



Improving Patient and Health Care Provider Safety: Task Force Develops Recommendations on Patient Handling

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Physical therapists and other health care providers sustain work-related musculoskeletal injuries as a result of patient handling and movement. A national task force, with representation from APTA, has developed a white paper and issued a list of six recommendations to enhance patient and provider safety during patient handling and movement.

White Paper

Strategies To Improve Patient and Health Care Provider Safety in Patient Handling and Movement Tasks: A Collaborative Effort of the American Physical Therapy Association, Association of Rehabilitation Nurses, and Veterans Health Administration

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Introduction

Over the past few decades, there has been growing concern over the increasing number and severity of musculoskeletal injuries associated with patient handling tasks, especially in nursing personnel. This concern has led to reports recommending patient handling technologies be used in place of traditional manual lifting.^{1 2} These recommendations have triggered debate between physical therapists (PTs) and rehabilitation nurses (RNs). On one hand, with the nursing shortage and high rates of injuries among nursing personnel, the recommendations are viewed as a necessary safety measure. On the other hand, over use of mechanical lifting devices could affect patient functional status and independence. This paradox has triggered debate and has hindered efforts to promote safe patient handling and movement in rehabilitation settings.

In order to address these concerns, the Veterans Health Administration (VHA) convened a National Task Force, consisting of representatives from the Association of Rehabilitation Nurses (ARN), American Physical Therapy Association (APTA), and the VHA. The purpose of this task force was to develop a position paper, balancing the needs of all three organizations into a workable solution. Our goal was to find a way to effectively incorporate the most recent evidence on safe patient handling and movement into rehabilitation settings.

Purpose

The purpose of this white paper is to promote collaboration between rehabilitation nurses and physical therapists to address the mutual goals of improving:

1. Safety of patients during handling and movement tasks.
2. Functional status and independence of patients to achieve optimal rehabilitation potential.
3. Safety of care providers during patient handling and movement tasks.
4. Utilization of evidenced based research on safe patient handling and movement.
5. Communication between interdisciplinary team members regarding safe patient handling methods.

Recommendations

After careful consideration of current practice and research, APTA, ARN, and the VHA Task Force on Safe Patient Handling and Movement make the following recommendations in order of priority:

1. Implement the OSHA Ergonomics for the Prevention of Musculoskeletal Disorders: Guidelines for Nursing Homes.

- a. Establish an interdisciplinary team responsible for reviewing and implementing the OSHA guidelines.
- b. Utilize or adapt algorithms in the guidelines for making decisions about safe patient movement.
- c. Establish organizational policies and procedures based on the guidelines.

Discussion: In 2003, the Occupational Safety and Health Administration (OSHA) promulgated voluntary guidelines for nursing homes for the prevention of musculoskeletal injuries. Though this document was written to assist in reducing the number and severity of work-related musculoskeletal injuries in nursing homes, they have application to many clinical settings, including rehabilitation. The guideline recommendations were based on current scientific evidence, and existing practices and programs, and were reviewed by various professional and trade associations, labor organizations, and other stakeholders. The guidelines address a process for protecting workers and recommendations for identification of problems and implementation of solutions for patient lifting and repositioning.

2. Build and support a culture of safety in rehabilitation settings that protects staff as well as patients.

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Discussion: There is a difference in the culture of the two disciplines in regards to occupational safety. Professional level educational programs for physical therapists emphasize self-protection and patient safety during all patient handling and movement tasks. This results in the development of a culture of safety that transcends into practice. In contrast, professional level educational programs in nursing emphasize patient safety but lack emphasis in self-protection. This results in a culture where self-protection is not valued. For the last 30 years, nurses have appeared on the Occupational Safety and Health Administration's (OSHA) top 10 list of professions with work related injuries.³ A reduction in occupational injuries associated with patient handling can only occur when the nursing profession and nurses themselves recognize this risk and take steps to promote their own safety. This will require a paradigm shift for the nursing profession and a change in the way nurses are taught in schools of nursing. Recognition that the culture of self-sacrifice contributes to the risk of injury in nursing is a necessary first step in the paradigm shift to accept self-preservation and safety as high priorities. With the shortage of RNs, health care organizations need every nurse to be injury free.

3. Improve communication channels between nurses and physical therapists to facilitate safe patient handling and movement tasks.

- Collaborate on patient handling policies.
- Develop process for initial plans of patient care with on-going updates.
- Develop routine interdepartmental meetings to discuss staffing and equipment needs.

Discussion: The development of a facility-wide policy that outlines patient handling and movement tasks should be the product of collaboration among nursing, physical therapy, and other rehabilitation professional staff and address issues such as bed mobility, transfers, ambulation and gait, wheelchair activities, and other activities of daily living. This policy should include provisions for discussing current patient level of cooperation, bed mobility assistance needs, transfer level, wheelchair level, ambulation and gait level, special equipment needs, and functional goals. Status should be updated at pre-set intervals to account for fluctuation in endurance and/or mentation. The policy should also outline the availability, storage location, function, and maintenance of all equipment. Finally, it should create a common language for all personnel to minimize error in decision-making, interpretation of patient care plans, and status evaluation. This policy may be further modified to meet special needs of individual patient care units.

The periodic review of staffing allocation and equipment needs are recommended to appropriately respond to an ever-changing patient population. While the appropriate selection of assistive and patient handling equipment can minimize the physical effort of personnel, these equipment still require one or more staff for safe operation, and the allocation of staff should continually meet the demands of the patient population. Interdepartmental meetings give staff the opportunity to request input on use or function of equipment; problems with equipment use, storage, and maintenance; and may generate ideas for improved staff utilization.

4. Develop policies and procedures for the therapeutic use of patient handling equipment.

- Select equipment that first provides safety for staff and patients.
- Select equipment with features that, as appropriate, allow for or promote active use of the assistive equipment by the patient for some therapeutic benefit.

Discussion: Selection of patient handling equipment should assure the safety of providers and patients yet not jeopardize the patient's rehabilitation potential. Various patient handling equipment may be used as assistive devices during rehabilitation, thereby increasing the patient's familiarity and independence with the device while decreasing the risk for developing occupational musculoskeletal injuries *in staff*. Institutional policy and procedures should include the following objectives so to prevent injury and maintain optimum rehabilitation potential:

- Train all staff in the proper and safe operation of all equipment.
- Use valid and reliable algorithms and patient assessment tools. (An example is included in the OSHA Guidelines.)
- Encourage patient participation in the use of assistive equipment (eg some sit/stand lifts can be used as an ambulation aid).
- Conduct an individualized functional assessment of each patient to assure techniques for assistance with movement are appropriate.
- Provide consistency in the use of equipment by both physical therapy and nursing staff.

5. Develop competency-based assessments that demonstrate proficiency for use of all patient handling equipment used on the respective patient care unit, including return demonstration.

Discussion: All new physical therapy and nursing staff should be introduced to patient handling equipment used by the facility during orientation. Once the employee has been assigned to a specific patient care unit, additional training should be provided to include the use, function, maintenance, and proper storage of the equipment. Adequate hands-on practice with

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the equipment must be provided and include the operation from provider and receiver roles, and coaching on how to train patients and family members on the appropriate use of the equipment. Employees should be required to demonstrate competency through active methods such as role playing and teaching other staff members (otherwise known as return demonstration).

A system for ongoing assessment of competency with these devices should be incorporated into existing channels for behavioral observation and professional development. In this way, there is a simple expansion of a familiar and accepted process rather than a new method that requires extensive introduction, orientation, and teaching. For example, proper use of equipment could be added to a checklist used by safety or ergonomics teams that perform random or periodic walkthroughs, an existing peer-review process, or an existing system for positive reinforcement whenever good practices are observed. More importantly, the continual review process helps to integrate appropriate use of equipment into the safe patient handling culture.

Patient Handling Web Sites

Patient Safety Center

www.patientsafetycenter.com

Occupational Health and Safety Agency for Healthcare

(Vancouver, British Columbia)

www.ohsah.bc.ca

6. Encourage research that supports the improvement of patient and staff safety while maximizing patient rehabilitation potential.

- a. Investigate the cost-effectiveness of ergonomics interventions.
- b. Investigate the impact of injury-risk reduction to physical therapists.
- c. Determine the efficacy of patient handling equipment when integrated into therapeutic activities.

Discussion: To enhance administrative support and resource allocation for purchasing appropriate patient handling equipment, cost effectiveness studies are needed to build a solid business case for safe patient handling interventions. Consideration of the direct and indirect costs associated with workplace injuries must be addressed and may include assessment of the costs of medical care, absenteeism, replacement, rehiring, training, work restrictions, insurance and worker's compensation premiums, productivity, quality of care, and the impact on morale.

While the integration of safe patient handling practices that emphasizes the use of assistive equipment has been encouraged in nursing personnel, little is documented about the impact of injury reduction strategies when these devices are integrated into physical therapy practice. Further research is needed to investigate the effect of patient handling and movement on physical therapy staff injury rates, the use of equipment as a means to assist in reaching rehabilitation goals while preventing injury, and the attitudinal changes required to incorporate safe patient handling techniques using equipment into physical therapy practice.

References

- 1 Panel on Musculoskeletal Disorders and the Workplace; Commission on Behavioral and Social Sciences and Education; National Research Council; and Institute of Medicine. 2001.
- 2 US Department of Labor, Occupational Safety and Health Administration. *Ergonomic Guidelines for Nursing Homes*. 2002. Available at www.osha.gov/ergonomics/guidelines/nursinghomes/final_nh_guidelines.html. Accessed February 24, 2004.
- 3 US Department of Labor, Occupational Safety and Health Administration. Table SO1. Highest incident rates of total nonfatal occupational injury and illness cases, private industry, 2001. Accessed October 31, 2003. Available at www.bls.gov/iif/oshwc/osh/os/ostb1109.pdf.

Additional Resources

- Bernard, BP. Musculoskeletal disorders and workplace factors. U.S. Department of Health and Human Services; 1997.
- Bohannon RW. Horizontal transfers between adjacent surfaces: forces required using different methods. *Archives of Physical Medicine and Rehabilitation*. 1999;80: 851-853.
- Bork BE, Cook TM, Rosecrance JC, Engelhardt KA, Thomason ME, & Wauford IJ. Work-related musculoskeletal disorders among physical therapists. *Phys Ther*. 1996;76(8):827-835.
- Buss IC, Halfens RJG, & Abu-Saad HH. The most effective time interval for repositioning subjects at risk of pressure sore development: a literature review. *Rehabilitation Nursing*. 2002;27(2), 59-66.
- Caboor DE, Verlinden MO, Zinzen E, Van Roy P, Van Riel MP, & Clarys JP. Implications of an adjustable bed height during standard nursing tasks on spinal motion, perceived exertion, and muscular activity. *Ergonomics*, 43(10), 1771-1780.
- Cohen-Mansfield J, Culpepper II WJ, & Carter P. Nursing staff back injuries: prevalence and costs in long term care facilities. *AAOHN Journal*. 1996: 44(1), 9-17.
- Collins, JW, & Owen BD. (1996). NIOSH research initiatives to prevent back injuries to nursing assistants, aids, and orderlies in nursing homes. *American Journal of Industrial Medicine*. 1996;29:421-424.
- Cromie JE, Robertson VJ, & Best MO (2000) Work-related musculoskeletal disorders in physical therapists: Prevalence, severity, risks and responses. *Phys Ther*. 2000;80(4):336-351
- Daynard D, Yassi A, Cooper JE, Tate R, Norman R, & Wells R. Biomechanical analysis of peak and cumulative spinal loads during simulated patient-handling activities: a substudy of a randomized controlled trial to prevent lift and transfer injury of health care workers. *Applied Ergonomics*, 2001;32:199-214.
- Dybel, GJ. Ergonomic evaluation of work as a home health care aide. Unpublished doctoral dissertation, University of Massachusetts Lowell. 2000.
- Estryn-Behar M, Kaminski M, Peigne E, Maillard MF, Pelletier A, Berthier C, Delaporte MF, Paoli MC, & Leroux, JM. Strenuous working conditions and musculo-skeletal disorders among female hospital workers. *International Archives of Occupational and Environmental Health*. 1990;62(1):47-57.
- Granata KP, & Marras WS. Relation between spinal load factors and the high-risk probability of occupational low-back disorder. *Ergonomics*. 1999;42(9):1187-1199.

- Hignett S. Ergonomic evaluation of electric mobile hoists. *British Journal of Occupational Therapy*. 1998;61(11): 509-516.
- Hignett S. Work-related back pain in nurses. *Journal of Advanced Nursing*. 1996;23:1238-1246.
- Hignett S, Crumpton E, Ruszala S, Alexander P, Fray M, and Fletcher B. *Evidence-Based Patient Handling: Tasks, Equipment and Interventions*. New York: Routledge; 2003.
- Lagerstrom M, Hansson T, & Hagberg M. Work-related low-back problems in nursing. *Scandinavian Journal Work Environment Health*. 1998;24(6):449-464.
- Marras WS, Davis, KG, Kirking BC, & Bertsche PK. A comprehensive analysis of low-back disorder risk and spinal loading during the transferring and repositioning of patients using different techniques. *Ergonomics*. 1999;42(7):904-926.
- Myers D, Silverstein B, & Nelson NA. Predictors of shoulder and back injuries in nursing home workers: a prospective study. *American Journal of Industrial Medicine*. 2002;41:466-476.
- Ronald LA, Yassi A, Spiegel J, Tate RB, Tait D, & Mozel MR. Effectiveness of installing overhead ceiling lifts: reducing musculoskeletal injuries in an extended care hospital unit. *AAOHN Journal*. 2002;50(3):120-127.
- Silverstein B, Viikari-Juntura E, & Kalat J. Use of a prevention index to identify industries at high risk for work-related musculoskeletal disorders of the neck, back, and upper extremity in Washington State, 1990-1998. *American Journal of Industrial Medicine*. 2002;41:149-169.
- Ulin SS, Chaffin DB, Patellos CL, Blitz SG, Emerick CA, Lundy F, & Misher L. A biomechanical analysis of methods used for transferring totally dependent patients. *SCI Nursing*. 1997;14(1):19-26.
- Winkelmolen GHM, Landeweerd JA, & Drost MR. An evaluation of patient lifting techniques. *Ergonomics*. 1994;37(5):921-932.
- Yassi A, Cooper JE, Tate RB, Gerlach S, Muir M, Trottier J, & Massey K. A randomized control trial to prevent patient lift and transfer injuries of health care workers. *Spine*. 2001;26(16):1739-1746.
- Yassi A, Khokhar J, Tate R, Cooper J, Snow C, & Vallentyne S. The epidemiology of back injuries at a large Canadian tertiary care hospital: implications for prevention. *Occupational Medicine*. 1995;45(4):215-220.
- US. Department of Labor, Occupational Safety and Health Administration. Table SO1. Highest Incident rates of total nonfatal occupational injury and illness cases, private industry, 2001. Available at www.Bls.Gov/iif/oshwc/osh/os/ostb1109.pdf. Accessed October 31, 2003.

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