

# **Getting to Zero in Washington State Nursing Homes: Final Report on Intervention Effectiveness**

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## EXECUTIVE SUMMARY

**BACKGROUND.** The huge toll caused by back injuries among nursing home workers has been well documented at both the national and state level. These injuries have been primarily related to patient/resident handling. There is strong evidence that reduction in low back load would reduce the risk for injury. Zero-lift programs are designed to reduce these back loads and involve 5 basic components including 1) management commitment and employee involvement in implementation, 2) having enough of the right equipment for transfers and repositioning available and used, 3) appropriate training of staff, 4) relevant policies in place and complied with, 5) active case management to assist workers in a safe return to work if they are injured. Training materials and mechanical lifting devices continue to be developed and improved; yet back injuries are still occurring in nursing homes at unacceptable rates. The challenge for the nursing home industry is to effectively implement programs that reduce the loads on the nursing assistants (NACs) while maintaining a safe and caring environment for the residents of the nursing homes.

**METHODS.** We took advantage of a partnership between the Department of Labor and Industries and the nursing home associations (particularly Washington Health Care Association) in Washington State to assess the impact of implementing different interventions on a) implementation of zerolift and b) reduction in compensable (4 or more lost workdays) workers' compensation claims rates for backs and shoulders related to resident handling. Out of six geographic regions in the state, two were assigned to a 15% one-time workers compensation (WC) premium discount (PD) offer intervention, one region was assigned an emphasis on implementing job modifications for injured workers as a way to get lifting equipment into these nursing homes, and the remaining three regions served as a comparison. In addition, WHCA (Washington Health Care Association) distributed training materials to their members and provided \$1,000 rebates on lifting devices for their members who were part of their workers' compensation RETRO group. These interventions crossed regions. We used four industrywide surveys (baseline and three yearly follow-ups) to assess the overall implementation in the industry. We conducted 30 baseline and 50 follow-up site visits to nursing homes in the three groups. PATH (postures, activities, tools and handling) analysis of NAC jobs was conducted during a subset of these site visits (8 PD and 8 comparison homes), to characterize exposures. A GEE (generalized estimating equations) approach to logistic regression was used to assess nursing home characteristics and zerolift implementation features' impact on WC claims rates in State Fund nursing homes.

**RESULTS.** The PD group (35/55 eligible participated) implemented components (particularly equipment) of zerolift more quickly than the comparison group. By the 4<sup>th</sup> survey, the comparison group had almost caught up with the PD group in terms of equipment. The job modification focus program was not effectively implemented so this region became part of the overall comparison group. There was limited awareness of the WHCA training materials or of the existence of the job modification program that was actually available to all injured workers if it would help return them to work successfully. The PATH analysis before and one year after the PD was distributed revealed significant decreases in awkward trunk postures during resident transfers but increases in shoulder load. The trunk loads increased in the comparison group. There was good correlation between site visit and survey equipment and training parameters. Other parameters had

poor correlations. Canonical correlations between sets of parameters (barriers, commitment/involvement, policies) were good ( $>0.6$ ). There was essentially no variance in policies and reported training practices between nursing homes. In the WC analyses, important predictors of increased risk were resident/NAC ratio, NAC turnover, management turnover, for-profit/chain status, and hand-crank lifts/NAC ratios. In some of the analyses, predictors of reduced risk included having the same administrator in the previous three years, having a higher percentage of sit-to-stands lifts, management commitment/employee involvement, and receiving a premium discount. However, these variables were not statistically significant in all analyses. The significant predictors of increased risk in virtually all analyses were being a small nursing home and having high turnover.

Changes in health policy and financial viability of nursing homes throughout the study period were reflected in turnover and difficulty in sustaining zerolift environments.

### **SIGNIFICANT FINDINGS**

Implementing zerolift programs can reduce trunk loads in nursing assistants while handling residents. One-time WC premium discounts appeared to help jumpstart the industry toward zerolift but were not able to sustain it through difficult financial times for the industry. Many of the barriers to sustained zerolift programs identified in this study are related to health policy and economic changes in the industry. Unless these underlying barriers are addressed, it will be difficult to bring about permanent change in the way NAC work is performed and risk reduced.