



KEY POINT SUMMARY

OBJECTIVES

In this study, the researchers examined a ceiling-lift program in a 75-bed, extended care unit of a community hospital in British Columbia, Canada, to evaluate the effectiveness of ceiling lifts in reducing staff musculoskeletal injury risks from handling patients. In addition, the study measured the impact of ceiling lifts on staff well-being, as well as resident safety and comfort. The authors note that the objectives of this part of the study were to: (1) assess staff perceptions of risk of injury, job satisfaction, and preferred resident-handling methods; (2) assess the frequency and type of resident-handling injuries; and (3) evaluate the cost-benefit of ceiling-lift programs.

Effectiveness of Overhead Lifting Devices in Reducing the Risk of Injury to Care Staff in Extended Care Facilities

Engst, C., Chhokar, R., Miller, A., Tate, R. B., Yassi, A.
 2005 / *Ergonomics*
 Volume 48, Issue 2, Pages 187-199

Key Concepts/Context

Healthcare facilities often install mechanical lifts to help staff avoid injuries from patient handling. However, some mechanical lifts require more time and space and are not always as comfortable, safe, and secure as manual patient handling. Few studies have used a prospective controlled design to evaluate the effectiveness of ceiling lifts in reducing risk of musculoskeletal injury to care staff; increasing staff satisfaction; and assessing preferred methods of lifting, transferring, and repositioning residents.

Methods

This study used a quasiexperimental design to examine the effectiveness of the ceiling lifts 1 year after they were installed. As a comparison unit, a separate, but identical, 75-bed, extended care unit in the same hospital did not receive ceiling lifts. The authors note that all staff had the same management, followed the same policies and procedures, received the same education and training, and had similar patient loads (i.e., admission criteria, dependency, duration of stay, and diagnoses). Residents were randomly assigned to either unit.

Findings

The researchers found that the staff clearly preferred using ceiling lifts to other methods. Further, the results showed that the ceiling lifts significantly reduced the caregivers' perceived risk of injury and discomfort to the neck, shoulders, upper and lower back, and arms/hands. And that the perceived benefits were backed by a 68% reduction in compensation claims related to lifting or transferring tasks. However, the researchers noted that the number of injury claims related to lifting and



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transferring did not differ from pre- to postintervention. According to the survey, when staff members needed to reposition a patient a small distance, for example to shift the patient in bed, they found it less time consuming to just manually reposition the patient using a soaker pad, sliding sheet, or bed linen. Similarly, the research indicated that caregivers did not see the benefits of using the ceiling lifts as a rehabilitative tool. In addition, the researchers found that job satisfaction increased for both groups. However, staff members in the comparison group felt that their jobs were less hectic and they worried less about making mistakes than staff in the intervention group. The authors attribute this difference to the fact that using the lifts takes more time and thus could be perceived as creating a greater workload and contribute to the staff members' perception that their jobs were more hectic than their counterparts in the comparison group. Finally, the researchers found that the ceiling-lift program reduced claims costs from lifting and transferring injuries, but that ceiling lifts did not have the same impact in reducing the risk of injury or compensation costs when they were used for repositioning tasks, even though perceptions of risk when using ceiling lifts for repositioning were lower than for other methods.

Limitations

While the results of this research are promising, future research is important to ascertain the long-term impact of ceiling lifts in residential care. Additionally, further research is warranted to better understand the long-term impact of the intervention on job satisfaction and work organizational factors to conclude that these results were not due to a Hawthorne effect. The limited cognitive ability of the residents made it difficult to assess their perceptions of comfort and security when being lifted or transferred using ceiling lifts.

Design Implications

Ceiling lifts should be considered as a viable and cost-effective alternative to mechanical-lift devices. Designers should engage staff in the selection and design of the installation as well as postinstallation evaluation.