OSHA & Worker Safety

# Handling with Care

## *Practicing safe patient handling*

Health care professionals often accept aches and pains as hazards of the profession, as they are often tasked with lifting, moving, and handling patients. However, workers need not resign themselves to strained backs, pulled muscles, and other musculoskeletal disorders (MSDs). Health care organizations can reduce the risk of injuries to staff by implementing safe patient handling and movement (SPHM) programs. Such a program includes proper staff training and use of appropriate equipment to reduce liability risks and expenses for the organization as well as protect patients and staff.

### Painful facts

Consider that in 2015 (the most recent year for which Bureau of Labor Statistics [BLS] data were available), 59,810 occupational MSD cases occurred in the health care and social assistance sector.[1] The source of injury or illness in nearly half of those cases (26,760) was a health care patient or resident of a health care facility.[1] The following occupations account for the greatest proportions of MSD cases involving patients[1]:

- Nursing assistants (43%)
- Registered nurses (20%)
- Personal care aides (8%)
- Home health aides (6%)
- Emergency medical technicians and paramedics (5%)
- Licensed practical and vocational nurses (5%)

The rate of MSDs from overexertion by hospital workers (68 per 10,000) was twice the rate averaged across all industries in 2014, while the rate for nursing home workers (107 per 10,000) was more than three times the average, and the rate for ambulance workers (174 per 10,000) was more than five times the average.[2]

Gary Orr, health scientist and ergonomist with the US Occupational Safety and Health Administration (OSHA) in Washington, DC, says hospitals and nursing homes typically have the highest numbers of MSDs—even more than construction firms. "Musculoskeletal disorders such as back and shoulder injuries are common among caregivers," says Orr. "Patient handling equipment can help prevent patient falls, bruises, and skin tears. And, patients feel more comfortable and secure when a mechanical transfer device is used."

### Getting a handle on the problem

Hospitals and other health care settings are busy places where staff face pressure to accommodate and treat a large number of patients on any given day. This pressure can lead to staff improperly lifting, transferring, maneuvering, and positioning patients or using the wrong equipment for the job—which can, in turn, lead to injuries. To improve patient handling, Orr says organizations need to carefully assess these practices and determine areas of risk to staff, patients, and the facility.

"There is no safe way to manually transfer a dependent or partially dependent patient," he says. "But appropriately trained staff, correct equipment, and effective techniques can make all the difference."

The good news is that technological innovation is increasingly driving the development of new and improved equipment—including mechanical and nonmechanical floor lifts, ceiling-mounted lifts, air-assisted inflated devices, lateral transfers and aids, transfer chairs, bathing assists, and operating room support equipment. Also, caregivers today are better trained than they were in years past in the use of these devices and recommended transfer techniques.

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### Sidebar 1. Safety Synergy

Staff and hospitals aren't the only ones who benefit from effective SPHM programs. Research shows that the quality of patient care also improves when such programs are implemented. OSHA reports that SPHM programs result in patients having fewer falls, skin tears, and pressure ulcers—all of which can cost a hospital significantly and decrease its Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores.[6]

Mechanical and other safe lifting equipment improves patient mobility as well, which can decrease length of stay. Studies indicate that patients feel considerably more secure and comfortable when a mechanical transfer device is employed.[7–13] The result? An increased sense of dignity and patient satisfaction.

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"Staff today expect to have assist devices in the workplace and support from technology. They realize that the solution is to have the right equipment, at the right time, in the right place, with the right knowledge," says Orr. That knowledge includes familiarity with special flowchart algorithms—developed by the US Veterans Health Administration (VHA)—to assess patient handling needs and determine the ideal type of SPHM equipment (*see* Figures 1 and 2 on pages 8 and 9). The bad news, says Orr, is that use of these devices remains low in hospitals, despite the availability of devices, staff training on their use, and the fact that 11 states have enacted safe patient handling laws.

"The myths that assist devices take too long to use, are impersonal, and hinder recovery are still strongly held in the health care industry," Orr says. "For example, a patient may fall and can't get up on their own. Instead of using an available lift, the nurse may get a nearby worker to help her get the patient off the floor as quickly as possible, putting their backs at serious risk. Using mechanical devices to transfer patients takes fewer personnel and about five minutes less, overall, than manual transfers."

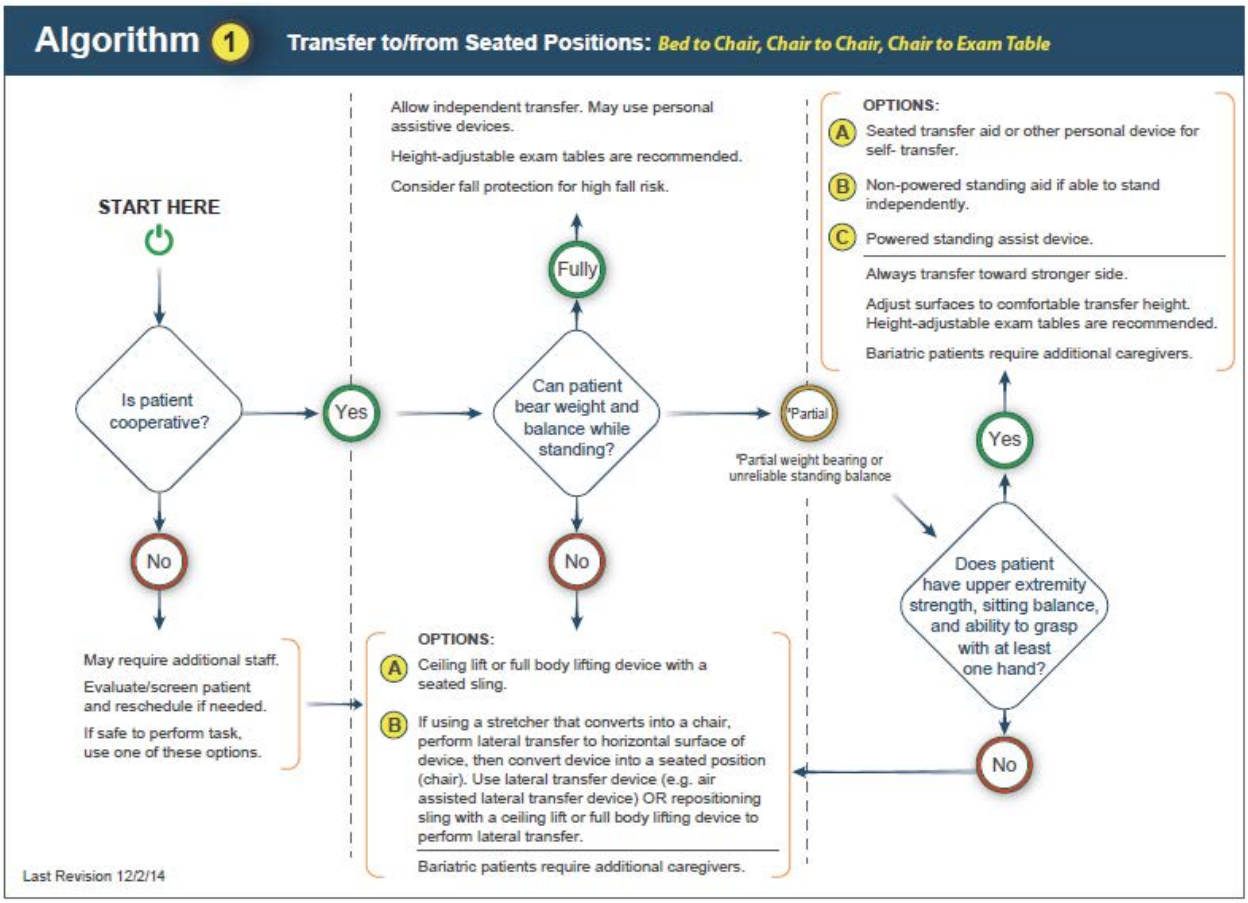
## Get with the program

For all the aforementioned reasons, it's imperative that health care organizations develop and adopt effective SPHM programs. Orr and OSHA suggest the following strategies (*see* Sidebar 2 for additional resources):

**STRATEGY** **Review injury data for your facility.** Such data can include the OSHA 300 log; the OSHA Form 301 ("Injury and Illness Incident Report"); workers' compensation claim summaries; internal incident, investigation, and corrective action reports; and employee turnover and recruitment data.[3]

**STRATEGY** **Scrutinize your overall injury rates and see how your organization compares to others.** Safety managers and administrators can use OSHA's self-assessment checklist, available at https://www.osha.gov/dsg/hospitals/documents/1.3_Self-assessment_508.pdf,

**Figure 1. VHA Safe Patient Handling and Mobility Algorithm 1: Transfer to/from Seated Positions: Bed to Chair, Chair to Chair, Chair to Exam Table**




**Source:** VHA: Safe Patient Handling and Mobility Algorithms. 2014 revision. Reprinted with permission of VISN 8 Patient Safety Center of Inquiry, Tampa, FL.

to compare their organizations' injury rates with national averages. Hospitals can visit the BLS website, at https://www.bls.gov/iif/, to access injury and illness rates at workplaces nationwide.

**STRATEGY** **Perform a site-specific risk assessment.**[3] Use the hospital risk assessment process or OSHA's patient handling risk assessment, available at https://www.osha.gov/dsg/hospitals/documents/3.8_SPH_self-assessment_508.pdf.

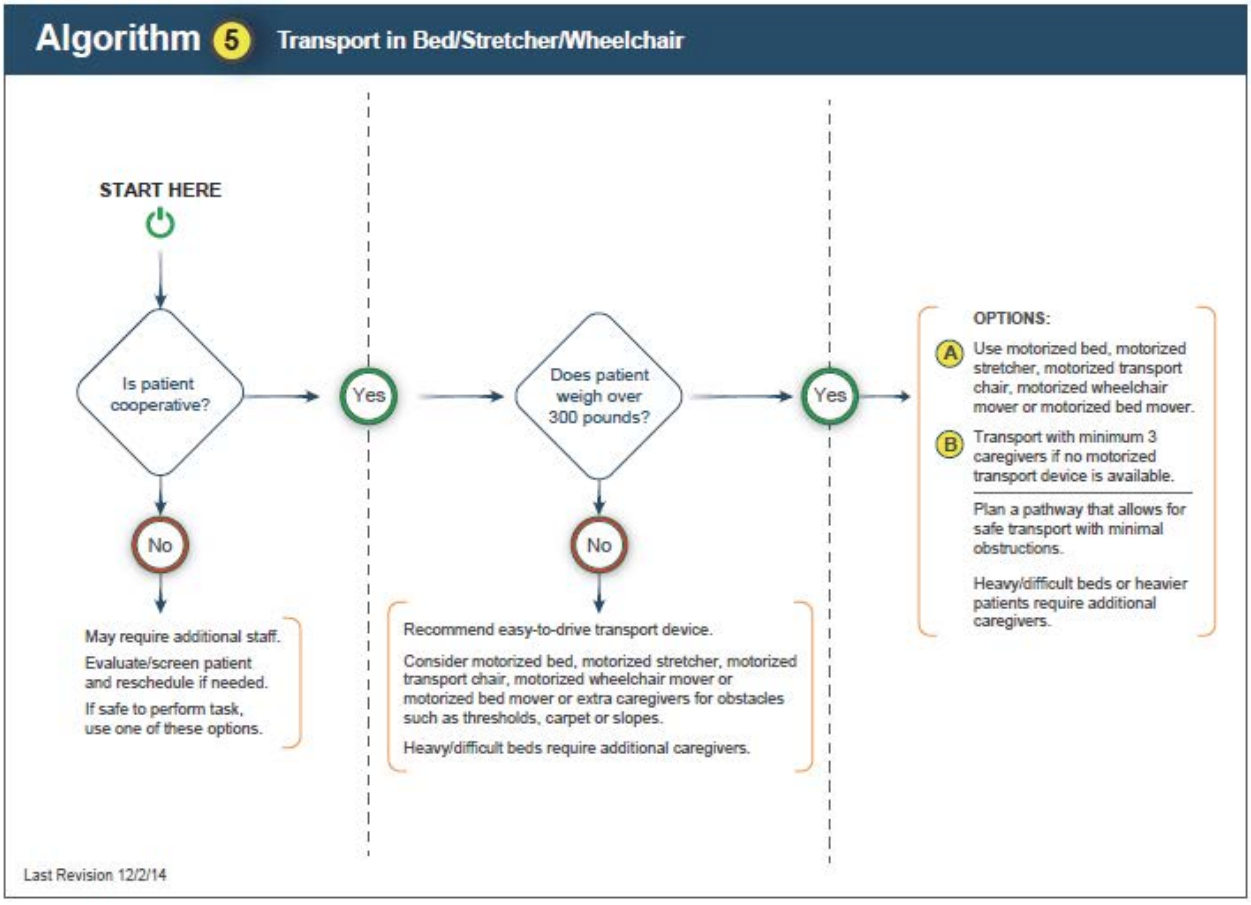
**STRATEGY** **Be proactive.** Identify potential problems that have gone unnoticed—before they result in injuries. Common proactive methods for accomplishing this include observing workplace conditions and processes, conducting job analyses and workplace surveys, and interviewing employees about their concerns and recommendations.[4]

**STRATEGY** **Review state laws and other guidelines on SPHM programs.** Examples of these resources include the following:

- OSHA safe patient handing resources: https://www.osha.gov/SLTC/healthcarefacilities/safepatienthandling.html
- Association of Occupational Health Professionals in Healthcare's guide to implementing SPHM programs in acute care settings: http://aohp.org/aohp/Portals/0/Documents/ToolsForYourWork/free_publications/Beyond%20Getting%20Started%20Safe%20Patient%20Handling%20-%20May%202014.pdf.pdf
- National Institute of Occupational Safety and Health resources on safe patient handling: https://www.cdc.gov/niosh/topics/safepatient/default.html
- US Department of Veterans Affairs safe patient handling guidelines: https://www.publichealth.va.gov/employeehealth/patient-handling/index.asp
- American Association for Safe Patient Handling & Movement guidelines: http://aasphm.org/

*(continued on page 10)*

## Figure 2. VHA Safe Patient Handling and Mobility Algorithm 5: Transport in Bed/Stretcher/Wheelchair




**Source:** VHA: Safe Patient Handling and Mobility Algorithms. 2014 revision. Reprinted with permission of VISN 8 Patient Safety Center of Inquiry, Tampa, FL.

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## Sidebar 2. Additional Online Resources

Learn more about establishing and maintaining an SPHM program by visiting these sites:

- **Improving Patient and Worker Safety Monograph (The Joint Commission):** https://www.jointcommission.org/assets/1/18/TJC-ImprovingPatientAndWorkerSafety-Monograph.pdf
- **Worker Safety in Hospitals portal (Occupational Safety and Health Administration [OSHA]):** https://www.osha.gov/dsg/hospitals/
- **Safe Patient Handling Program Checklist (OSHA):** https://www.osha.gov/dsg/hospitals/documents/3.2_SPH_checklist_508.pdf
- **Guidelines for Nursing Homes: Ergonomics for the Prevention of Musculoskeletal Disorders (OSHA):** https://www.osha.gov/ergonomics/guidelines/nursinghome/
- **A Back Injury Prevention Guide for Health Care Providers (Cal/OSHA):** http://www.dir.ca.gov/dosh/dosh_publications/backinj.pdf
- **Beyond Getting Started: A Resource Guide for Implementing a Safe Patient Handling Program in the Acute Care Setting (Association of Occupational Health Professionals in Healthcare):** http://aohp.org/aohp/Portals/0/Documents/ToolsForYourWork/free_publications/Beyond%20Getting%20Started%20Safe%20Patient%20Handling%20-%20May%202014.pdf.pdf
- **Safe Patient Handling and Mobility Guidebook (VHA Center for Engineering & Occupational Safety and Health):** http://www.tampavaref.org/safe-patient-handling/SPH.zip
- **Safe Patient Handling and Mobility (National Institute for Occupational Safety and Health [NIOSH]):** https://www.cdc.gov/niosh/topics/safepatient/default.html
- **Patient Handling and Movement Assessments: A White Paper (Facility Guidelines Institute):** https://www.fgiguidelines.org/wp-content/uploads/2015/08/FGI_PHAMA_whitepaper_042810.pdf
- **Safe Patient Handling and Mobility portal (American Nurses Association):** http://nursingworld.org/MainMenuCategories/WorkplaceSafety/Healthy-Work-Environment/SafePatient/default.aspx
- **SPHM Certification (Association of Safe Patient Handling Professionals):** www.asphp.org/certification

**STRATEGY** **Establish a business case justifying your SPHM program and get management buy-in.** Determine (a) how much your facility spends on patient handling injuries annually; (b) an indirect cost multiplier to cover additional costs associated with injuries (such as temporary staffing and overtime, turnover, and reduced productivity); (c) the projected cost of your SPHM program (including initial investment in equipment and installation, operation, maintenance, and training); and (d) the percentage reduction in related injury costs you anticipate seeing over time as a result of your SPHM program.[4] (*See* Sidebar 2, above, for more on these programs.)

**STRATEGY** **Develop and adopt site-specific SPHM processes and policies.** Put your best practices in writing, including a policy of "no lifting" to dissuade staff from manually handling patients.[5]

**STRATEGY** **Incorporate VHA algorithms into your program.** Download them from http://www.tampavaref.org/safe-patient-handling/SPH.zip (Enclosure 5-03) for help guiding staff in proper SPHM techniques.

**STRATEGY** **Build your SPHM program team carefully.** Allocate time and resources to support a team consisting of caregivers (at least 50% participating), managers, and at least one maintenance worker who is not a manager.[5] "Caregivers are the ones with the best knowledge of the job, the tasks of greatest concern, and the type of solutions that will be accepted by the employees. Caregivers should come from different departments and shifts and should be responsible for routinely performing patient handling activities," says Orr. "The managers chosen must be respected by both management and the caregivers." In addition, managers and caregivers must be able to focus on SPHM issues.

**STRATEGY** **Select SPHM equipment carefully.** Involve employees in the selection of this equipment.

**STRATEGY** **Train employees on your SPHM program.** Ensure that employees understand their roles in the program.

**STRATEGY** **Encourage early reporting.** Employees should promptly report injuries/MSDs, MSD management, and SPHM program evaluation.

## Sealing the deal on safety

If you need further incentive to create and enforce an SPHM program in your organization, think about these questions: What are the alternatives? Are those alternatives viable, affordable, and acceptable in the industry?

Orr says that effective SPHM programs provide a cost savings to hospitals—not an expense. "These programs historically have a great return on investment, including patient benefits like bed sore prevention, with an estimated annual rate of return of 35%, on average," says Orr.

## Sidebar 3. Joint Commission Standards Related to Patient Handling, Lifting, and Moving

- **EC.03.01.01**—Staff and licensed independent practitioners are familiar with their roles and responsibilities relative to the environment of care.
- **EC.04.01.01**—The hospital collects information to monitor conditions in the environment.
- **EC.04.01.03**—The hospital analyzes identified environment of care issues.

Finally, remember that The Joint Commission promotes a culture of safety in its requirements. Its hazard assessment provision requires hospitals to identify areas of risk and develop a plan to mitigate the risk. In addition, several Environment of Care standards espouse best practices that foster a safer SPHM environment (*see* Sidebar 3). "Joint Commission surveyors also look at the OSHA log and see injuries associated with patient handling as a risk," Orr notes. "Implementation of an effective SPHM program is a good way to address that risk." EC

### References


1. US Department of Labor, Bureau of Labor Statistics. Frequently Asked Questions (FAQs). Accessed July 5, 2017. https://www.bls.gov/iif/oshfaq1.htm#q16.
2. US Department of Labor, Bureau of Labor Statistics. 1 BLS Table R8. Incidence Rates for Nonfatal Occupational Injuries and Illnesses Involving Days away from Work per 10,000 Full-Time Workers by Industry and Selected Events or Exposures Leading to Injury or Illness, Private Industry, 2014. Accessed July 5, 2017. https://www.bls.gov/iif/oshwc/osh/case/ostb4374.pdf.
3. Facility Guidelines Institute. Patient Handling and Movement Assessments: A White Paper. 2010 Health Guidelines Revision Committee Specialty Subcommittee on Patient Movement. Accessed July 5, 2017. https://www.fgiguidelines.org/wp-content/uploads/2015/08/FGI_PHAMA_whitepaper_042810.pdf.
4. The Joint Commission. Improving Patient and Worker Safety: Opportunities for Synergy, Collaboration and Innovation. Accessed July 5, 2017. https://www.jointcommission.org/assets/1/18/TJC-ImprovingPatientAndWorkerSafety-Monograph.pdf.
5. Stenger K, Montgomery LA, Briesemeister E. Creating a culture of change through implementation of a safe patient handling program. *Critical Care Nursing Clinics of North America*. 2007;19(2):213–222.
6. Occupational Safety and Health Administration. Safe Patient Handling Programs: Effectiveness and Cost Savings. Accessed July 5, 2017. http://www.osha.gov/Publications/OSHA3279.pdf.
7. Tampa General Hospital. 2013 update to data that appeared in Kutash M, Short M, Shea J, Martinez, M. The lift team's importance to a successful safe patient handling program. *Journal of Nursing Administration*. 2009;39(4):170–175.
8. Knoblauch MD, Bethel SA. Safe patient-handling program "UPLIFTS" nurse retention. *Nursing*. 2010;40(2):67–68.
9. Owen BD. Preventing injuries using an ergonomics approach. *AORN Journal*. 2000;72(6):1031–1036.
10. Owen BD, Keene K, Olson S. An ergonomic approach to reducing back/shoulder stress in hospital nursing personnel: A five year follow up. *International Journal of Nursing Studies*. 2002;39:295–302.
11. Pellino TA, Owen B, Knapp L, Noack J. The evaluation of mechanical devices for lateral transfers on perceived exertion and patient comfort. *Orthopaedic Nursing*. 2006;25(1):4–10.
12. Zhuang Z, Stobbe TJ, Collins JW, Hsiao H, Hobbs GR. Psychophysical assessment of assistive devices for transferring patients/residents. *Applied Ergonomics*. 2000;31(1):35–44.
13. Howard N. Patient handling: Fact vs. fiction. *American Nurse Today*. 2010;5(7):32–34.



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An OSHA Cooperative Program


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**Clarifications and Expectations: Understanding Key Changes to the Life Safety Standards**
*(continued from page 6)*

The provisions of LS.02.01.30, EP 14 are very limiting. A better solution is to install automatic shutters at the opening. An alternative would be to create an anteroom, in which the corridor opening would be protected by the second door of the anteroom into the laboratory or pharmacy.

The air movement design described in LS.02.01.30, EP 15, has been prohibited for many years and should not be an issue. The condition described involves conditioned air being introduced at one end of the corridor and circulating to the other end of the corridor and then being returned or exhausted. This is different from using the interstitial space above the ceiling as a return plenum (see LS.02.01.30, EP 22). The note to EP 7 clarifies that incidental air may be used between rooms and corridors as part of balancing airflow in the building. EC

## Standards Connection

**LS.02.01.30, EP 15**

Corridors serving adjoining areas are not used for a portion of an air supply, air return, or exhaust air plenum.

**Note:** *Incidental air movement between rooms and corridors (such as isolation rooms) because of the need for pressure differentials in hospitals is permitted. In such cases, the direction of airflow is not the focus for this element of performance. For the purpose of fire protection, air transfer should be limited to the amount necessary to maintain positive or negative pressure differentials. (For full text, refer to NFPA 101-2012: 19.5.2.1; NFPA 90A-2012: 4.3.12.1; 4.3.12.1.3.2)*