

# An Evidence Base and a Safer Workplace

*How a provider collaborated to implement and evaluate safe movement practice and technology.*

by Colleen Lavelle, Carol Sedlak, Susan Jones and Margaret Doheny

An important part of demonstrating quality care for seniors—to the benefit of seniors, workers and provider organizations—is building an evidence base that identifies quality improvements and measures their effectiveness.

This is the story of one long-term care provider that helped to do just that. In collaboration with a professional nursing association and a university school of nursing, this provider implemented a safe-movement program and participated in an evaluation that showed reduced injuries to staff.

**A**sk any nurse or nursing assistant if she or he has back problems and you're likely to get a "yes." Due to the fragile condition of many older adults in nursing homes, and their dependence on others to provide for their needs, committed nursing staff are continuously helping these individuals move about.

While many in the nursing profession pride themselves on going the extra mile to help those in their care, outdated lifting practices pose serious threats to their health and careers. The occurrence of musculoskeletal injuries sustained on the job by health care workers is one of the highest among all professions and is expected to increase as the workforce ages. These injuries are often the result of lifting, moving and transferring residents and patients and occur across all health care settings. In fact, musculoskeletal

injuries often cause dedicated nurses and nursing assistants to leave their careers prematurely and may discourage qualified individuals from entering the field in the first place.

## The Myth of "Proper Body Mechanics"

The prevalence of injuries among health care workers is largely due to widespread misconceptions about the use of "proper body mechanics." Despite evidence-based studies that show body mechanics training does not equip nursing staff to compensate for heavy lifting, fundamental nursing education textbooks and nursing home training manuals still refer to these techniques as the sole method of preventing injuries.

Reducing injuries among health care workers requires new solutions for moving and lifting nursing home residents and patients. Indeed, the health care community can prevent injuries among nursing staff by introducing teaching methods based on evidence-based ergonomic principles and promoting the use of modern safe movement technology.

## A Call to Action

Concerned about the consequences of nursing staff injuries, Jennings Center for Older Adults in Garfield Heights, Ohio, embarked on a safe movement pilot program in 2006. The goal of the program was to reduce lifting and transfer injuries among nursing staff in its 156-person nursing home.

Jennings was first introduced to safe movement research and practice by board member and Kent State University College of Nursing professor Carol Sedlak. Sedlak's involvement with the



Jennings Center for Older Adults

Jennings' nursing assistants and nurses are thrilled with the safe movement program. As one staff member stated, "Now that we have the ceiling lifts, I don't know what we would do without them. I can't imagine going room to room, looking for a mechanical lift now."

American Nurses Association's (ANA) Handle with Care® campaign to prevent musculoskeletal injuries in nurses resulted in Kent State and Jennings serving as a pilot site for a new evidence-based safe movement curriculum.

"For years I would cringe at teaching body mechanics to nursing students," says Sedlak. "I thought 'there has to be a better way than manual lifting!'" Kent State was one of 26 nursing schools nationwide selected by the ANA to teach the groundbreaking curriculum.

Evidence-based studies showing the relationship between manual lifting and musculoskeletal injuries, as well as field trips to other organizations that had already adopted safe movement practices, convinced the Jennings Center for Older Adults board and administration to embrace the concept. Thus, the development and implementation of a safe movement program began. Support was subsequently garnered from local foundations that provided approximately 30 percent of the program's equipment costs. These included Saint Luke's Foundation of Cleveland, Ohio, the Eva L. and Joseph M. Bruening Foundation, the McGregor Foundation and the Fred A. Lennon Charitable Trust.

### Cornerstones of Safe Movement Practice

Jennings' Chief Operating Officer and Administrator, Allison Salopeck, assembled a Safe Movement Project team of clinical and staff education managers, human resource and administration staff, and nurse academicians from Kent State. The team developed implementation and evaluation plans and adopted the following essential cornerstones of safe movement practice.

**Education:** Jennings' safe movement education program is based on the Safe Patient Handling Module developed for schools of nursing by the American Nurses Association, National Institute for Occupational Safety and Health, and the Veterans Administration Patient Safety Center. The curriculum was adapted for the long-term care setting by a team of Jennings' clinical staff and nurse academicians from Kent State. The education

program, which applies evidence-based ergonomic principles and modern safe-movement technology, was taught to 175 nursing staff over a period of seven months. Each staff person received four hours of in-service instruction and four hours of competency demonstration and testing over six to eight weeks.

**Policies and procedures:** Changing the paradigm about how residents are lifted and transferred requires a fundamental shift in behavior. Providing clear direction about what is expected is critical, including developing and communicating new policies and procedures. At Jennings, job descriptions and incident reports were revised to reflect new safe movement procedures. In addition, resident assessment protocols were developed and conducted by nurse managers and physical therapists to determine each nursing home resident's lifting, repositioning and transferring needs.

**Staff commitment:** Jennings staff members responded favorably to new safe movement education, policies and procedures largely because they understood the benefits of the program for themselves and residents. Communication with staff members started early in the process, including involving them in testing and selecting equipment. Staff members' opinions and observations were elicited and responded to throughout the process.

**Equipment:** Anchored in education, clear policies and procedures and commitment to the program, staff members were able to practically apply safe movement technology using modern lifting equipment. While nursing staff throughout the home received safe movement education, most of the safe movement equipment was installed on the home's upper level, where resident acuity is highest. The equipment purchased included electric ceiling lifts with universal room coverage in 57 resident rooms and 54 adjoining resident bathrooms; 74 fast rising high/low electric beds (which take 20 seconds to move from the lowest to the highest position with a normal load), and six sit-to-stand lifts.

### Evaluation

An independent evaluation measured the program's effectiveness and added to outcome data regarding safe movement practices. The results of the evaluation are expected to further advance the knowledge and practice of safe movement techniques in long-term care.

The evaluation, approved by Kent State University's institutional review board, was a longitudinal pre-post design that studied the impact of the program throughout the nursing home. Data were collected for one year prior to program implementation (Time 1) and for one year after program implementation (Time 2). Sources of data included employee incident reports, a pre- and post-implementation questionnaire completed by 46 Jennings health care staff, focus groups and worker's compensation data related to health care worker injuries. Key findings of the program evaluation follow.

**Perceived impact of safe movement program on health care worker injuries:** This data was gleaned from the nursing staff questionnaire, given to the same individuals at Time 1 and Time 2. There were significant changes in health care workers' perception of injuries related to lifting and transferring:

- The number of health care workers who said an injury occurred as a result of lifting or transferring a resident was 16 in Time 1 and four in Time 2, a 75 percent reduction.
- The number of health care workers who felt that lifting and transfer injuries resulted in a back strain was 16 in Time 1 and three in Time 2, an 80 percent reduction.
- The number of times in a month health care workers felt lifting or transferring a resident was "too much" for them was 11 in Time 1 and three in Time 2, a 73 percent reduction.

**Impact of safe movement program on health care worker injuries:** The following objective data obtained from health care worker incident reports are consistent with the qualitative data collected from the



Staff members use the fast-rising electric beds all the time and have noticed the benefits. “Thank you, thank you,” said a nursing assistant at Jennings. “I’m six feet tall and one of the people that had back problems. After two or three weeks using the electric beds, I had no back problems.”

health care worker questionnaire:

- The number of reported injuries related to lifting and transferring was six in Time 1 and two in Time 2, a 67 percent reduction.
- Lost work days resulting from lifting and transfer injuries were 389 in Time 1 and four in Time 2, a reduction of nearly 100 percent.

**Reduction in costs associated with health care worker injuries:** The following findings indicate a substantial reduction in workers’ compensation and modified work day costs after implementation of the safe movement program.

- Costs incurred as a result of modified work days related to lifting and transfer injuries totaled \$14,326 in Time 1 and zero in Time 2, a 100 percent reduction and realized savings of \$14,326.
- Workers’ compensation claims (including reserves) related to lifting and transferring paid by Jennings’ workers’ compensation insurance carrier was \$217,951 in Time 1 and \$14,705 in Time 2, a 93 percent reduction.
- The workers’ compensation insurance premium rate was \$4.41 per \$100 in

gross wages in Time 1 and \$2.78 per \$100 in gross wages in Time 2, a 37 percent reduction.

- Workers’ compensation premiums were \$346,228 in Time 1 and \$238,955 in Time 2, a 33 percent reduction and realized savings of \$107,273.
- Paid workers’ compensation claims related to lifting and transferring comprised 91 percent of all paid workers’ compensation claims in Time 1 and 24 percent in Time 2, a 74 percent reduction. A strong correlation can be made between the reduction in workers’ compensation claims related to lifting and transferring and a portion of the reduction in Jennings’ overall workers’ compensation rate and premium payments.

**Equipment payback period:**

- \$597,463 was invested in safe movement equipment.
- Annual out-of-pocket cost savings is \$121,599 (\$107,273 reduction in the nursing home’s workers’ compensation premium and \$14,326 reduction in modified work days).
- Assuming annual cost savings remain consistent, Jennings Center for Older Adults expects to recoup the cost of its safe movement equipment within five years.

## More Research Needed Into Safer Working Conditions

The significant growth in the number of older persons over the next several decades, coupled with the realities of a shrinking workforce, will place extraordinary stress on the long-term care system at precisely the time when the demand for nursing home care will be the greatest. “We are faced with the challenge of caring for an increasing number of older adults with greater care needs and fewer people available to care for them,” says Allison Salopeck. “We believe our safe movement program will help keep more nurses and nursing assistants employed for longer periods of time.”

While additional studies are needed to more fully substantiate the benefits of implementing safe movement programs in long-term care, the outcomes of Jennings’ program evaluation suggest such programs may indeed prevent injuries. In an era where high-quality nursing staff is at a premium, creating safe working conditions through safe movement practice and technology may be a promising recruitment and retention strategy. **■**

*Colleen Lavelle, M.A., LNHA, is chief planning officer for Jennings Center for Older Adults, Garfield Heights, Ohio. Carol A. Sedlak, Ph.D., R.N., CNS, and Margaret O. Doheny, Ph.D., R.N., CNS, are professors at the Kent State University College of Nursing. Susan L. Jones, Ph.D., R.N., CNS, is professor emeritus at the Kent State University College of Nursing.*

## Resources

### Jennings Center for Older Adults, Garfield Heights, Ohio

Contact: Allison Salopeck, chief operating officer and administrator, [allison.salopeck@jenningscenter.org](mailto:allison.salopeck@jenningscenter.org) or (216) 581-2902, ext. 2322.

### American Nurses Association, Silver Spring, Md.

For more information about ANA’s Handle with Care© campaign, visit [www.nursingworld.org](http://www.nursingworld.org).

### Related Guidelines from AAHSA Quality First

See Quality First Guideline 9.2., “Implementing Evidence-based Practices and Approaches,” at [www.aahsa.org/evidence\\_based.aspx](http://www.aahsa.org/evidence_based.aspx).