E·O·H·S·S
ENVIRONMENTAL & OCCUPATIONAL HEALTH & SAFETY SERVICES

Safe Patient Handling:

A guide to proper work practices and design of your work environment

Injuries related to patient handling have almost become an expected risk among healthcare workers. Nationally, healthcare workers have one of the highest rates of injury, exceeded only by truck drivers and non-construction laborers.

According to the Bureau of Labor Statistics, during 2003, nursing aides, orderlies, and attendants suffered the highest rate of work-related musculoskeletal disorders (WMSDs) involving days away from work of any occupational classification in the nation. These groups were out of work a total of 32,170 days that year, with a median of six days away from work per incident—almost four times more than construction laborers, with 8,690 total days.

WMSDs are career-threatening injuries: 12% of nurses leave the profession every year due to back injuries; over 52% of nurses complain of chronic back pain.

This brochure is intended to provide valuable information about workplace practices aimed at reducing the risk of musculoskeletal disorders caused by lifting and moving patients.

What are work-related musculoskeletal disorders (WMSDs)?

Work-related musculoskeletal disorders, including cumulative trauma disorders (CTDs) and repetitive strain injuries (RSIs), are a group of health problems caused by overuse or misuse of muscles, tendons, and nerves. WMSDs are caused by any combination of the following factors:

Awkward or fixed posture: working in an awkward position or holding the same position for a long time. For example:

- Repositioning or turning patients in bed (side rails are up, bed is too low, and the provider reaches across patient)
- Attaching gait or transfer belts with handles (the bed or chair is too low or far away)
- Providing in-bed medical care (the bed is too low and side rails are up)
- Washing patients' legs and feet in a shower chair (the shower chair is too low and access is limited)

Repetitive tasks: repeated repositioning in bed, numerous transfers to and from beds, chairs, or commodes without rest breaks.

Forceful exertions: lifting or transferring heavy patients, unexpected or abrupt forceful motions, stopping patient falls or lifting them off the floor after a fall.

Standing: standing for more than four hours.

Why are healthcare workers injured?

- The sheer volume of lifting and turning patients leads to fatigue, muscle strain, and injury.
- The deficit in the nurse-to-patient care ratio increases the risks by causing nurses to assume awkward positions while providing patient care.
- Many patient handling tasks are accomplished on a horizontal rather than a vertical plane, as patients are often lying down when needing assistance (e.g., transferring from bed to stretcher or bed to chair, repositioning in bed).
- Patients are asymmetric, bulky, cannot be held close to the body, and typically weigh more than three or four times the maximum weight (50 lbs.) recommended for safe lifting.
- Patient handling tasks are unpredictable, and the amount of assistance a patient can offer at any point in time varies.
- Recent research shows that repositioning patients in bed (either turning them or pulling them up) holds an equal or greater potential for nurses' back injuries as lifting or transferring patients.
- Lifting equipment is often not available or appropriate.
- Those most likely to become injured are new staff, staff who "float" from other units, staff who attempt to lift patients without assistance, and fit, strong staff because they tend to underestimate the effort needed for the task.

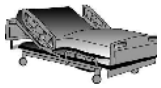
How can work-related musculoskeletal disorders be prevented?

Training alone is not effective in reducing injuries

Over the past 20 years, efforts to reduce work-related injuries in healthcare workers have been largely unsuccessful. Interventions to date have focused on body mechanics, education, and training in lifting techniques. The current trend has moved towards healthcare institutions providing mechanical lifting and moving equipment to do the work.

Proper equipment

Good work practices must be combined with the use of appropriate equipment:

	**Technical lift equipment** helps lift patients who cannot support their own weight. Choose a lift that does not require manual pumping to avoid possible repetitive motion disorders to workers' arms and shoulders. Lift equipment can be classified into two main categories: **lean-stand assist lift** and **sling-type full lift**.
	**Multi-positional chairs** provide a no-lift solution for patient transfers in a safe, dignified environment for both patient and caregiver. Easily converting between a stretcher and an upright mobile chair in seconds, the chair enables caregivers to comfortably transfer and transport a patient weighing up to 250 pounds.
	**Overhead track-mounted resident lifters** are built-in ceiling track systems to which sling lifts attach.
	**Shower chairs**, which fit over the toilet, can eliminate multiple transfers, saving healthcare workers multiple lifts. A patient can be moved to the shower chair, toileted, showered, and transferred back to bed. **Shower stalls** should allow for shower chairs to be pushed in and out on level floor surfaces. Use a standard shower without the front lip to allow for easy access.
	**Toilet seat risers** should be used to equalize the height of the wheelchair and the toilet seat, making it a lateral transfer rather than a lift up and back into the wheelchair.
	**Height-adjustable electric beds** have height controls to allow for easy transfer from bed height to wheelchair height. These beds can be kept low to the ground for patient safety and then raised up for interaction with staff. Avoid hand-cranked beds, which can lead to wrist/shoulder musculoskeletal disorders such as strain or repetitive motion injuries.

Effectiveness of equipment

Not all lifting devices are the same. Proper equipment selection depends on the specific needs of the facility. A list of vendors—along with their websites, which provide information on hospital equipment—is available from EOHSS.

Shift work

Studies have shown that people who work at night or on rotating shifts have a higher risk of developing musculoskeletal disorders than day shift workers. Policies and procedures, including days and hours worked in a row, forward rotating shifts, and attention to starting times, should be implemented to decrease the risk of developing musculoskeletal disorders.

Safe patient handling policy with a zero lifting program

A study by the Department of Veterans Affairs has shown that the department recouped its investment in equipment within one year by saving on workers' compensation costs. A safe patient handling policy and program with procedures should be developed to identify high-hazard lifting tasks. This policy would mandate zero lifting, engineering controls, and safe work practices to help reduce and/or prevent injuries caused by lifting tasks.

What should I do if I have symptoms?

- Report any symptoms to your supervisor immediately.
- Complete an Incident Report (Form 70).
- Forward a copy of the Incident Report to Risk and Claims Management and EOHSS.

Staff will be referred for medical evaluation by Risk and Claims Management, and EOHSS can evaluate the workstation for proper design, posture, and furniture.

If you have any questions or would like an assessment of your workstation, please call the Department of Environmental & Occupational Health & Safety Services:

Newark
973-972-4812

Scotch Plains
908-889-2486

Piscataway / New Brunswick
732-235-4058

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http://www2.umdnj.edu/eohssweb/eohss.htm

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