

SPECIAL REPORT:

Preventing Patient-Handling Injuries in Nurses



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Safe patient handling and mobility: The journey continues

By Ruth Francis, MPH, MCHES, and Jaime M. Dawson, MPH



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Hazards associated with manual patient handling continue to compromise the health and safety of nurses. Among nurses who responded to the American Nurses Association's (ANA's) Health Risk Appraisal:

- 42% believe they are at risk at work from lifting or repositioning patients
- 13% have had a debilitating musculoskeletal injury
- 75% have access to safe patient handling and mobility (SPHM) technology, but only half use it consistently.

We must take a closer look at this problem and ask critical questions: Why do only half of the nurses who *could* use SPHM technology *actually* use it? Is the equipment relatively inaccessible? Is it heavy or difficult to use? Is enough SPHM technology available to meet patients' needs? Have nursing staff received the education they need to use it properly?

But even if every nurse had access to SPHM technology, equipment alone isn't the answer. Comprehensive SPHM programs are necessary to eliminate manual patient handling. ANA's *Safe Patient Handling and Mobility: Interprofessional National Standards* and the corresponding implementation guide provide a framework for developing effective and sustainable SPHM programs. Important program elements include:

- maintaining a commitment to a culture of safety
- choosing appropriate SPHM technology
- ensuring SPHM technology is accessible
- conducting ongoing training to maintain competency
- conducting ongoing program evaluation and remediation.

This special report gives you the information you need to help you or your employer develop and implement an SPHM program or enhance an established one. The report details risk factors for patient handling injuries, describes a multifactorial approach to preventing these injuries, dis-



cusses the importance of a culture of safety and commitment to SPHM, and provides strategies that help prevent injuries. A graphic on the last page summarizes key points of the report. Additional information is available in the article "Five strategies to help prevent nurses' patient-handling injuries" at www.AmericanNurseToday.com/?=23251.

Debilitating musculoskeletal injuries have ended too many nurses' careers. We can no longer allow the health and safety of the nursing workforce to be compromised.

We're all on this journey to a safer workplace together. We all need to do our part.

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Selected references

Executive Summary: American Nurses Association Health Risk Appraisal (HRA). Preliminary Findings October 2013-October 2014. nursingworld.org/HRA-Executive-Summary.

American Nurses Association. *Safe Patient Handling and Mobility: Interprofessional National Standards*. Silver Spring, MD: American Nurses Association; 2013.

Safe patient handling and mobility panel: Members, process, and objectives

On June 18-19, 2015, a panel of leading experts in safe patient handling and mobility met to better define the problem, clarify risk factors, and identify strategies for reducing risk for patient-handling injuries and improving patient safety. Panel members included:

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The panel discussed the persistent and costly problem of injuries experienced by nurses and other healthcare professionals in acute-care settings. While many occupational injuries can stem from acute or traumatic events, the panel concurred that injuries also develop through the progressive accumulation of body stressors caused by the physical demands of routine nursing activities. They agreed that healthcare professionals must be informed about the risks associated with routine patient-care activities and strategies to design, implement, and maintain safe patient handling and mobility programs, which are essential to reduce the continued risk of patient-handling injuries.

The three primary meeting objectives were to:

- review the current evidence and identify gaps in the existing evidence base regarding the burden of healthcare worker injuries
- consider activities performed in acute-care settings associated with an increased risk of injuries while gaining a better understanding of contributing risk factors
- develop terminology to better describe healthcare worker injuries caused by the cumulative impact of physical stressors and demands of routine patient-care activities.

The panel, convened by Sage Products, adhered to a consensus-building process to achieve these objectives, working collectively and in small groups to refine their understanding of the key issues. A literature review on the topic of patient-handling injuries had been completed by an independent consultant before the meeting, and the panel reviewed and considered the information during the course of its discussion. ●

Patient-handling injuries: Risk factors and risk-reduction strategies

Learn about a multifaceted approach to safe patient handling and mobility programs.

By Guy Fragala, PhD, PE, CSP, CSPHP; Teresa Boynton, MS, OTR, CSPHP; Marlyn T. Conti, BSN, RN, MM, CPHQ; Lee Cyr, CPCU, ARM; Lynda Enos, BSN, MS, RN, COHN-S, CPE; Devon Kelly, MS, OTR/L; Nancy McGann, PT, CSPHP; Kathleen Mullen, BSN, RN, CNOR, CSPHA; Susan Salisbury, BS, OTR/L, CDMS; and Kathleen Vollman, MSN, RN, CCNS, FCCM, FAAN



For more than 40 years, nurses have had the highest job-related injury rates of all healthcare personnel. In a 2011 survey conducted by the American Nurses Association:

- 62% of nurses expressed concerns about experiencing a disabling musculoskeletal injury
- 56% reported musculoskeletal pain caused or exacerbated by their work
- 42% reported being injured at work at least once during a 12-month period
- 52% reported chronic back pain
- 38% said they'd had to take time off work due to occupation-related back pain
- 20% said they'd changed their unit, position, or employment setting due to lower back pain.

The costly and seemingly intractable problem of work-related injuries among nurses and other healthcare professionals prompted Sage Products to convene a June 2015 meeting with leading experts in safe patient handling and mobility (SPHM) to better define the problem, clarify risk factors, and identify risk-reduction strategies. Panel members reached a consensus that the term patient handling injury (PHI) is an accurate, well-

recognized term for identifying nurses' injuries stemming from direct patient care. This term promotes awareness and knowledge about specific causes of injuries, establishes a shared understanding of the problem's magnitude, and helps identify solutions to enhance nurse and patient safety.

The overarching goal of SPHM programs is to support nurses' efforts to provide the right care for the right patient at the right time. Nurses must be aware of PHI risk factors and participate fully in efforts to ensure their patients' and their own safety through consistent use of SPHM practices. This article examines leading risk factors for PHIs and reviews strategies for designing and implementing effective SPHM programs at health-care facilities.

Risk factors

The following factors contribute to PHIs in nurses:

- prolonged work hours
- longer shift duration
- longer duration of exposure during a shift
- more consecutive days worked
- preexisting health conditions
- excessive sleepiness
- social and familial disruptions
- psychological disorders
- an older nurse workforce
- greater use of complex technological innovations
- increasing numbers of critically ill patients.

Certain organizational factors also contribute to high PHI rates—inadequate staff education in SPHM, failure to commit resources to technology to support safety, and limitations of systems that promote and reinforce SPHM.

Based on a literature review and professional experience, Sage's expert panel identified four major risk factors linked specifically to patient handling that increase nurses' PHI risk. (See *Risk factors for patient handling injuries*.)

Multifaceted approach to injury prevention

Multifaceted SPHM programs are more effective than any single intervention in re-

Risk factors for patient handling injuries

Four major risk factors for patient handling injuries (PHIs) in nurses are exertion, frequency, posture, and duration of exposure. Combinations of these factors, such as high exertion while in an awkward posture (for example, holding a patient's leg while bent over and twisted), unpredictable patient movements, and extended reaching intensify the risk.

Exertion

The amount of exertion (force or effort required to lift, move, or handle a patient) depends on such patient factors as size, need for physical assistance to perform mobility activities, cognitive status, and physical ability and willingness to actively participate in the move. Forces exerted on the nurse's musculoskeletal structure during manual lifting or handling or when moving heavy, dependent, or nonparticipatory patients commonly exceed levels that the body can safely tolerate. Nurses exert themselves more for patients who:

- are obese or overweight
- are more dependent
- have cognitive impairments
- are unable or unwilling to actively participate and promote their own movement.

PHI risk increases as the degree of exertion intensifies.

Frequency

Frequency refers to the number of times a nurse performs patient-handling tasks during a shift. Repeated performance of such activities as pulling up or boosting a patient in bed, turning a patient from side to side, performing a lateral transfer, and lifting a patient after a fall increases PHI risk.

Posture

Posture refers to the nurse's body position when performing patient-handling activities. During patient care, nurses commonly reach across beds or around medical equipment or other obstacles. Extended reaching away from the trunk can lead to undesirable postures, especially when weight or load is added. The farther the load is from the nurse's body during lifting, the greater the force imposed on the musculoskeletal structure. Bending (with or without a load) places considerable force on the musculoskeletal structure, especially the lower back and lumbar spine, increasing PHI risk. Twisting the back while bending also significantly increases risk.

When working in a confined space, nurses frequently assume awkward postures. Holding patients in a stationary position or maintaining their own back or arms in a fixed position for a prolonged time places nurses in a static posture, which increases stress, strain, and PHI risk. Dynamic or repetitive movements in specific postures also increase risk.

Duration of exposure

Duration of exposure to risk encompasses the cumulative effects of exertion, frequency, and position. Many PHIs stem from cumulative or repetitive risk exposure. Frequent episodes of excessive exertion with heavy loads or undesirable and awkward postures while providing patient care over extended periods can stress, weaken, and damage the musculoskeletal structure, causing cumulative trauma disorders.

Activities that promote a culture of safety

Activities that foster a culture of safety in healthcare organizations include:

- open communication using daily in-house or unit-based huddles
- presenting safety messages or topics at the start of all meetings
- visible safety boards and messaging
- rounding by senior leadership
- coaching programs
- promoting the message that errors provide opportunities to learn and improve safe patient handling and mobility (SPHM) skills.

These activities promote cultural changes at both the organizational and staff levels, leading to a participatory approach that creates a sustainable SPHM program.

ducing or preventing PHIs; research shows such programs reduce PHI risk. A comprehensive effort to achieve sustained PHI reductions and improve patient safety hinges on multimodal strategies that take into account available human and equipment resources, as well as how these resources interact with work systems in diverse healthcare settings (such as perioperative, long-term care, and critical care and other acute-care environments). Successful SPHM programs must encompass appropriate technology along with worker education, a culture of safety, commitment from the top down, and routine periodic program evaluation.

Technology

Technological advances and assistive devices aid the critically important work of promoting patient movement and mobility while reducing or eliminating PHI risk factors. Proper use of assistive devices to lift, move, reposition, and transport patients is the foundation of a successful SPHM program. Assistive devices include mobile mechanical patient lifts, ceiling-mounted lifts, friction-reducing devices, lateral transfer aids, in-bed turning and repositioning devices, and height-adjustable electric beds. Ideally, this equipment should be located at or near the bedside of all patients.

All staff involved in patient handling activities must embrace and endorse integration of tools and technology into the

care delivery process. Where nurses have easy access to appropriate equipment, evidence-based SPHM programs are crucial—but these alone are insufficient to guarantee program success (for instance, some nurses may choose not to use SPHM equipment). What's more, SPHM programs may reduce injuries initially, but if nurses eventually revert to old, familiar patient-handling behaviors, injury reductions may not be sustained.

Also, assistive devices must match patients' physical, cognitive, and clinical needs; nursing tasks to be performed; workplace design; and nurse characteristics. Furthermore, nurses must work within the structure of their organization to be effective agents of change for SPHM. An organizational investment in SPHM equipment and integration of this equipment into daily patient care is vital to a successful program.

Education

Competency-based employee education on use of SPHM devices and associated work practices is crucial. Both new hires and permanent staff involved in patient handling should receive education on an ongoing basis to promote, sustain, and increase their proficiency.

Culture

Successful design and implementation of SPHM programs requires meaningful, sustained changes in the workplace culture. Establishing a culture of safety at the individual, group, and organizational levels rests on understanding the complexity of healthcare delivery systems with tightly interwoven and constantly changing work processes. The organization's current culture and SPHM program design must be evaluated from a systems perspective to ensure that the program has a sustained favorable impact on PHI rates.

In an organizational culture of safety:

- nurses feel a sense of responsibility and are willing to report adverse events, injuries, and near misses
- administrators respond to these reports consistently and effectively
- everyone involved is treated fairly, with the cause of the event viewed

from a systems perspective rather than assigning blame to individuals. (See *Activities that promote a culture of safety.*)

Commitment

To build and sustain a successful SPHM program, leaders, managers, and clinical staff must demonstrate a consistent commitment and nurse and patient safety must be integrated into clinical and business goals. Frontline nursing staff must be actively engaged and participate in planning, implementing, and evaluating the program. Visible active support of all program elements by senior leaders, mid-level managers, and engineering and construction staff can overcome barriers and promote changes in ways that frontline staff may be unable to achieve. Also, a well-designed and supported SPHM mentoring or coaching program at the unit or department level continuously reinforces SPHM principles and use of appropriate equipment, which are crucial to maintaining cultural changes.

Evaluation

SPHM program outcomes and processes must be evaluated objectively on a routine basis. Relevant outcome measures include decreased PHI rates, improved patient safety, reduced direct costs (including medical costs for injury treatment and rehabilitation, as well as compensation to injured workers), fewer days of lost work, increased employee satisfaction, and ongoing identification of opportunities for refining SPHM processes and policies. Outcome metrics at the system and unit levels can be disseminated through the facility's intranet or "dashboards" that display safety data in real time. Employees should be encouraged to share stories of safety events with full transparency.

Thoughts, words, and actions

An industry-wide effort to prevent PHIs through SPHM programs requires partnerships and coalitions, staff education, increased access to and use of assistive devices, and ongoing education—all supported by federal and state SPHM initiatives in development. Numerous re-



sources are available to assist organizations on their journey to SPHM.

Organizational change to support and promote SPHM occurs only when all organization members focus on three key questions: What are we doing? Why are we doing it? What's my role? Full engagement and cultural transformation can occur only when everyone responds effectively to these questions in thoughts, words, and actions.

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Visit www.AmericanNurseToday.com/?p=23251 for a list of selected references.

Reduce patient handling injuries NOW!

It's time for nurses and administrators to do their part to reduce patient handling injuries (PHIs) in nurses—and patients—resulting from mobility missteps.

Know the facts

In a survey of nurses conducted by the American Nurses Association (ANA):

- 56% reported musculoskeletal pain caused or exacerbated by their work
- 42% reported being injured at work at least once during a 12-month period
- 52% reported chronic back pain.

Support safe patient handling

and mobility legislation at naction.org/site/PageNavigator/nstat_take_action_sph_113.html

Track metrics

- Monitor outcomes measures, such as PHI rates.
- Be transparent by sharing data.
- Make changes as needed.

Promote a culture of safety

- Foster open communication by using daily in-house or unit-based huddles.
- Convey safety messages or topics at the start of all meetings.
- Use visible safety boards and messaging.
- Conduct rounding by senior leadership.
- Establish coaching programs.
- Promote the message that errors are opportunities to learn and improve patient handling and mobility skills.
- Address safe patient handling and mobility in orientation and competency programs.

Understand the risk factors

- Exertion
- Frequency
- Posture
- Duration of exposure

Use technology as a resource

- Involve staff in choosing assistive devices.
- Make sure assistive devices are readily at hand.
- Match the assistive device to the situation.
- Use assistive devices correctly.

Focus on three big questions:

- What are we doing?
- Why are we doing it?
- What's my role?

Watch a video

on safe patient handling and mobility at nursingworld.org/SafePatientHandling-Video

Seek out resources

Safe Patient Handling and Mobility @ nursingworld.org/handlewithcare. This ANA website features many valuable resources. Also check out these ANA publications:

1. *Safe Patient Handling and Mobility: Interprofessional National Standards Across the Care Continuum* (2013)
2. *Implementation Guide to the Safe Patient Handling and Mobility Interprofessional National Standards* (2013)

Association of periOperative Nurses (AORN). Safe patient handling toolkit. (Includes resources specific to the perioperative environment.) <https://www.aorn.org/guidelines/clinical-resources/tool-kits/safe-patient-handling-tool-kit>

Minnesota Hospital Association. Safe patient handling. (Offers a tool kit for implementing a safe patient handling program, plus other resources.) mnhospitals.org/patient-safety/current-safety-quality-initiatives/patient-handling

Occupational Health & Safety Administration. Safe patient handling equipment. (Includes links to such tools as "Beyond Getting Started: A Resource Guide for Implementing a Safe Patient Handling Program in the Acute Care Setting.") osha.gov/dsg/hospitals/patient_handling_equipment.html

VA Sunshine Healthcare Network. Safe patient handling and movement. (Offers algorithms, toolkits, and other resources.) www.visn8.va.gov/patientsafetycenter/safepatienthandling/

Agency for Healthcare Research and Quality. The Falls Management Program: A Quality Improvement Initiative for Nursing Facilities. (A good resource for long-term care facilities.) ahrq.gov/professionals/systems/long-term-care/resources/injuries/fallsp/index.html

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