

AOHP Position Statement

Patient Handling

Historical/Background Data

Back injuries and other musculoskeletal disorders related to patient handling are the leading cause of workplace disability for nurses and other direct patient care providers. Nurses have one of the highest incidences of work-related back injuries/disorders of all occupations. (1,2)

In 2002, there were a total of 1,436,200 cases of non-fatal occupational injuries and illnesses involving days away from work among all workers. (3)

Nursing aides, orderlies and attendants accounted for the second highest number of non-fatal occupational injuries and illnesses involving days away from work in private industry. (3)

In addition, this group had the second highest incidence of injuries and illnesses that required recuperation away from work beyond the day of the incident (79,000). (3)

This same group had the highest number of musculoskeletal disorders (44,400) in 2002. Trunk injuries involving the shoulder and back represented the highest number of musculoskeletal injuries/incidents, accounting for 36 percent of all cases. (3)

Of 487,900 cases of work-related musculoskeletal disorders involving days away from work, nursing aides, orderlies, attendants and registered nurses accounted for 55,200 of those cases. (3)

Of the total 1,436,200 cases of non-fatal occupational injuries and illnesses involving days away from work, nursing aides, orderlies, registered nurses, health aides and licensed practical nurses accounted for 119,200 cases. (3)

The most recent nationally reported annual occupational illness and injury health care costs (direct and indirect) were conservatively estimated at more than \$1.256 trillion. Direct costs accounted for \$418 billion. (4,5)

Each year, approximately 40,000 nurses report illnesses from back pain. This represents more than three quarters of a million lost work days annually due to back injuries among nurses (6,7). Many of these injuries were related to patient transfer and repositioning tasks. Back injuries may not be the most frequent injury, but they do result in the most lost workdays.

In 2004, the Bureau of Labor Statistics (BLS) reported registered nurses held about 2.3 million jobs in 2002, and it is projected to be a growing occupation. With fewer younger people entering nursing, the nursing workforce is aging faster than the general workforce. Nurses are feeling overburdened, overstressed and overworked. The American Nurses Association (ANA) (2001) completed an on line survey of 4,826 nurses regarding work-related health and safety issues.

Nurses are most concerned with acute and chronic effects of overwork and stress, disabling back injury and developing a bloodborne disease from a contaminated needle stick. (8)

The importance of developing reliable approaches for prevention of back injuries and other musculoskeletal disorders related to patient handling is critical. The Association of Occupational Health Professionals in Healthcare (AOHP) supports actions, policies and laws that will help to establish a safer environment of care for nurses and patients as it relates to safer patient handling and prevention of injuries.

Definitions

- **Manual patient handling and associated risks**

Manual patient handling refers to tasks such as lifting, transferring, transporting and repositioning of patients without the use of assistive devices. Such handling has been shown to increase the risk of back and other musculoskeletal injuries/disorders for nurses and other direct care workers. (9)

The risk is additionally increased because of several other factors that are difficult to control, such as: patient characteristics (asymmetric distribution of weight; lack of stable areas to grip, making it difficult to keep patient's weight close to the nurse's body per "proper" body mechanics); awkward posture and positioning if patients are agitated, combative, non-responsive or limited in ability to assist; and structural physical environmental factors that may limit space and make it difficult to utilize proper body mechanics.

The exposure to back injuries and musculoskeletal disorders persists even with additional staff assistance. (9)

- **Back injury/musculoskeletal disorder**

Back injuries and musculoskeletal disorders describe a collection of conditions affecting and not limited to muscles, nerves, tendons, ligaments, joints, cartilage or spinal discs. (10) Common manifestations of these disorders include low back pain, sciatica, rotator cuff injury and carpal tunnel syndrome. (11) Many job tasks can cause and/or attribute to these disorders, including patient handling.

- **Lift Equation**

The National Institute for Occupational Safety and Health (NIOSH) provides the basis for safe practices for lifting and handling. A NIOSH "lifting equation" sets the maximum recommended weight limit at 51 pounds under ideal conditions. It applies to all men and 75% of women. (10) Studies have applied the NIOSH lifting equation to nursing practice, and they found the estimates of compressive force to the spine were all above the action limit permitted as safe. (12, 13)

- **Control Strategies**

Control Strategies in occupational health are designed to minimize or eliminate workers' exposure to hazards. Three control strategies have been used, including work practices ("proper" body mechanics), administrative controls (enforcement of health and safety

policies, training procedures) and engineering controls (removal or elimination of the hazard through the use of specialized equipment.)

The two most common control strategies of work practices and administrative controls have been utilized in healthcare facilities for some time in the prevention of patient handling injuries without acceptable results. Thirty-five years of research dispute the belief that classes in body mechanics and training in lifting techniques prevent job-related injuries. (13,14, 15,16,17,18,19,20,21,22)

OSHA considers engineering controls to be used first to implement primary prevention of injury/exposure. Engineering controls have been a less utilized control strategy in healthcare. When safe patient handling engineering controls are utilized, the hazard is removed or eliminated. It is the position of AOHP that engineering controls are where the focus, training and resources need to be applied to provide safe patient handling for healthcare workers and patients.

Great strides have been made in utilizing engineering controls in healthcare, such as preventing bloodborne exposures and communicable airborne diseases. This needs to include the area of patient handling. In recent years, the advance of technology has provided a multitude of tools for engineering controls in patient handling tasks. Examples include full-body sling lifts, stand-assist lifts, lateral transfer devices, ceiling lifts and friction reducing devices. These lift/assist devices remove the manual dimension of patient handling and assume a large portion of the patient's weight, relieving the caregiver of the total effort and risk with patient handling duties. Effectiveness of this equipment is dependent on other factors as well, including, training, availability, and sufficient space for and maintenance of equipment. (9) In addition, it is extremely important to obtain input from the individuals who actually must use the engineering controls so that the best device is selected.

- **Exceptional Situations**

In certain "exceptional situations," patient handling may be unavoidable. This may occur when a caregiver is presented with life-threatening situations or care of pediatric patients that may prohibit the use of assistive devices. In such situations, activities with patient handling should be minimized when possible without affecting patient care or exceeding the abilities of the caregiver.

- **Improved Quality of Care**

Improved quality of patient care is related to the use of assistive devices with patient handling activities. With the elimination of manual patient handling, patients have been noted to have less pain and fewer injuries with the activity, and they are more secure and stable. Overall, with the use of assistive devices for patient handling, there is improved respect and quality of care for the patient.

The Royal College of Nursing in the United Kingdom has had a directive since 1992 regarding the manual handling of patients. Its position is "There is rarely conflict between the needs of the patient and the safety of the nurse." The Manual Handling Operations Regulations of 1992 permits manual lifting only where it is 'unavoidable.' These regulations require an employer to avoid the need for his employees to carry out manual lifts 'so far as is reasonably practicable.' An employer could face considerable legal consequences for allowing employees to carry out lifts that are not 'reasonably practicable,' and employees may be

subject to disciplinary action. (23) In 2002, it was decided that an employer was in breach of duties under the regulations and fined after finding that there were 'real risks of injury inherent in the Drag lift,' which was the method of moving patients habitually used in the hospital where the claimant worked. (24)

AOHP's Position

AOHP's position is to provide a safe and healthy environment for the nurse/caregiver and patient. The organization recognizes all of the above and recommends:

- Employer and management commitment to adopting an institutional policy for the safest approach to handling, moving and transporting patients. The safest approach is the use of assistive equipment, discouraging the use of manual handling. There needs to be investment in adequate supply of appropriate devices, ensuring availability of equipment and adequate storage space for equipment, proper disinfection based on infection control principles, education of staff on usage, and designating resource personnel for ongoing assessment and evaluation.
- Employee participation is vital in the assessment and implementation process to encourage acceptance and success of the program. Staff have a wealth of essential information about specific hazards in their work environment associated with patient handling and can assist in guiding actions that will ensure program effectiveness and positive outcomes.
- Staff must also be involved and given authority in the evaluation and selection of patient handling devices and equipment. They also need to be involved with initial and ongoing education/training activities related to patient handling and the use of assistive devices and equipment.
- Regulation and enforcement of a standard to control ergonomic hazards in the healthcare industry to prevent back injuries and musculoskeletal disorders is needed. The regulation should include the use of engineering controls for patient handling activities. AOHP supports a continued call to OSHA and state legislation to develop such standards that are appropriate and reasonable to healthcare employers.
- Support of research and evidence based practice is necessary to continue the ongoing development of interventions to prevent back injuries and musculoskeletal disorders related to patient handling. Further study is also recommended to redesign other high-risk tasks to promote safer work environments for nursing staff. Prompt communication of current study findings to the association and partnering organizations is critical in reducing these injuries and disorders.

In summary, AOHP believes that manual patient handling is unsafe for the caregiver and patient. Such handling is also directly responsible for disabling back injuries and musculoskeletal disorders in nurses and other direct patient care providers. Utilizing safe patient handling will be a way to reduce stress for nurses to help them stay in the profession. Safe patient handling can

occur with assistive devices, ensuring improved quality patient care and outcomes. The ultimate benefits are afforded to the nurse/caregiver, patient and employer. AOHP welcomes the opportunity to work collaboratively with regulatory agencies and professional associations to promote safe patient handling and reduced healthcare worker injuries.

References:

1. Cust, G., Pearson, J., & Mair, A. (1972). The Prevalence of low back pain in nurses. *International Nursing Review*. 19(2), 169-79.
2. Magora, A. (1970). Investigation of the relation between low back pain and occupation. *Industrial Medicine*. 39(11), 31037.
3. U.S. Department of Labor, Bureau of Labor Statistics. (2002). Retrieved 6/9/04 from <http://stats.bls.gov/oshhome.htm?H6>
4. Leigh, J.P., Markowitz, S.B., Fahs, M., Shin, C., & Landrigan, P.J. (1997). Occupational injury and illness in the United States: Estimates of costs, morbidity, and mortality. *Archives of Internal Medicine*. 157(14), 1557-1568.
5. National Safety Council. (1998). *Accident facts*. Itasca, IL: Author.
6. Garrett, B., Singiser, D., & Banks, S. (1992). Back injuries among nursing personnel: the relationship of personal characteristics, risk factors and nursing practices. *AAOHN Journal*. 40(11), 510-516.
7. Stubbs, D., Buckle, P., Hudson, M., Rivers, P., & Worringham, C.J. (1983a). Back pain in the nursing profession: I. Epidemiology and pilot methodology. *Ergonomics*. 26(8), 755-756.
8. American Nurses Association. (2001). *Health and Safety Survey*. Retrieved March 24, 2004 from <http://www.nursingworld.org/about/mailroom.htm>
9. American Nurses Association. *Position Statement on Elimination of Manual Patient Handling to Prevent Work-Related Musculoskeletal Disorders*. June 21, 2003.
10. National Institute for Occupational Safety and Health. (1997). *Elements of Ergonomics Programs*. DHHS (NIOSH) Publication No. 97-117. Cincinnati, OH.
11. National Research Council and Institute of Medicine. (2001). *Musculoskeletal disorders and the workplace-low back and upper extremities*. National Academy of Sciences. Washington, DC: National Academy Press.
12. Nelson, A. 1996. *Identification of Patient Handling Tasks that Contribute to Musculoskeletal Injuries in SCI Nursing Practice*. Unpublished Research. James A. Haley VA Medical Center Study.
13. Owen, B., & Garg, A. (1991). Reducing risk for back pain in nursing personnel. *AAOHN Journal*. 39(1), 24-33.
14. Anderson, J. (1980). Back pain and occupation. In Jayson, M.I.V. (ED.) *The Lumbar Spine and Back Pain, 2nd Edition*. pp. 57-82. London: Pitman Medical Ltd.

15. Brown, J. (1972). *Manual lifting and related fields*. An annotated bibliography. Labor Safety Council of Ontario.
16. Buckle, P. (1981). *A multidisciplinary investigation of factors associated with low back pain*. Ph.D. Thesis. Cranfield Institute of Technology.
17. Dehlin, O., Hedenrud, B., & Horal, J. (1976). Back symptoms in nursing assistants in a geriatric hospital. *Scandinavian Journal of Rehabilitation Medicine*. 8(2), 47-53.
18. Hayne, C. (1984). Ergonomics and back pain. *Physiotherapy*. 70(1), 9-13.
19. Snook, SI, Campanelli, R., & Hart, J. (1978). A study of three preventative approaches to low back injury. *Journal of Occupational Medicine*. 20(7), 478-81.
20. Stubbs, D., Buckle, P., Hudson, M., & Rivers, P. (1983b). Back pain in the nursing profession II. The effectiveness of training. *Ergonomics*, 26, 8-767-779.
21. Venning, P.J., Walter, S.D., & Stitt, L.W. (1987). Personal and job-related factors as determinants of incidence of back injuries among nursing personnel. *Journal of Occupational Medicine*. 29(10), 820-5.
22. Wood, D. (1987). Design and evaluation of a back injury prevention program within a geriatric hospital. *Spine*. 12(2), 77-82.
23. Health and Safety Executive (1992). *Manual Handling Operations Regulations*. London. HMSO Article 3(2) and Regulations 4(1)(a).
24. Knott v. Newham Healthcare NHS Trust [2002] *EWHC 2091* (QB). 16 October 2002.
25. Nelson, A., Haley, J., Lloyd, J., Menzel, N. *Redesigning Patient Handling Tasks to Prevent Nursing Back Injuries*. Session number: 1071, 2002.
26. *Patient Care Ergonomics Resource Guide: Safe Patient Handling and Movement*. Developed by Patient Safety Center of Inquiry (Tampa, FL). Veterans Health Administration and Department of Defense. October, 2001.
27. Occupational Safety and Health Administration, *Guidelines for Nursing Homes: Ergonomics for the Prevention of Musculoskeletal Diseases*. Accessed June 10, 2004 from http://www.osha.gov/ergonomics/guidelines/nursinghome/final_nh_guidelines.html.