Safe Patient Handling Programs

Effectiveness and Cost Savings

Prior to establishing a comprehensive safe patient handling program, your administrators will probably want to get a full picture of the costs and benefits. This document gives administrators a business case for investing in safe patient handling programs, policies, and equipment, based on real-life findings from hospitals across the United States that have successfully implemented these programs.

Many nurses and nursing assistants suffer from work-related musculoskeletal disorders and pain.

According to the most recent Bureau of Labor Statistics data, workers in hospitals suffer injuries and illnesses at nearly twice the national average rate. Hospitals had an incidence rate of 6.8 nonfatal occupational injuries and illnesses per 100 full-time workers in 2011, compared with 3.5 per 100 in all U.S. industries combined.[1]

The incidence rate for injuries and illnesses resulting in days away from work, measured across all industries and occupations nationwide, was 1.2 per 100 full-time workers in 2011.[1] The incidence rate for these injuries among nursing aides, orderlies, and attendants across the healthcare industry was nearly four times that, at 4.4 per 100 full-time workers.[2] Nearly 50 percent of the reported injuries and illnesses among nurses and nursing support staff in 2011 were musculoskeletal disorders. Nursing assistants suffered more of these disorders in 2011 than any other occupation, while registered nurses ranked fifth.[2]

Patient handling injuries can be very costly to hospitals.

According to one large national survey drawn from 53 healthcare systems with roughly 1,000 hospitals in all 50 states, patient handling injuries accounted for 25 percent of all workers' compensation claims for the healthcare industry in 2011.[3] On average, a workers' compensation claim related to patient handling cost $15,600, and wage replacement accounted for the largest share of this cost ($12,000).[3] In terms of wage replacement, patient handling injuries are among the most expensive type of hospital worker injuries.[3,4]

In addition to these direct and highly visible costs, there are numerous indirect and less visible costs from patient handling injuries—difficult to measure, but with a very real impact on a hospital's finances and resources. These include employee turnover, training, overtime, incident investigation time, productivity, and morale. Patient safety, satisfaction, and recovery times may also be affected if workers are injured during patient handling and repositioning. These indirect costs can increase the total cost of patient handling injuries by two to four times.[5,6] For example, a number of studies have tried to estimate the cost of replacing a nurse who leaves the profession, factoring in the costs associated with separation, recruiting, hiring, productivity loss, and orientation and training. These studies place those costs in the range of $27,000 to $103,000 per nurse.[7]

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Safe patient handling investments pay for themselves quickly.

Investments in safe patient handling can include permanent or portable lifts, transfer sheets and other equipment, training on equipment use and maintenance, implementation of a "minimal lift" policy that eliminates manual handling whenever possible, and/or a dedicated "lift team" that travels through the hospital moving patients with proper equipment. While the costs for instituting such programs can be significant, several studies have shown that the initial capital investment in safe patient handling policies, programs, and equipment can be recovered in fewer than five years.[8,9,10,11] The map below shows some examples reported from safe patient handling case studies across the country:

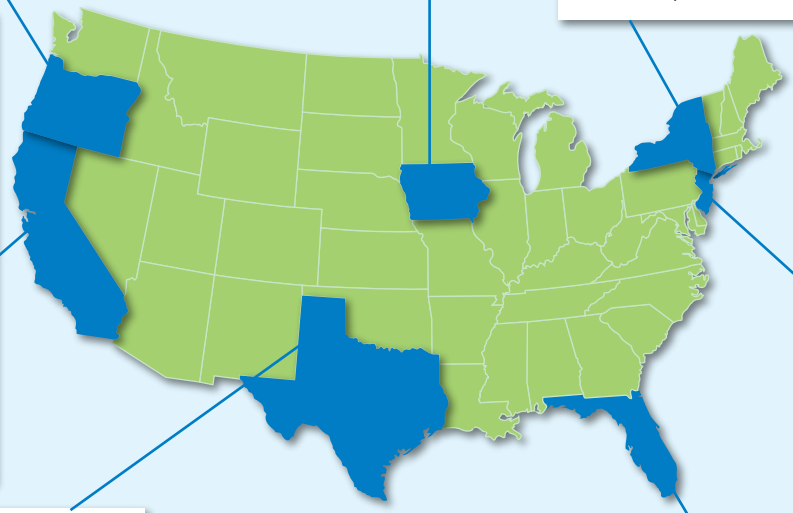
Examples of Safe Patient Handling Cost Savings

Sacred Heart Medical Center, a 432-bed tertiary care facility in Oregon, saved $305,000 over a two-year period and reported that "the lifts actually paid for themselves in 15 months."[12]

The University of Iowa Hospitals and Clinics, a 725-bed comprehensive tertiary care academic medical center, reduced its workers' compensation costs by more than $475,000 and recovered its initial investment in a safe patient handling program within three years.[13]

Kaleida Health Network, the largest healthcare provider in western New York, invested $2 million in a comprehensive safe patient handling program in 2004 and realized a full return on investment within three years. By 2011, the five hospitals within the network (with 70 to 511 beds each) had saved $6 million in patient handling injury costs.[14]

After investing $800,000 in a safe lifting program, Stanford University Medical Center saw a five-year net savings of $2.2 million. Roughly half of the savings came from workers' compensation, and half from reducing pressure ulcers in patients.[16]



After creating a culture of safe patient handling, Englewood Hospital and Medical Center, a 520-bed acute care teaching hospital in New Jersey, reported that it met and exceeded its return on investment goal of 155 percent within 30 months.[15]

Northwest Texas Healthcare System, a 404-bed acute care facility and medical center, instituted a minimal lift policy and reported that it nearly recouped the cost of its three-year program within one year.[5]

The Veterans Health Administration Patient Safety Center introduced safe patient handling programs in 23 high-risk units (with 20 to 60 beds each) in seven Southeast facilities. The cost-benefit analysis showed a net savings of $200,000 per year, and the initial capital investment was recovered in approximately four years.[9, 11]

Safe patient handling is effective in reducing worker injuries and lost time.

Hospitals with successful safe patient handling programs have found they can significantly reduce the number of employee injuries and lost work days from injuries. For example, injury rates were significantly lower after safe patient handling programs were introduced in 23 high-risk units across seven Southeast Veterans Health Administration facilities. The injury rate fell from 24.0 per 100 workers per year to 16.9, a 30 percent reduction.[9,11]

Safe patient handling has been associated with not only *fewer* injuries but also a decrease in the *severity* of injuries. In the following examples, hospitals reduced injury rates and severity by implementing various safe patient handling improvements:

- Statistically significant reductions in both *frequency* and *severity* of injuries were seen after 31 rural community hospitals in Washington implemented a "zero lift program" that replaced manual lifting, transferring, and repositioning of patients with mechanical lifting or use of other patient assist devices. The frequency of patient handling injury claims decreased from 3.88 per 100 full-time equivalents to 2.23, a 43 percent reduction. Total incurred loss per claim decreased by 24 percent.[17]
- Nine hospitals and one nursing home participated in a program to introduce lift teams in their facilities in an effort to reduce injuries associated with lifting patients. All facilities reported reductions in back injuries due to lifting patients. The lift teams successfully reduced back injuries by 69 percent, the incidence rate by 62.5 percent, and lost work days by 90 percent. Healthcare costs per back injury were reduced by 88 to 95 percent.[18]
- After establishing lift teams to perform patient transfers and repositioning tasks, Tampa General Hospital in Florida reduced its patient handling injury rate by 65 percent. Its rate of patient handling injuries among registered nurses was reduced by 71 percent. The hospital also realized a 90 percent reduction in lost work days, an 84 percent reduction in modified duty days, and a 92 percent reduction in workers' compensations costs.[19]

Minimal lifting replaces manual lifting, transferring, and repositioning of patients with mechanical lifting or other patient assist devices.

- Three years after introducing a minimal lift program, Franklin Square Hospital Center in Baltimore, Maryland, saw the number of patient handling injuries decrease by more than 70 percent.[20] The consultants hired to implement the program, including all equipment purchased and staff training, had guaranteed a three-year decrease of 60 percent in patient handling staff injuries or a refund of the percentage of the difference.
- Two years after creating a culture of safe patient handling, Englewood Hospital and Medical Center in New Jersey saw a 57.1 percent reduction in workplace injuries and an 80.5 percent reduction in lost work days.[15]

Safe Patient Handling Programs: Effectiveness and Cost Savings

Safe patient handling saves on the bottom line.

Hospitals that implement a safe patient handling program substantially reduce their costs associated with patient handling injuries. For example:

- Three years after the University of Iowa Hospitals and Clinics implemented a comprehensive safe patient handling program, workers' compensation costs fell from $559,610 to $84,880 (an 85 percent reduction). Lost work days decreased by 76 percent, from 2,881 days to 529 days. Replacing injured employees for the 2,352 lost work days that would have been expected to occur prior to implementing the safe patient handling program is equivalent to hiring nine full-time registered nurses, at an estimated cost of about $600,000.[13]
- Workers' compensation costs associated with patient transfer decreased by 99.8 percent after one chronic care hospital in Canada implemented a zero lift program.[8]
- Tampa General Hospital saw a 92 percent reduction in workers' compensation costs for patient handling injuries after establishing its lift teams. The Level 1 trauma center's workers' compensation costs as a percentage of total payroll decreased from 1.14 percent in 1999 to 0.09 percent in 2012.[19]
- After purchasing mechanical patient lifts, a small community hospital in a suburb of St. Louis, Missouri, saw a decrease in annual workers' compensation costs from $484 to $151 per full-time equivalent.[21]

Indirect cost savings, such as those associated with registered nurse turnover, can also be substantial. For example, a small acute care satellite facility in South Carolina implemented a minimal lift program to promote safe patient handling and to improve retention of experienced nurses (defined as those older than 46). Before implementing the program, registered nurse turnover averaged 10 percent. Turnover was cut in half, decreasing to 5 percent during the pilot program. This reduction saved the facility $170,000 in one year.[22]

Patients also benefit.

The quality of patient care improves when safe patient handling programs are implemented.[23,24] Patients have fewer falls, skin tears, and pressure ulcers, which can cost the hospital money and lower their Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores. Mechanical and other safe lift equipment increases patient mobility, which can reduce patients' length of stay. Studies have also shown that patients feel significantly more comfortable and secure when a mechanical transfer device is used.[13,19,22,25,26,27,28,29] All of this results in an enhanced sense of dignity, leading to increased patient satisfaction.

Careful implementation is required to achieve the full benefits of safe patient handling programs.

These are just a few of the business reasons to invest in safe patient handling solutions to ensure that patients are handled with care and dignity. Overwhelming evidence suggests not only that safe patient handling is a wise investment that can reduce worker injuries, but that having policies, procedures, and products that enhance safe patient handling can be good for a hospital's bottom line.

To achieve the fullest possible benefit, however, hospitals need to consider more than just what type of equipment to buy. Successful safe patient handling programs also involve a comprehensive assessment of the nature of patient and worker needs; full support from administration and key managers; employee involvement; policies that encourage the safest techniques for handling patients; the right amount of equipment that is right for the job; adequate, convenient storage and maintenance of equipment; education and training; and ongoing evaluation and improvement. Without these, your hospital's culture may not be ready to embrace the new program, putting your investment at risk. For more information on ways to build a safety culture that focuses on patient and worker safety together, see some of the safety and health management system resources at www.osha.gov/dsg/hospitals.

To establish a business case for your facility, you will need to determine:

1. How much your facility spends on patient handling injuries (i.e., workers' compensation claims) every year.
2. An indirect cost multiplier to cover additional costs associated with injuries, such as temporary staffing and overtime, turnover, and reduced productivity. You may also wish to include quantifiable data on savings due to improved patient care in the form of fewer falls, skin tears, and pressure ulcers. *Estimates for indirect costs vary. The literature supports multiplying the cost of workers' compensation claims by two to four to estimate the total cost of patient handling injuries.*[5,6]
3. The projected cost of your safe patient handling program, which includes your initial investment in equipment and installation, operation and maintenance (including replacing expendable supplies), and training.
4. The percent reduction in patient handling injury costs that you expect to see over time as a result of your safe patient handling program. You should consider your costs and benefits over multiple years. Several studies have shown that the initial capital investment in safe patient handling policies, programs, and equipment can be recovered in fewer than five years. [8,9,10,11]

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