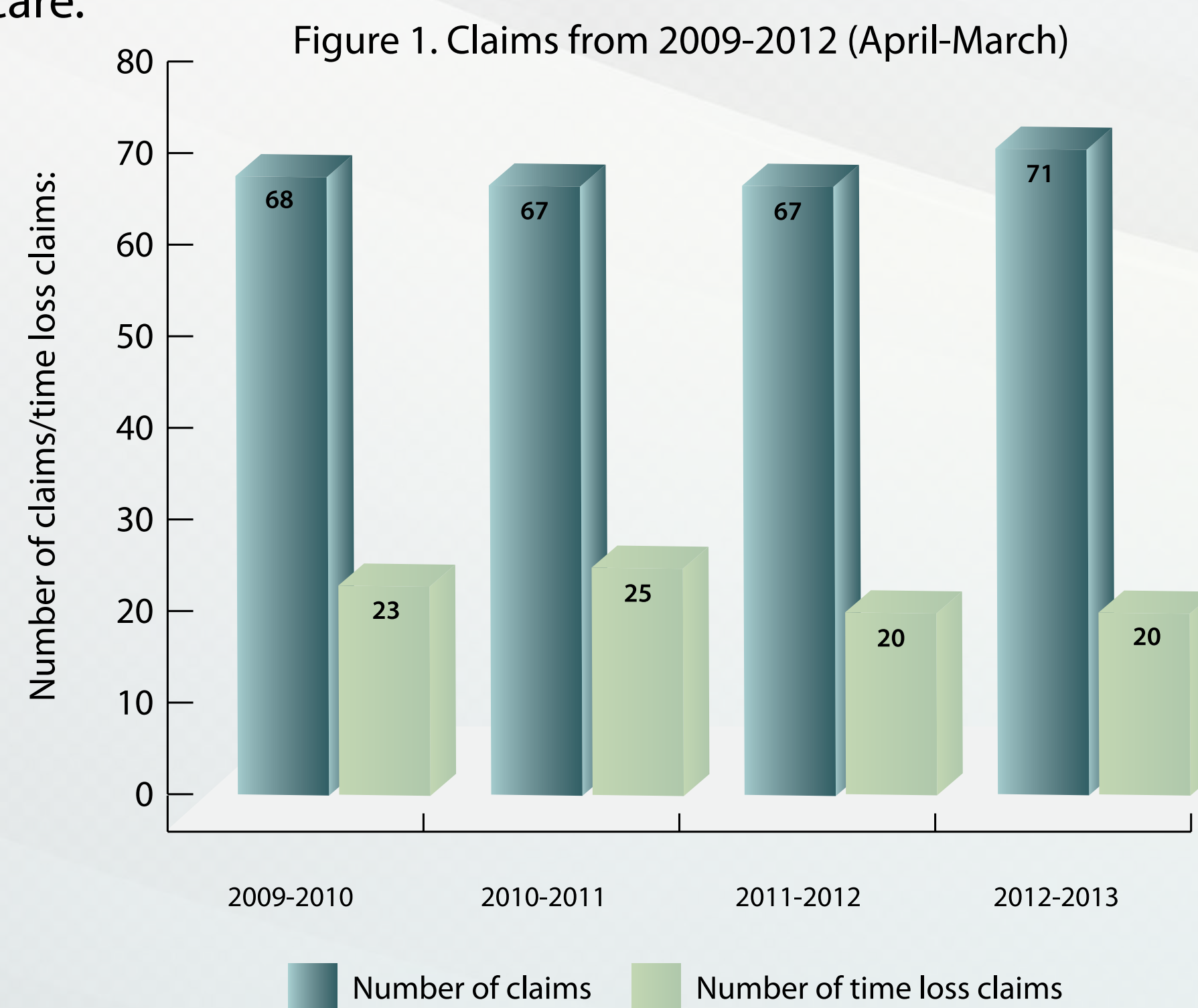
Evaluating the Effectiveness of a Patient Repositioning System for Preventing Workplace Injury

Debbie Burris, RN BSc.N, Director of Clinical Practice & Transformation

BACKGROUND

Evidence-based pressure ulcer (PU) prevention is essential to ensure patients do not experience the increased morbidity and decreased quality of life associated with facility-acquired PUs. The Canadian Association of Wound Care estimates the lowest cost of treatment for one pressure ulcer at \$5,000 per month with a median increase in length of stay of 4.31 days.¹ The sacrum is particularly vulnerable to pressure injury (accounting for approximately 30% of all pressure ulcers²) due to excess pressure, friction, shear and moisture. Protocols to prevent PUs in the hospital include multiple interventions, one of which is frequent patient repositioning (every 2 hours or as needed).³

Frequent patient repositioning can also lead to occupational injury.⁴ Client handling injuries contribute to half of all Musculoskeletal Disorders in the health care sector in Canada,⁴ and our facility reviewed Worker's Compensation Board claims from 2009-2012 to assess internal statistics (Figure 1). The Worker's Compensation Board published a resource manual to help prevent workplace injuries. One of the 5 steps of prevention is "controlling hazards."⁵ A quality initiative was implemented to control hazards associated with patient repositioning, and evaluate a novel turn and positioning system* on caregiver exertion compared with standard of care.



Prevalon®Turn and Position System, Sage Products LLC (Cary, IL)

METHODS

Design: Multi-unit observational case study

Assessment:

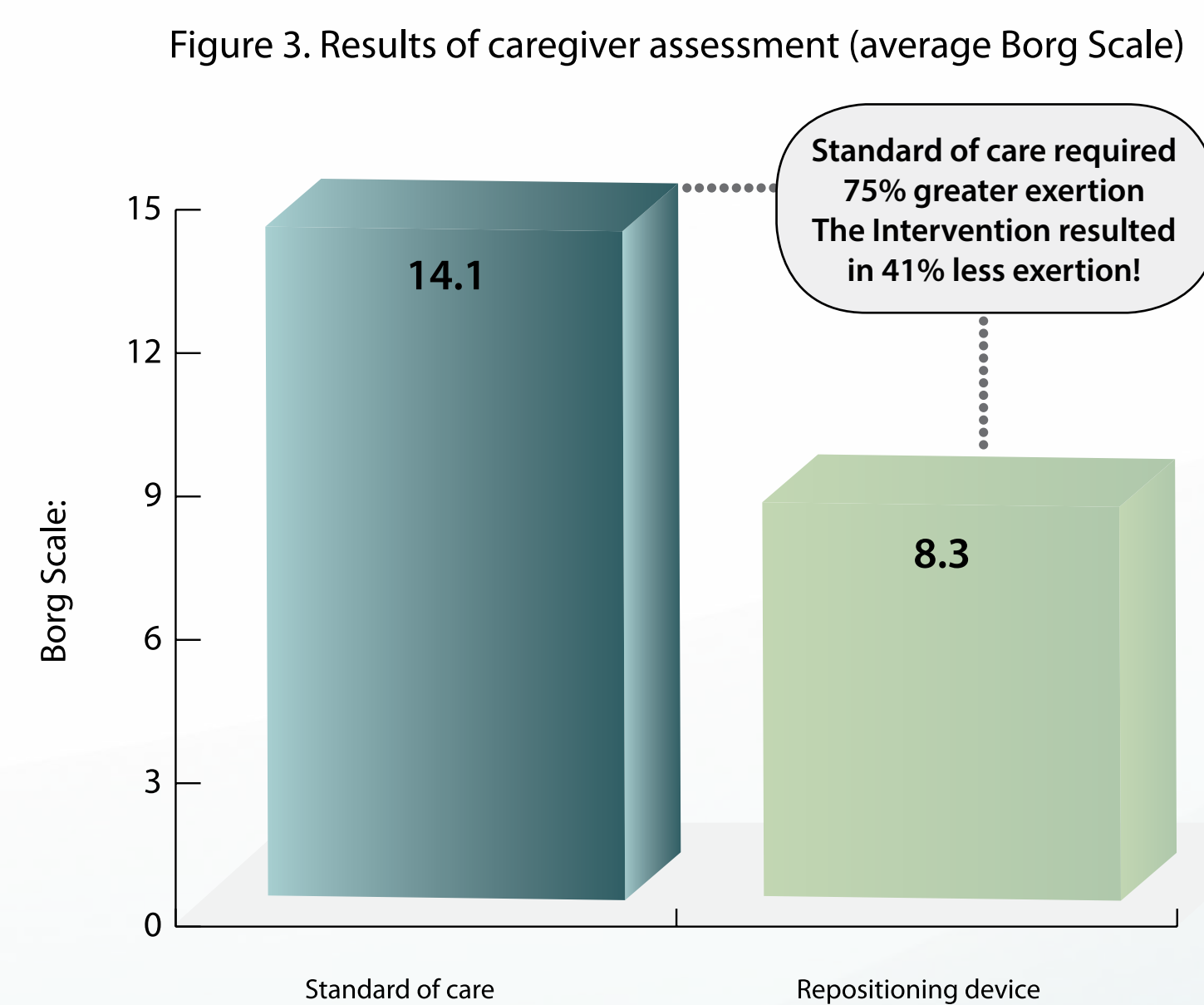
- A total of 50 experienced caregivers (RNs and LPNs) across 5 units participated in this study.
- Prior to the study, caregivers were familiarized with each method of repositioning.
- Caregivers were asked to compare the effort required to reposition a 250 lb male subject using their standard of care (pillows and draw sheets) versus use of the turn and position system.
- The validated Borg Scale (Figure 2) for perceived exertion was used to evaluate physical exertion.

Figure 2. Validated Borg Scale of Perceived Exertion

| | |
|-----|---|
| 6 | No exertion at all |
| 7.5 | Extremely light |
| 9 | Very Light (For a healthy person, it is like walking slowly at his or her own pace for some minutes.) |
| 11 | Light |
| 13 | Somewhat hard (Somewhat hard exercise, but it still feels OK to continue.) |
| 15 | Hard (Heavy) |
| 17 | Very hard (A healthy person can still go on, but he or she really has to push him or herself. It feels very heavy, and the person is very tired.) |
| 19 | Extremely hard (For most people this is the most strenuous exercise they have ever experienced.) |
| 20 | Maximal exertion |

RESULTS

The standard of care required 75% greater exertion to reposition a patient in bed when compared to a patient repositioning device (Figure 3).

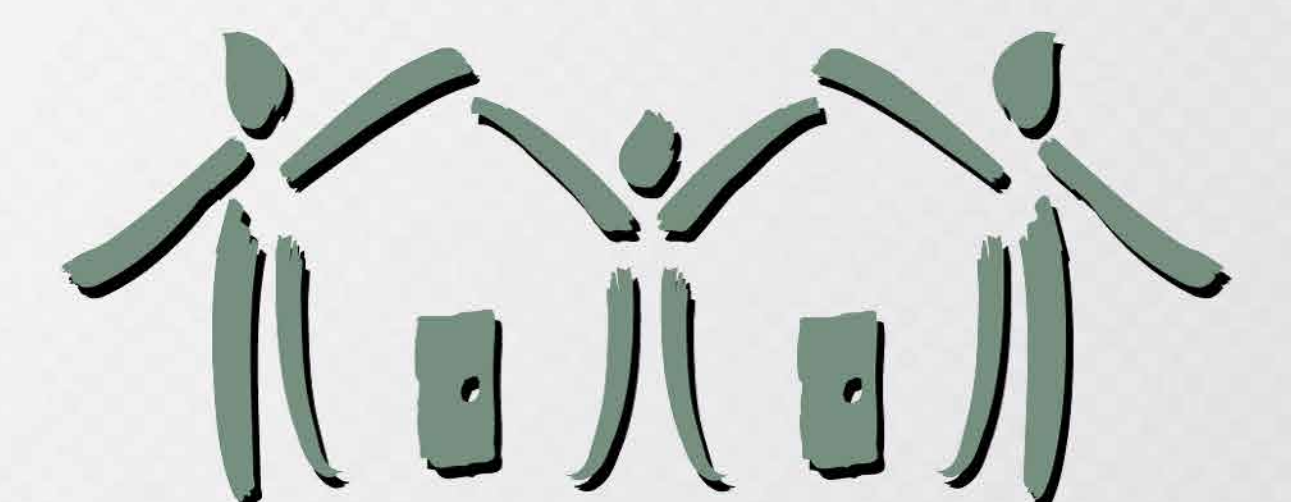


CLINICAL IMPLICATIONS

- Results from this quality initiative indicated the high-risk occupational activity of in-bed patient mobilization might be made easier and safer with use of a patient repositioning system.
- There is significant potential for enhanced compliance with patient repositioning if repositioning is made easier for staff.

REFERENCES

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