Project Update

Ceiling Lifts

OHSAH

in partnership with:

St. Joseph's General Hospital, Comox, BC

The Ceiling Lift Project at St. Joseph's General Hospital: Follow-up Evaluation August 2002

Background

Sixty-five ceiling lifts were installed in the extended care unit of St. Joseph's General Hospital, Comox, BC, in April of 1998. Staff were educated and trained on how to use the new lifts and a "no-lift" policy was implemented. The effectiveness and cost-benefit of the ceiling lift project was initially evaluated by OHSAH in December 2000.

A follow-up evaluation was conducted by OHSAH in August 2002 to better understand the long-term effects of ceiling lifts and to validate the original findings. Few studies have investigated the long-term effects of ceiling lifts on reducing patient handling injuries.

The main result of the initial evaluation was a 58% reduction in musculoskeletal injury (MSI) rates associated with lifting and transferring residents. The cost of compensation claims was reduced by 69% for lift and transfer injuries and 50% for total MSIs post-intervention.

Methods

The follow-up evaluation included three years of injury data that had not previously been available. This allowed for a comprehensive seven-year analysis from 1995 to 2001.

Injury data were analysed with respect to:

1. Total compensation costs by injury type
2. Total lost time by injury type
3. Total time loss claims by injury type

The ceiling lift project resulted in 40% reduction in total claims cost; 82% reduction in lift/transfer costs; 83% reduction in lost hours (lift/transfer injuries)

Injury data were separated into 3 categories: a three-year pre-intervention period (1995 to 1997), a one-year intervention period (1998), and a three-year post-intervention period (1999 to 2001). Data for each period were averaged to minimize the effect of year to year variation on the data comparisons. Ceiling lifts were installed over several months during the intervention year (1998).

There were some limitations that may have affected the rate of injury and the cost of compensations claims. Information was unavailable for lost hours associated with some injury claims by casual workers. Compensation costs were not adjusted for wage

"I don't work in pain anymore."
Joy Le Blanc, Care staff (left)

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increases, which were estimated for nurses and care aides at approximately a 25% increase from 1995 to 2002. An increase in wages would result in a relatively larger reduction in compensation costs post-intervention.

Other factors that may have affected the rate of injury include the rate of staff turn over, the implementation of electric beds, and new commodes with functional brakes. These factors were not analysed.

Results

Compensation costs by injury type

Total compensation costs have been reduced by an average of 40%, with an even larger reduction in claims cost (82%) related to the costs of lift/transfer injuries. However, repositioning claims have only been marginally reduced because repositioning slings were found to be unsuitable in most cases.

St. Joseph's General Hospital realized that repositioning injuries were not reduced by the use of ceiling lifts, and began using a new repositioning draw sheet. Since the implementation of this draw sheet, there has been only one repositioning injury which resulted in minimal claims costs.

Lost time by injury type

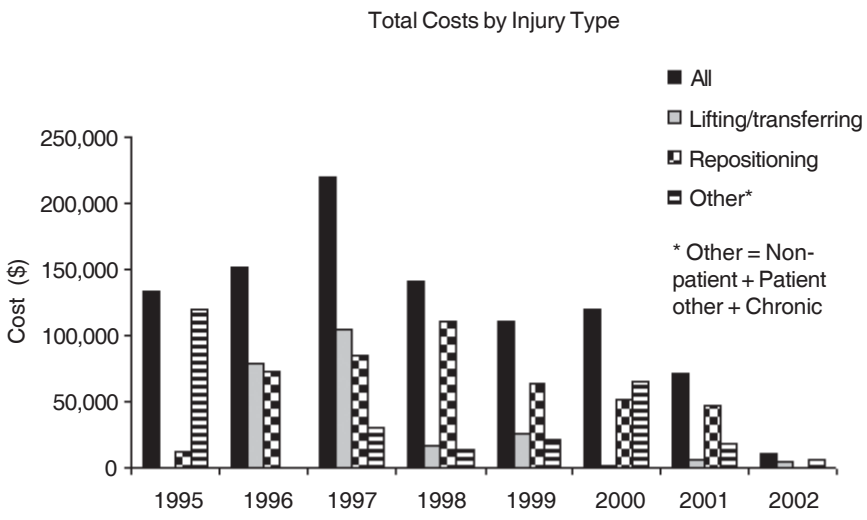
Compensation costs attributed to all patient lift and transfer injuries are down dramatically, however there has only been a post-intervention reduction in lost hours for all injuries of 7.4%. When examining the data more closely, it can be seen that there was a reduction of 82.9% in lost hours for lift and transfer injuries; however, there was actually an increase in lost hours for repositioning injuries (34.5%) and non-patient handling injuries.

It appears that ceiling lifts are effective for reducing time loss associated with lifting and transferring injuries, but they do not have the same effect on repositioning injuries.

Facilities in the process of implementing ceiling lifts need to be aware of the differing requirements for lifting, transferring, and repositioning. Work with your ceiling lift manufacturer to ensure that your ceiling lift and sling configurations are appropriate for repositioning and ensure that staff are thoroughly trained on the use of the new equipment.

Time loss claims by injury type

A comparison the total number of time loss claims before and after installation of the ceiling lifts demonstrated a 5.9% increase in claims post-intervention. This increase in the number of claims was due to repositioning injuries and non-patient handling activities. The average number of lift and transfer time loss claims decreased by 67%, while the average number of repositioning time loss claims actually increased by 25%. This is consistent with trends in the compensation costs and the days lost.



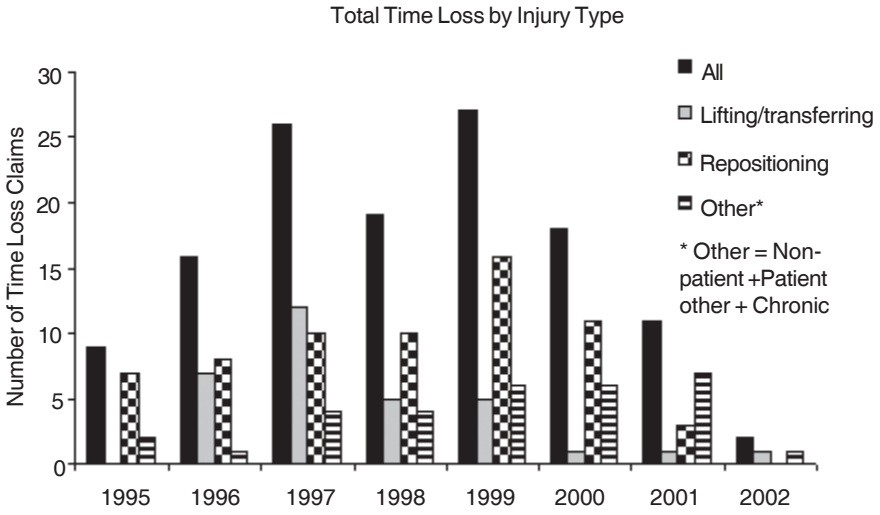
	Pre Period 1995-1997	Post Period 1999-2001	% Change
Avg. total claims cost/year	$168, 000	$101, 000	-40%
Avg. lift claims cost/year	$61, 000	$10, 000	-82%
Avg. repos'n. claims cost/year	$57, 000	$55, 000	-3.5%

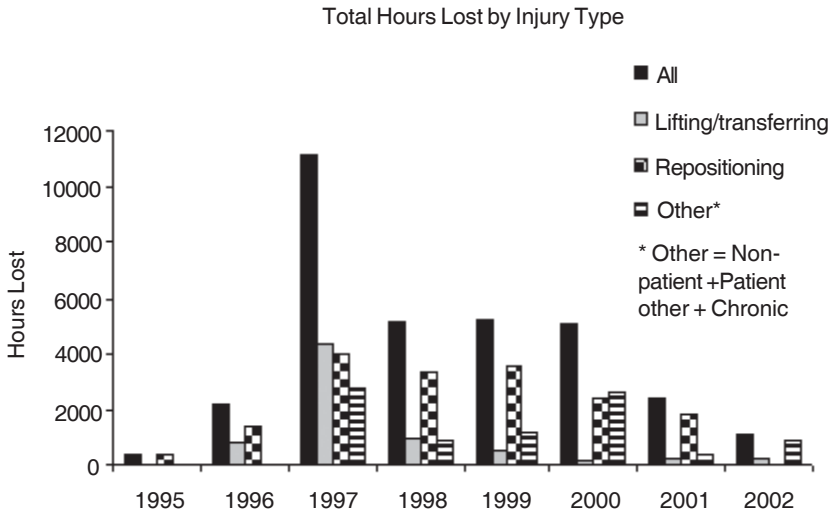
Table 1. Percent change for total, lifting, and repositioning claims costs

Conclusion

The follow-up evaluation of the St. Joseph's General Hospital Ceiling Lift Project found that implementing ceiling lifts was an effective strategy to reduce costs associated with lift and transfer injuries. Compensation costs for lift and transfer injuries were reduced by 82% and total claims costs by 40%. This is great news, not only for the staff and residents using the lifts, but also for the financial health of the facility.

Analysis of injury data identified that the ceiling lifts that were installed were not suitable for use in repositioning tasks, therefore the compensation costs for repositioning injuries did not decrease.





The ceiling lift project was financed as a one-time capital equipment expenditure of $344,323. In the three-year pre-intervention period, patient handling MSI costs were $353,071. The post-intervention costs were reduced to $197,091, which is a savings of $155,980 over the three-year period. These savings represent direct costs of patient handling MSIs, and do not include indirect costs, which may be 2 to 3 fold greater. Considering only the direct costs, the payback period may be modestly estimated at 6.5 years. Factoring in indirect costs, the payback period is estimated at less than 4 years, this demonstrates that ceiling lifts are likely to pay for themselves in a favourable time period.

No more bed pan use! Ceiling lifts have rendered them virtually obsolete.

In addition to reduced lift and transfer injuries and cost-savings, staff have commented that the use of ceiling lifts has improved resident quality of life. Ceiling lifts have allowed residents to be out of bed more often and have also helped to improve resident comfort during transfers.

No-Lift Policy

In March of 2001, a Memorandum of Understanding was signed between the Association of Unions and Health Employers Association of British Columbia (HEABC) to eliminate all unsafe manual lifting of patients and residents.

More specifically, "The parties agree to establish a goal of eliminating all unsafe manual lifts of patients/residents through the use of mechanical equipment, except where the use of mechanical lifting equipment would be a risk to the well-being of the patient/residents."

"The Employer shall make every reasonable effort to ensure the provision of sufficient trained staff and appropriate equipment to handle patients/residents safely at all times, and specifically to avoid the need to manually lift patients/residents when unsafe to do so. If the use of mechanical equipment would be a risk to the well-being of the patient/residents, sufficient staff must be made available to lift patients/residents safely."

Ceiling lifts are easily accessible, require minimal floor space, and make patient transfers easier to perform than most conventional methods of patient transfer.

Manual lifting of patients has been shown to increase risk of injury to caregivers, making the implementation of a no-lift policy beneficial for healthcare providers in the healthcare industry as a whole.

OHSAH Ceiling Lift Studies

OHSAH is funding and evaluating the effectiveness and cost benefit of ceiling lifts in a variety of settings. The multi-site study involves a 75-bed extended care unit at Saanich Peninsula Hospital, a 100-bed intermediate care unit at Fairhaven United Church Homes, and an 8-bed nuclear medicine unit at Royal Columbian and Burnaby Hospital. Preliminary results from Saanich Peninsula Hospital include a large reduction in lift and transfer injuries and improved staff perceptions about work.

The design and preliminary results of this research, in conjunction with the findings at St. Joseph's General Hospital, provide stakeholders with evidence on the effectiveness, cost benefit and usability of ceiling lifts in a variety of healthcare applications. Understanding organizational factors (i.e. staffing, education, training, policies and procedures, etc.) that impact the effectiveness of ceiling lifts in reducing injuries and increase job satisfaction and quality of patient care will also contribute to creating a safer working environment.

Ceiling Lift Programs

Is your facility in the process of implementing ceiling lifts? OHSAH's Patient/Resident Ceiling Lift Program guidelines contains information on budget estimations, the selection of equipment suppliers and distributors, and on the configuration, use and maintenance of ceiling lifts in different settings. The binder also contains material produced by the Interior Health Authority (formerly Okanagan-Similkameen Health Region), which may be used as a foundation for the development of a ceiling lift program. Request a copy by contacting OHSAH or download material from our website.

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