Ergonomics: Protecting Your Body

This Continuing Education Study Guide Presented by

STERIS

Authors of this educational material are clinical education employees of STERIS Corporation and do not receive additional compensation for this activity.

STERIS Corporation is providing this educational content. Specific products pictured are used to support this material and do not constitute commercial support.

Ergonomics: Protecting Your Body - Study Guide #14

To receive 1.0 contact hour for completing this study guide, you must:

1. Read the complete study guide.

2. Complete the review questions and compare your responses with the answers provided. If some areas are unclear, review that section of the study guide that is indicated in parentheses next to the correct answer on the answer sheet.

3. Next you must:
   - > Complete the Evaluation Form. – Signature required
   - > Send the completed Evaluation Form to:

   STERIS Corporation
   Clinical Education Department
   5960 Heisley Road
   Mentor, OH 44060-1834

4. A Certificate will be sent to you.

Accreditation/Credit Hour

Study Guide 14 for 1.0 contact hour is provided by STERIS Corporation, which is an approved provider of continuing nursing education by the California Board of Registered Nursing – provider number CEP11681.

Description of Study Guide Topic

Disabling injuries to the back and other body parts from workplace injuries have become a major concern for the healthcare industry. The nursing community has the highest medical claim rates of any occupation or industry (American Nurses' Association [ANA] press release, 2003); more than one-third of nursing personnel have been affected by back-related injuries. Professional organizations, healthcare facilities and healthcare companies have launched proactive and diligent programs to promote safe patient handling to prevent musculoskeletal disorders (MSDs) among healthcare personnel. This study guide will describe the incidence of musculoskeletal injuries in the healthcare environment and discuss plans and assistive devices that can be used to minimize these injuries.

Overall Purpose of the Study Guide

To explore the prevalence of workplace musculoskeletal injuries in healthcare personnel while highlighting preventive programs and assistive devices that can be used to minimize these injuries.

Objectives

Upon completion of this study guide program, you should be able to:

1. Review the prevalence of musculoskeletal injuries in healthcare personnel.
2. Discuss campaigns and programs to minimize musculoskeletal injuries.
3. Describe patient handling devices available to minimize healthcare worker injuries.

Intended Audience

This study guide is a self-study program intended for use by perioperative nurses, surgical technologists, perianesthesia nurses and staff members, endoscopy suite nurses and staff members, central service personnel, physician office and clinic personnel, surgeons and other healthcare professionals interested in this topic.

Risk vs. responsibility

For years, healthcare providers have displayed an unwavering commitment to patient care without focusing on their own personal safety. Times have changed. Today, the workforce is older and musculoskeletal disorders (MSD) and injuries have become more prevalent. This, in turn, has led to adverse consequences in the workplace including high turnover rates, greater absenteeism, increased burnout, escalating workmen's compensation claims and difficulties with recruitment and retention of healthcare professionals (ANA position statement, 2003).

Because of the disproportionate amount of musculoskeletal injuries, the healthcare worker must be urged to focus on his or her own safety and welfare. For healthcare providers, protecting oneself first only leads to safer patient care and a healthier workforce.

When delivering patient care or performing other tasks in the healthcare environment, the risk of harm to the provider sometimes may be greater than the expectations of the task. For example, a nurse may be expected to lift a new monitor to place it on top of a shelving unit. The weight of the monitor may be excessive and the body mechanics needed to lift the device to the top shelf will probably be awkward. This familiar and relatively simple task could actually cause a lifetime of pain and discomfort if a back injury occurs.

Healthcare facilities must provide appropriate devices to minimize MSD risks to healthcare workers. The industry has addressed this need by developing adequate safeguards that are dedicated to minimizing risks to the healthcare worker.

MSD statistics in the healthcare community

Musculoskeletal disorders pertain to conditions that affect muscles, nerves, tendons, ligaments, joints, cartilage, or spinal discs (ANA position statement, 2003). They may present as low back pain, carpal tunnel syndrome, sciatica, or other conditions. Many of the routine tasks of nursing, such as patient lifting, transferring and repositioning can lead to MSD if special assistive devices are not readily available or used. For example, manual patient lifting from the transportation cart to the surgical table places the nursing team at an increased risk for musculoskeletal disorders.

The American Nurses Association conducted a survey and found that approximately 60% of the nurses were in fear of developing a severe back injury from the work they perform in the healthcare environment (de Castro, 2004). Other surveys note that 38% of nurses require time off of work because of back pain and 12% of nurses are leaving the profession because of back pain. Approximately 52% of the nursing community complains of chronic back pain (ANA press release, 2003). Even though regulators have made attempts to address workplace problems that cause MSD, a focus on workplace injuries within the predominantly female field of nursing has been lacking in the past.

In the 1960s and 1970s, healthcare occupations had one of the highest rates of back-related injuries and conditions (Nelson et al., 2003). The incidence of back injury rates increased more than 40% from 1980 to 1990, while decreasing 32% between 1994 and 1998. Once again, the rate of back injuries began to climb again in 1999 and 2000 (Nelson et al., 2003). From 1994 until 2000, nursing occupations continued to be identified as high-risk occupations for back-related injuries (Nelson et al., 2003).

According to the Bureau of Labor Statistics, nursing staff members are involved in over 200,000 work-related injuries and illnesses each year and more than half of them require time away from work. Nursing staff members are twice as likely as other workers to be injured on the job (Occupational Health and Safety Agency [OSHA], 2004).

Registered nurses and other healthcare providers will benefit from a safer workplace as a result of a new alliance between OSHA and Association of periOperative Registered Nurses (AORN). AORN and OSHA will work to develop training and education programs for AORN members and others on work safety in order to avoid debilitating occupational injuries. The alliance will focus on preventing exposure to blood-borne diseases, ergonomic injuries and exposure to smoke generated from the use of electrosurgery units and lasers (OSHA news release 12/15/2006).

Nursing practices lead to an increase risk for MSD

Nurses and other healthcare workers are involved with a variety of patient handling tasks, such as lifting, transferring and repositioning, which are typically performed manually. Continuous, repeated performances of these tasks are done throughout the nurse's career and are often associated with low back pain.

Some of the patient handling tasks that pose risks for MSD are (OSHA, 2004):

- Lifting heavy objects (e.g., manually lifting immobile patients)

- Lifting or moving patients while in an awkward position (e.g., reaching across the surgical patient to assist with lifting)
- Lifting alone
- Lifting many times per shift
- Lifting un-cooperative or confused patients
- Repetitive tasks (e.g., repeatedly cranking a manual adjustment for the surgical table)
- Tasks done using a great deal of force (e.g., pushing a transportation cart up a ramp)
- Overexertion (e.g., trying to stop a patient from falling if ambulating too early)
- Being expected to perform work beyond the worker's capabilities

Healthcare workers must practice proper ergonomics and body mechanics to avoid MSD.

Ergonomics is the science of fitting the job to the worker, the practice of designing work tasks and equipment to conform to the worker's capabilities, or adjusting the work environment or work practices to prevent injuries before they occur (OSHA, 2004). "Ergonomics" has become a common term as awareness of workplace patient handling risks have grown.

Lifting guidelines

OHSA has suggested some lifting guidelines for healthcare workers when handling patients. They include (OSHA, 2004):

- Never transfer patients when off balance
- Never engage in heaving lifting especially when the spine is rotated
- Lift loads close to the body
- Never lift alone – use team lifts or lifting devices whenever possible
- Provide training regarding when and how to use assistive lifting devices

Other suggestions include:

- Place heavy equipment to be transported on a rolling device or have large wheels attached to the equipment
- Push rather than pull whenever possible. Keep the arms close to the body so that the pushing effect will be with the whole body and not just the arms
- Attach handles (at waist to chest height) to equipment for easier movement
- Always assure that passageways are unobstructed when moving anything or anyone
- Do not try to transport a number of items alone if moving a patient in a wheelchair or on a cart (e.g., IV pole, other equipment)
- Do not reach into a deep sink or into a deep bag (such as a laundry bag) as this motion can cause back injury
- Immediately remove from service any defective lifting device or assistive patient handling attachment or part
- When performing cleaning tasks, alternate the leading hand (e.g., when mopping a floor)
- Clean objects at waist level rather than bending over them. Try to raise the work to your level
- Use tools with extended handles for hard-to-reach areas (e.g., cleaning devices)
- Select cleaning devices with light-weight construction and adjustable handles

Patient assessment

Nurses must complete a patient assessment to carefully match the patient's characteristics with the proper lifting devices and equipment that may be needed (Nelson et al., 2003).

The patient assessment should include:

- Patient's ability to assist with moving and/or handling (level of assistance)
- Patient's weight-bearing capability
- Patient's upper body strength to support own weight
- Patient's ability to understand and follow instructions to assist and cooperate
- Patient's height, weight and body shape
- Patient's conditions, wounds, contractures, amputations, spinal stability, pressure ulcers and other conditions that may prevent self-help
- Patients's IVs, tubes, or other devices that may affect patient handling

"Handle with Care" Campaign

In September 2003, ANA launched the "Handle with Care" ergonomics campaign that is a proactive, multi-faceted effort aimed at preventing work-related musculoskeletal disorders by using assistive equipment and patient handling devices. ANA has collaborated with specialty organizations, healthcare organizations, industry and academic/research facilities to promote united efforts to prevent back and other injuries through education, training and the use of assistive devices.

The high incidence of MSD among the nursing staff members only shows that poor ergonomics can hurt nurses and patients. This is the reason for the ANA campaign - to bring ergonomics and the national trend of MSD among nurses to everyone's attention.

The ANA also has been very active in lobbying Congress to establish stronger ergonomics standards and protections for nurses. During the 1990s, ANA representatives testified on numerous occasions on the need for an ergonomics standard. In 2000, Congress finally passed an

ergonomics standard. Unfortunately, it was repealed the next year by the newly-elected Congress. Not only was the standard repealed, but OSHA was ordered to cease all work related to the standard unless otherwise mandated by Congress. Even though OSHA released nursing home guidelines for preventing MSDs in 2003, the need still exists for a strong federal ergonomics mandate to eliminate manual lifting that is fair to both workers and industry. Regulations that use engineering controls (assistive devices) are the answer to decreasing healthcare worker injuries. Even without OSHA's intervention, healthcare facilities, organizations and industry are adopting their own ergonomics policies.

On June 23, 2003, the ANA position statement entitled "Elimination of manual patient handling to prevent work-related musculoskeletal disorders" was published (see appendix for entire position statement). This statement helps to educate the healthcare professional on the advances in science and technology that support the ANA's goal of promoting a national "no manual lift" policy. Manual lifting always involves such tasks as lifting, transferring and repositioning patients without the use of an assistive device (ANA, position statement, 2003). Policies such as this one are already in place in Australia, the United Kingdom and other industrialized nations. Reporting of injuries and potential injuries must be reinforced with policies that stress non-punitive action for these reports.

The goals of the "Handle with Care" campaign are (ANA press release, 2003):

> To develop safe workplaces in acute- and long-term care settings through safe patient handling techniques and patient lift devices

> To provide nurses with the information they need to recognize and prevent the risk of back injuries and MSDs

> To decrease healthcare industry costs by reducing nurse injuries and compensation claims

As awareness grows regarding the incidence and control of workplace MSDs, hope grows that the number of nurses leaving the workplace because of back injuries will eventually decrease. Educational programs have been launched and continue to be conducted to promote interventions and equipment that reduce the risk of occupational injury from patient handling and lifting.

Comprehensive ergonomics program

Management must demonstrate a commitment to reduce or eliminate the risks associated with patient handling. One way of demonstrating this commitment is through a written ergonomics plan. The elements of a comprehensive ergonomics program should include:

Management participation:

> An ergonomics committee should be created to be responsible for setting up and managing the ergonomics program. This committee should be a hospital-wide committee consisting of representatives from risk management, administration, employee health, nursing, etc. Personnel from surgery, PACU and the endoscopy lab should be represented.

> An ergonomics officer should be designated within the surgery or endoscopy department who would continually assess the environment and nursing tasks that could compromise worker safety.

> Development of ergonomics policies:
  - Developing a "no manual lift" policy establishes a consensus among staff members to use safe practices when lifting or moving patients.
  - A "no manual lift" policy also reflects support from the administration that assistive devices and equipment will be purchased and available to minimize and/or eliminate manual lifting techniques.

> Hazard prevention and control should include implementation of administrative controls (e.g., providing adequate staffing) and engineering controls (e.g., providing proper lifting devices).

> Ongoing communications with employees about the ergonomics program should be conducted to enlist their suggestions and compliance.

Workplace analysis:
Workplace walkthroughs, talking to employees, and periodic screening surveys can reveal valuable information.

An assessment plan to identify workplace hazards may include:

> Collecting and analyzing data of injuries and incident reports to note trends and identify patterns of injury

> Observation and identification of high-risk tasks during all shifts

> Survey of nursing staff for high-risk tasks and behaviors

> Observation of the workplace environment to determine the layout of the patient care areas that might contribute to high-risk tasks

> Job analysis and control of MSD hazards to determine high-risk patient handling tasks (such as moving a patient from the transportation cart to the surgical table)

Patient assessment

> To determine patient characteristics and patient dependency that would require assistive devices

Procurement of assistive devices

> A plan to evaluate, select, and trial various assistive patient handling devices should be in place. Selection criteria can include ease of use, cost effectiveness, stability, patient comfort and safety, worker safety, maintenance, storage, availability for use, and efficiency

> Appropriate assistive equipment should be available in sufficient quantities, located in convenient places, and in good working order

Training
Worker training on ergonomics should be developed that specifically focuses on minimizing back injuries for the workers. Training with the assistive patient handling devices should be interactive.

Reporting and medical management

> A blame-free environment should be created to encourage immediate reporting of back injuries and other MSDs) or potential for work-related injuries) to ensure prompt response and treatment of injured employees.

> A rapid response system should be created to promptly address and treat worker MSDs to prevent conditions from becoming worse.

- "Light duty" or "no lifting" when work restrictions are ordered during recovery should be enforced.
- Monitoring and review of workplace injuries should be implemented on a regular basis.

Evaluation
Evaluate the ergonomics program regularly (i.e., annually) to identify deficiencies and determine the effectiveness of the program to incorporate best practices and latest techniques.

Technology to minimize MSD

A shocking revelation is that many nurses have never heard of or seen the wide variety of patient handling assist devices that are available today. When a recommendation states, "use lifting equipment when feasible," the interpretation of 'feasible' often becomes associated with costs. Some administrators think that purchasing this specialized equipment will negatively impact the bottom line, but today's patient handling equipment has shown to be very cost effective. One study of six Veterans' Administration hospitals noted that worker's compensation costs decreased significantly when a comprehensive program designed to reduce job-related injuries for nurses was implemented and safe patient handling equipment was purchased and used (Nelson et al., 2003).

For years, student nurses have been taught to use good body mechanics, thinking that this was all that was needed to prevent back and other body part injuries. The theories of good body mechanics are based on moving static loads, such as boxes with handles. These theories are also based on the abilities of the male population; therefore, these theories don't specifically pertain to the female-dominated nursing profession. In addition, body mechanics concentrate on the lower back for lifting motions without addressing other vulnerable body parts involved with patient handling tasks.

Assistive devices are critical to protect the patient and worker from injury. Engineering controls (in the form of patient handling devices) are the best defense mechanism to prevent workplace injury as they remove the manual dimension from patient handling. These devices not only protect the worker from musculoskeletal injuries but benefit the patient in a number of ways by (ANA fact sheet, 2004):

- Protect against patient injury due to falls and skin tears
- Provide a more secure process for lifting, transferring and repositioning patients
- Decrease patient anxiety and increasing patient confidence when assistive devices are used
- Provide patient comfort by minimizing awkward or forceful patient handling
- Maintain patient dignity, privacy and self-esteem
- Increase patient autonomy by matching the patient's ability to move with the type of assistive device

There are many different types of patient handling equipment and devices that are designed to minimize healthcare worker injuries and maximize patient safety and comfort (Nelson, 2003; OSHA, 2004).

Some of the categories include:

- Lateral-assist devices:
  - Inflatable lateral-assist devices are similar to a transfer board but involves an inflatable mattress that requires much less effort when moving a patient.
  - Friction-reducing lateral-assist devices or sliding boards are transfer or sliding boards made from low-friction materials (such as plastic with a special coating) that significantly reduces the force required to move a patient (such as from the transportation cart to the surgical table). Many types of low-cost sliding boards are available today.
  - Mechanical lateral-assist devices are height-adjustable stretchers or beds (motorized or with a hand crank or foot pedal) to position the patient for ease of transfer.
- Overhead track-mounted patient lifters are track systems that is built into the ceiling and has a sling device used to transport patients from one device to another (like from the surgical table to the recovery cart.)
  - Powered full-body sling lifts can have a portable base or be ceiling-mounted and are used to suspend a patient or move patient from one device to another.
- Transfer chairs can be converted into beds or stretchers to minimize the need to move the patient onto another device.
- Powered stand-assist and repositioning lifts are an alternative to the full-body sling lifts. A sling is placed under the patient's arms and around the back to lift a somewhat dependent patient who has some weight-bearing abilities.
- Stand-assist and repositioning aids such as support rails or other devices that the patient can hold onto when attempting to stand. Many times these aids are attached to the bed or transfer cart but can be located on a wall or be freestanding.
- Beds and carts are being designed to be more ergonomically sensitive to both the needs of the patient and the healthcare worker, bypassing the need to transfer the patient onto another device such as in the GI lab where the procedure is usually performed on the patient cart.
- Sliding boards are slick boards that are placed under the patient to transfer from cart to surgical table. The patient is slid instead of lifted.
- Gait belts are belts with handles that are positioned around the patient's waist to assist patients who require partial assistance. This device improves the healthcare worker's grasp, reducing the incidence of musculoskeletal injuries. Gait belts should be available in the PACU or recovery area to help with patients who may be unstable.
- Trapeze lift is a bar device that is placed over the bed for the patient to grasp to help reposition him or herself. These may be placed on the beds of patients who have orthopedic, obesity, or other conditions but can help assist movement with their own upper body strength.
- Wheelchairs with removable arms allow for easier lateral transfers.

- Back belts - the effectiveness of wearing back belts by healthcare workers to reduce the risk of back injury has yet to be determined. Workers using back belts may have a false sense of security about their lifting capability and may try to lift weights beyond their means.

Summary

Nurses tend to be self-sacrificing by focusing more on patient safety while disregarding their own personal welfare. However, if current trends continue, and the number of nurses and nurses aides leaving the workplace due to musculoskeletal injuries continues to rise, patients will inevitably suffer. Statistics have revealed the alarming rates of worker injury from MSD caused by inappropriate lifting techniques, defective patient handling devices and lack of knowledge about patient handling risks.

Organizational and industry leadership have created a focus on decreasing the risks from workplace injuries. ANA's "no manual lifting" policy has created overwhelming attention for the need for engineering controls in the development and use of patient handling devices. To be effective, patient handling equipment must be available and easily maintained and stored. If any of these fundamentals are compromised, the risk of MSD is influenced. Staff members also must be well-trained in the use of patient handling devices.

The technology to minimize and even eliminate musculoskeletal injuries in the nursing community is available today. The benefits of patient handling devices are obvious as they reduce the risk of injury, thus improving the quality of patient care.

This study guide has been planned, produced and approved as a continuing education (CE) activity. This material will be reviewed within 2 years of its release date and re-released, or its designation for CE credit will become invalid.

Glossary

Administrative controls
Practices that are controlled by administration or management. For example, an administrative control would be to provide adequate staffing to minimize the incidence of injury or accidents.

Engineering controls
Designs of devices or equipment. For example, to minimize or eliminate musculoskeletal injuries by healthcare workers, special lifting devices can be used for patient handling.

Ergonomics
Science of fitting the job to the worker; practice of designing work tasks and equipment to conform to the worker's capabilities; adjusting the work environment or work practices to prevent injuries before they occur.

"Handle with Care" ergonomics campaign
A proactive multi-faceted effort by the American Nurses Association aimed at preventing work-related musculoskeletal disorders by using assistive equipment and patient handling devices.

Manual lifting
Involves such tasks as lifting, transferring and repositioning patients without the use of an assistive device.

Musculoskeletal disorders (MSD)
Pertains to conditions that affect muscles, nerves, tendons, ligaments, joints, cartilage, or spinal discs.

References

De Castro, Butch, "Actively preventing injury: Avoiding back injuries and other musculoskeletal disorders among nurses" American Journal of Nursing, January 2004, Vol. 104, Issue 01, accessed through web page: http://nursingworld.org.

ANA, Fact Sheet, "Welcome to Handle with Care," http://nursingworld.org/handlewithcare/factsheet.htm accessed April 2007.

ANA position statement, "Position Statement on Elimination of Manual Patient Handling to Prevent Work-Related Musculoskeletal Disorders," effective June 23, 2003. (See appendix for entire position statement)

ANA, Press Release, "ANA launches 'Handle with Care' ergonomics campaign", September 17, 2003.

Nelson A, Owen B, Lloyd J, Fragala G, Matz MW, Amato M, Bowers J, Moss-Cureton S, Ramsey G, and Lentz K, "Safe patient handling and movement," American Journal of Nursing, Vol. 103, No. 3, p. 32-44.

OSHA, web site on "Ergonomics" www.osha.gov/SLTC/etools/hospital/hazards/ergo/ergo.html accessed April 2007.

Review

1. Ergonomics is the
   A. Science of fitting the job to the worker
   B. Practice of designing work tasks and equipment to conform to the worker's capabilities
   C. Adjusting the work environment or work practices to prevent injuries before they occur
   D. All of the above

2. More than _____ of nursing personnel have been affected by back-related injuries.
   A. 1/4
   B. 1/3
   C. 1/2
   D. 3/4

3. Nurses are more prone to musculoskeletal injuries because they
   A. Are usually more committed to patient care than to their own personal safety
   B. Are getting older
   C. May not have the proper lifting devices readily available
   D. All of the above

4. Routine tasks of nursing that can cause MSD include
   A. Documentation, patient lifting, patient bathing
   B. Administration of medications, patient transfers, patient handling
   C. Patient lifting, transferring, repositioning
   D. Bed making, patient bathing, patient moving

5. Approximately _____ of nurses are leaving the profession because of chronic back pain.
   A. 12%
   B. 24%
   C. 32%
   D. 51%

6. Good body mechanics may not always apply to nurses as they
   A. Are based on the male model
   B. Are based on moving static loads, like boxes with handles
   C. Concentrate on the lower back for lifting motions while disregarding other body parts that could be injured
   D. All of the above

7. "Pull rather than push" is a good motto to protect the back from injury.
   A. True
   B. False

8. The main objective(s) for nurses to complete a patient assessment before transferring a patient from a cart to the surgical table is (are) to
   A. Determine the patient's ability to assist with the move
   B. Determine the patient's lower body strength to assist with the move
   C. Determine the patient's nutritive state
   D. All of the above

9. The main goal(s) of the ANA "Handle with Care" campaign is (are) to:
   A. Develop safe workplace practices through safe patient handling techniques and patient lift devices
   B. Teach nurses about good body mechanics
   C. Promote specific lifting devices
   D. All of the above

10. Selection criteria for proper patient handling devices should include:
    A. Ease of use, cost, worker safety
    B. Patient comfort, stability, storage
    C. Efficiency, maintenance, patient safety
    D. All of the above

Answers to Review Questions & Section Sources:
1. D (Nursing practices lead to an increase in risk for MSD)
2. B (Description of study guide topic)
3. D (Risk vs. responsibility)
4. C (MSD statistics in the healthcare community)
5. A ((MSD statistics in the healthcare community
6. D (Technology to minimize MSD)
7. B (Lifting guidelines)
8. A (Patient assessment)
9. A ("Handle with Care" Campaign ("No manual lift" policy))
10. D (Comprehensive ergonomics program)

Evaluation Form

Study Guide 14: Ergonomics: Protecting Your Body

Last Name

First Name/M.I.

RN/LPN/LVN License Number (Circle one: RN - LPN - LVN)

Non-RN: License or Social Security Number

Health Care Facility

Health Care Facility Street Address | City | State | ZIP Code

Current Home Street Address | City | State | ZIP Code

For International Address: | Country | Province/Postal Code

Area Code /Telephone Number | E-Mail Address

☐ Please check here if you want the certificate to be mailed to the address above.

☐ Please check here if you want the certificate e-mailed to you at the e-mail address above.

To receive continuing education credit, please complete the evaluation form and mail, fax or e-mail the completed form to STERIS Corporation.

Rate on a scale of: 1=low 5=high

To what extent did the study guide meet the 3 stated objectives below?

1. Review the prevalence of musculoskeletal injuries in healthcare personnel.	1	2	3	4	5
2. Discuss campaigns and programs to minimize musculoskeletal injuries.	1	2	3	4	5
3. Describe patient handling devices available to minimize healthcare worker injuries.	1	2	3	4	5
4. To what extent is this learning method easy-to-use?	1	2	3	4	5

5. How much time was required to read the content, take the test, compare your answers and complete the evaluation form? _____ hours _____ minutes

6. Has the provider disclosed the conflict of interest or lack therof declared by the planners and content specialist? Yes_____No_____ (Review inside cover page)

7. Was the content presented without bias of any commercial product or drug? Yes_____No_____

I have completed all the requirements for this entire activity (please sign and date).

_____

Your signature is required to attest that you have completed the requirements for this activity.

Please mail this completed form to:

STERIS Corporation
Education Department
5960 Heisley Road
Mentor, Ohio 44060-1834
Fax: 440-392-8902
E-mail: clinicaleducation@steris.com

Appendix

Position Statement on Elimination of Manual Patient Handling to Prevent Work-Related Musculoskeletal Disorders Summary

In order to establish a safe environment of care for nurses and patients, the American Nurses Association (ANA) supports actions and policies that result in the elimination of manual patient handling. Patient handling, such as lifting, repositioning and transferring, has conventionally been performed by nurses. The performance of these tasks exposes nurses to increased risk for work-related musculoskeletal disorders. With the development of assistive equipment, such as lift and transfer devices, the risk of musculoskeletal injury can be significantly reduced. Effective use of assistive equipment and devices for patient handling creates a safe healthcare environment by separating the physical burden from the nurse and ensuring the safety, comfort and dignity of the patient.

Background

The term musculoskeletal disorder describes a collection of conditions affecting, but not limited to, muscles, nerves, tendons, ligaments, joints, cartilage, or spinal discs.[1] Common manifestations of musculoskeletal disorders include low back pain, sciatica, rotator cuff injury and carpal tunnel syndrome.[2] Job tasks, such as patient handling, can lead to the development of these conditions or exacerbate existing ones.

Nurses suffer a disproportionate amount of musculoskeletal disorders consequent to the cumulative effect of repeated manual patient handling events[3], often involving unsafe loads. Among nurses, back, neck and shoulder injuries are commonly noted as the most prevalent and debilitating.[4] Though nurses have been historically trained to use "proper" body mechanics to prevent injury from lifting and transferring patients, questions arise as to their true value and applicability to the practice of nursing.[5]

While mostly associated with dependent patient care, the risk for musculoskeletal injury secondary to manual patient handling crosses all specialty areas of nursing. As such, no nurse is effectively clear from the risk of injury. The impact on the nursing workforce may lead to adverse consequences at the organizational level through increased absenteeism, lost work time, burnout, decreasing retention, high turnover and threatened recruitment. Moreover, the occurrence of musculoskeletal injuries may have a profoundly discouraging effect within the contexts of nursing shortage, aging nursing workforce and waning numbers of professional entrants.[6]

Manual Patient Handling

The distinction of manual patient handling specifically refers to tasks such as lifting, transferring and repositioning of patients without the use of assistive devices. Performing manual patient handling places nurses at increased risk for musculoskeletal disorders. This risk can be attributed to several factors, including weight of load, patient characteristics, awkward posture and positioning and environmental factors. While attempts to scientifically quantify allowable levels of weight for lifting have been made, designations based on static loads or developed using non-representative study populations cannot be generalized to the nursing workforce.[7] Patients' bodies have an asymmetric distribution of weight and do not possess available, stable areas to grip thereby making difficult the attempt to hold a patient's weight close to the nurse's own body. Also, there may be occasions when patients are agitated, combative, non-responsive, or can offer limited levels of assistance potentiating the risk for injury.[8] In addition, the structural physical environment of care may necessitate awkward positions and postures, further increasing the susceptibility of developing a musculoskeletal disorder. Altogether, these factors merge to create an unsafe load for nurses to manage capably. Even with assistance from additional staff members, it is critical to note that the exposure to the hazard persists.

Engineering Controls

Engineering controls are the best line of defense for worker protection and can be effectively applied to patient handling. Technology has been successfully applied to significantly reduce the risk of exposure to occupational hazards in the healthcare setting, such as for needlestick injuries and communicable airborne diseases. The healthcare industry must embrace the evolution of technological development in terms of its value to the delivery of quality patient care by a safe and healthy workforce.

Specialized equipment exists to assist in patient handling tasks and the selection of products continues to grow. Examples of patient handling equipment include full-body sling lifts, stand-assist lifts, lateral transfer devices and friction reducing devices. Assistive equipment removes the manual dimension of patient handling and assumes a large proportion of the patient's weight. The use of assistive equipment relieves the caregiver of the total effort and risk associated with patient handling duties.[7,9] The availability and utility of assistive equipment eliminates the need to engage in total manual patient handling. Though some form of patient handling must be undertaken by nurses, it should be limited to assisting patients while using assistive equipment (e.g., repositioning a patient in a chair after using a lifting device).

The degree of effectiveness of using patient handling equipment and devices to prevent musculoskeletal disorders is significantly dependent on factors related to availability, maintenance and sufficient space.[5,9] Equipment and devices must be readily available to staff in order to encourage their use.[10] Availability incorporates quantity, location and access of equipment commensurate with staff and patient needs. Further, equipment and devices must be maintained in good operational condition to ensure optimum utility. Disrepair and dilapidation unnecessarily subjects both caregiver and patient to preventable risk for injury. Also, adequate space within patient care settings that accommodates use of patient handling equipment and devices is essential. Barriers and obstacles within the physical patient care environment, such as, but not limited to furniture, walls, or other treatment equipment, may be prohibitive aspects to patient handling situations. The extent to which any of these factors are limited can strongly influence the risk for musculoskeletal injury.

Exceptional Situations

There may be occasions when manual patient handling cannot be avoided. Nurses may be presented with exceptional or life-threatening situations prohibiting the use of assistive patient handling equipment. In addition, manual patient handling may be performed if the action does not involve lifting most or all of a patient's weight. Other exceptions include the care of pediatric (infant or small child) or other small patients and the use of therapeutic touch. In any and all cases, effort towards patient handling should be minimized wherever possible without compromising patient care or exceeding the abilities and skills of the nurse.

Quality Patient Care

The use of assistive equipment for patient handling tasks also benefits patients.[11] Patient adverse events related to patient handling and movement include pain (i.e., when lifting patients under their arms) and injury (e.g., falls, contusions and skin tears). The use of assistive equipment directly contributes to preventing such adverse events and improving patient safety, comfort and dignity - reflecting ANA's commitment to Patient Safety/Advocacy. Through the elimination of manual patient handling, patients are afforded more secure and stable

means to progress through their care. Also, assistive equipment can be designed to incorporate patient comfort and dignity considerations as a way to respect patients' rights and to improve the overall quality of care.

Employer/Management Commitment

Employers and managers should adopt a policy that commits the institution to the safest approach to handling and moving patients. The safest approach prioritizes the use of assistive equipment and discourages the performance of manual patient handling. Organizational actions must support the use of assistive equipment for patient handling tasks by investing in an adequate supply of appropriate assistive equipment, ensuring that equipment is readily available to staff, assuring that staff are well-trained in the use of equipment and designating resource specialists skilled in the assessment and evaluation of patient handling.[12] Additionally, any policy related to the elimination of manual patient handling must be non-punitive. Nursing staff should be encouraged to participate in effectively implementing requirements for safe patient handling and not made fearful of reporting incidents of work-related injury. These elements are necessary to ensure that a policy restricting manual patient handling successfully serves to reduce the risk of musculoskeletal disorders.

Employee Participation

Employee participation is vital for the success of workplace health and safety interventions. Front-line staff nurse employees should be motivated and supported to be involved in the development and implementation of efforts to restrict manual patient handling. Staff can provide essential information about organization-specific hazards associated with patient handling and can help guide actions to ensure effectiveness.[13] Staff must also hold decision-making authority in the evaluation and selection of patient handling devices and equipment.[5] Further, initial and on-going training in the assessment of case-specific patient handling, as well as the use of devices and equipment is necessary.

Regulation and Enforcement

ANA has campaigned and continues the call for a federal Occupational Safety and Health Administration (OSHA) standard to control ergonomic hazards in the workplace for the prevention of work-related musculoskeletal disorders.[14] A regulation that includes stipulations requiring healthcare settings to use engineering controls (i.e., assistive lift and transfer equipment) for patient handling tasks would lead to the elimination of total manual patient handling. In the absence of a national standard, ANA also supports efforts undertaken at the state level to enact ergonomic legislation. Regulation and enforcement are necessary components of the overall effort to prevent work-related musculoskeletal disorders.

Research

ANA seeks the commitment and consultation of the scientific community in the on-going development of interventions dedicated to the prevention of musculoskeletal disorders related to patient handling. The knowledge base and research evidence describing methods of safe patient handling, particularly the use of assistive equipment, continues to expand. The prompt communication of emerging study findings is fundamental for their timely incorporation into professional practice and education of student nurses.

Conclusion

ANA believes that manual patient handling is unsafe and is directly responsible for musculoskeletal disorders suffered by nurses. Patient handling can be performed safely with the use of assistive equipment and devices that serve as engineering controls for ergonomic hazards. The benefit of assistive patient handling equipment is characterized by the simultaneous reduction of the risk of injury for nursing staff and improvement in the quality of care for patient populations.

References

1. National Institute for Occupational Safety and Health. (1997). Elements of Ergonomics Programs. DHHS (NIOSH) Publication No. 97-117. Cincinnati, OH.

2. 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.

3. Smedley J, Egger P, Cooper C & Coggon D. (1995) Manual handling activities and risk of low back pain in nurses. Journal of Occupational and Environmental Medicine, 52(3), 160-3.

4. Trinkoff, A.M., Lipscomb, J.A., Geiger-Brown, J., & Brady, B. (2002) Musculoskeletal problems of the neck, shoulder, and back and functional consequences in nurses. American Journal of Industrial Medicine, 41(3), 170-178.

5. Nelson, A., Fragala, G., & Menzel, N. (2003). Myths and facts about back injuries in nursing. American Journal of Nursing, 103(2), 32-40.

6. Powell-Cope, G., Nelson, A., Tiesman, H., Matz, M. (2003) Nurses' working conditions and the nursing shortage (Letter to the Editor). Journal of the American Medical Association, 289(13), 1632.

7. Nelson, A., Lloyd, J.D., Menzel, N., & Gross, C. (2003). Preventing nursing back injuries. American Association of Occupational Health Nursing Journal, 51(3), 126-134.

8. Owen, B. & Garg, A. (1993). Back stress isn't part of the job. American Journal of Nursing, 93(2), 48-51.

9. Owen, B.D. (2000). Preventing injuries using an ergonomic approach. Association of Operating Room Nurses Journal, 72(6), 1031-1036.

10. Trinkoff, A.M., Brady, B. & Nielsen, K. (2003) Workplace prevention and musculoskeletal injuries in nurses. Journal of Nursing Administration 33,(3), 153-158.

11. Owen, B.D., & Fragala, G. (1999). Reducing perceived physical stress while transferring residents. American Association of Occupational Health Nursing Journal 47,(7), 316-322.

12. Nelson, A., Owen, B., Lloyd, J.D., Fragala, G., Matz, M.W., Amato, M., Bowers, J., Moss-Cureton, S., Ramsey, G., & Lentz, K. (2003) Safe patient handling movement. American Journal of Nursing, 103(3) 32-44.

13. United States Department of Labor - Occupational Safety and Health Administration. (2003). Guidelines for nursing homes: Ergonomics for the prevention of musculoskeletal disorders. Washington, DC.

14. American Nurses Association, Comment to 29 CFR 1910 Ergonomics Proposed Rule, submitted by Mary Foley, March 1, 2000 to U.S. Department of Labor-Occupational Safety and Health Administration.

Effective Date: June 21, 2003
Status: Position Statement
Originated by: Nurse Advocacy Programs Center for Occupational Health and Safety
Adopted by: ANA Board of Directors
(Reprinted with permission from American Nurses Association, ANA

Document # M2761EN.2009-11, Rev. D

STERIS®

STERIS Corporation
5960 Heisley Road
Mentor, OH 44060-1834
USA
800-548-4873
www.steris.com