How to Use This Toolkit

Contents

Introduction

The development of this toolkit arose in response to the need for guidance and tools to help hospitals and other health care entities in Nevada address the incidence of health care worker (HCW) injuries related to manual patient handling and the associated costs to staff, patients and the health care organizations. ***Refer to Table i.***

There is considerable evidence to guide hospitals and other healthcare organizations in mitigating patient handling related injuries by implementing safe patient handling and mobility (SPHM) programs that include the use of mechanical patient lifts and assistive aids.

However, it was determined that a *single repository* of freely accessible information offering a detailed step-by-step guide on developing, implementing, and maintaining a cost-effective SPHM program would be beneficial for healthcare organizations in Nevada.

Nevada Hospital Association convened a SPHM advisory committee with representatives from over 20 hospital organizations of varying size, some of whom also offered long term care and home health services in Nevada. The committee assisted in defining the toolkit's scope at the start of development.

Tools and methods presented in this toolkit are founded on comprehensive review of existing safe patient handling related literature from the US and from other countries where SPHM has been thoroughly researched and implemented. The toolkit incorporates evidence-based best practices as well as relevant standards and guidelines, including those established by the American Nurses Association's (ANA) Safe Patient Handling and Mobility Interprofessional Standards Across the Care Continuum, the Occupational Safety and Health Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH) and other professional health care and safety-related associations. Finally, the author leveraged her extensive background supporting numerous health care facilities in the development, implementation, and evaluation of SPHM programs.

The toolkit is intended to complement the following renowned safe patient handling and mobility publications:

- The American Nurses Association Safe Patient Handling and Mobility Interprofessional Standards Across the Care Continuum 2nd edition (2021). https://www.nursingworld.org/nurses-books/safe-patient-handling-and-mobility-2nd-edition2/

The eight evidence-based standards detailed in this publication guide development, implementation, and evaluation of an SPHM program and are incorporated throughout the toolkit. The elements of the ANA SPHM standard that correspond with SPHM program elements and sections in this toolkit are presented in ***Section 1***, ***Appendix B***.

- The Patient Handling and Mobility Assessments (PHAMA) (2nd ed.) Matz M, Celona J, Martin M, McCoskey K, Nelson GG. Facility Guidelines Institute (2019). https://www.fgiguidelines.org/wp-content/uploads/2019/10/FGI-Patient-Handling-and-Mobility-Assessments_191008.pdf

  This document details essential design criteria for supporting SPHM in healthcare facilities together with supplemental information that is referenced within the toolkit.

Purpose and Structure of the Toolkit

The purpose of this toolkit is to provide guidance with practical tools, resources, and information that can be used by hospitals, and other health care settings, to develop and sustain effective safe patient handling and mobility (SPHM) programs.

The contents aim to provide a step-by-step approach to developing a *new* or assessing and enhancing an *existing* SPHM program.

The toolkit will assist health care leadership, SPHM program coordinators or managers, SPHM committees and other stakeholders to:

- Evaluate the SPHM program and individual SPHM practices at their facility or within their organization, against current best practices to prevent staff and patient harms associated with manual patient handling.
- Identify a customized and targeted strategy to develop, implement, evaluate, and sustain a new SPHM program or enhance an existing program.
- Identify and engage stakeholders and enhance the culture of worker and patient safety.
- Enhance your SPHM program and policy by establishing processes that support patient safety initiatives such as fall prevention and early mobility.

This toolkit also serves as a resource for individuals new to SPHM who have responsibilities in program development and management to gain information about SPHM.

The toolkit is offered as a non-prescriptive guide to SPHM program development. The tools, resources, and guidance provided are designed for use in interprofessional environments and with various patient populations, including large or small hospital facilities, outpatient care areas, community settings, and home settings where patients require assistance with mobility.

They can be customized as needed to align with an organization's culture, resources, patient demographics and specific handling and mobility needs, physical environment, staff mix, and existing SPHM-related experience.

Detailed information about SPHM needs for specific patient populations, including patients of size or pediatric patients, is not included. However, ***Section 10*** provides SPHM-related information and resources for these groups and for non-hospital settings.

What This Toolkit is Not

The focus of this toolkit is SPHM program development. Detailed guidance regarding the application and instruction for use of SPHM technology is not included.

The categories of SPHM technology presented in the toolkit are not exhaustive. Information provided about SPHM technology serves as a *guide* for choosing suitable SPHM technology for a variety of care settings.

It is essential to consult the manufacturer's instructions and equipment manuals when selecting, utilizing, and maintaining SPHM technology. Caregivers must receive proper training in the use of all SPHM technology.

Toolkit Structure

OSHA's evidence-based strategies for management of occupational ergonomics, safety, and health programs, along with the ANA SPHM standards, form the foundation of the comprehensive approach described in this toolkit for developing a multifaceted SPHM program.

A process improvement approach that applies to the principles of high reliability and change management, as recommended by organizations including the Agency for Healthcare Research and Quality (AHRQ) and the International Institute for Healthcare Improvement (IHI), is incorporated into comprehensive program development and implementation strategies.

The toolkit is organized into sections and outlines a structured approach to SPHM development and implementation.

Sections 2-8 reference a set of tools that support the content and activities presented. Tools are downloadable and provided in several formats (e.g., Microsoft Word, Excel, and/or Adobe PDF), so that they can be used, and/or customized as needed.

Reference and resource materials relevant to the content of each toolkit section are also provided. Note that some resources and articles cited were published more than ten years ago. Despite their publication date, these materials have been included because they continue to provide valuable and relevant information applicable to current practices.

Tool i. *Safe Patient Handling and Mobility (SPHM) Program Development, Implementation & Evaluation: Suggested Sequence of Activities*, provides an overview of program steps in a flow chart format.

Quick Tip

Although this toolkit offers a step-by-step *(Tool i)* approach to organize your SPHM program implementation efforts, program steps are not always sequential and are often interdependent. When using a *continuous improvement approach* to program management you may need to develop, implement, evaluate, and enhance some solutions and processes concurrently.

It is recommended that you (together with your SPHM committee), review the entire toolkit before starting to plan your approach to implementing an SPHM program. This allows you to determine which sections of the toolkit are more relevant to your efforts, depending on what SPHM program elements may already exist and are effective at your facility.

Consider all phases of SPHM program planning and implementation collectively within the context of a systems approach.

Safe Patient Handling and Mobility – How to Use This Toolkit

The following is an outline of the Toolkit contents and steps to developing, implementing, and sustaining an SPHM program.

Section 1. Understanding SPHM.

This section offers an introduction to SPHM and describes:

- Safe Patient Handling and Mobility (SPHM) and its significance for healthcare workers, employers, and patients.
- The risks associated with manual patient handling and the supporting evidence and benefits of using SPHM to mitigate these risks.
- Relevant legislation, standards, and guidelines.
- Strategies for implementing and sustaining effective SPHM programs.

Section 2. Getting Started

Defines the need to develop a SPHM program or to enhance an existing program

Step 1. Review the best practices for preventing patient handling-related injuries and related regulations and standards and collect baseline incident/injury and cost data related to patient handling injuries.

Step 2. Analyze data collected to identify and prioritize units, departments, and employee groups, with higher risk of exposure to patient handling; and the nature, severity and cost of injuries associated with patient handling. Begin to identify hazards, overall risks & program elements that need to be addressed.

Building the SPHM Program Foundation & Management Structure

Step 3. Enlist support of senior leadership to develop a SPHM program plan that will support organizational goals related to delivery of safe, quality care to patients and providing a safe work environment for health care workers.

Step 4. Identify a program champion or executive sponsor, and a program coordinator, and form a multidisciplinary SPHM committee.

Step 5. Educate the committee about the scope and risk related to manual patient handling in health care, the components of successful SPHM programs, the proposed approach to addressing SPHM at your facility and function of the committee. Develop the program vision and committee mission statements, and a draft project charter.

Section 3 Hazard Identification & Assessment

Step 6. **Determine the scope of the issue & program needs.**

Multiple methods are detailed such as conducting a gap analysis, employee and manager surveys and site visits of priority units/departments where high-risk patient handling tasks are performed.

Step 7. Analyze and prioritize survey and site visit data.

A process to prioritize areas of concern/risk, program needs and gaps, and where SPHM program efforts are to be directed overall is defined.

Section 4 Hazard Control & Program Plan Development

Step 8. Develop solutions to address and control hazards.

Defines how to choose SPHM technology and program and process elements that will effectively address a facility or organization's specific SPHM needs.

Step 9. Create a communications plan, education and training plan, and SPHM policy

These program elements are essential to facilitate successful program implementation and active engagement of all stakeholders who are involved with or affected by it.

Step 10. Complete the draft SPHM program plan

This includes defining strategic and tactical elements to support the proposed approach to implementing SPHM program that meets established objectives and defining specific measurable goals for the program, return on investment strategies, and a detailed plan for program implementation.

Step 11. Obtain approval of the SPHM plan and policy from senior leadership

Step 12. Finalize the SPHM program plan and policy

Section 5. Hazard Control and Prevention - SPHM Solutions

Details SPHM technology solutions and SPHM patient mobility assessment protocols that can be used to mitigate risks associated with high-risk patient handling tasks and promote safe and progressive early mobility for patients.

Section 6. Education and Training

Describes how to develop and implement SPHM an Education and Training program.

Section 7. Program Implementation

Step 13. Implement the SPHM program

Details implementation strategies including approaches to pilot testing program activities; and selecting, purchasing, and installing SPHM technology. Incident reporting, response, and management program components are also discussed.

Section 8. Program Evaluating

Step 14. Evaluate the SPHM program

Effective evaluation of program implementation strategies, outcomes and processes using multiple approaches are discussed.

Section 9. Program Improvement & Sustainability

Step 15. Sustain the SPHM program

Strategies related to sustaining each core element of an SPHM program are reviewed.

Section 10. Resources

Extensive collection of articles and downloadable resources designed to support the development, implementation, and ongoing maintenance of Safe Patient Handling and Mobility (SPHM) programs across diverse healthcare environments.

Why SPHM Programs are Needed

Work-related musculoskeletal disorders (WMSDs) associated with manual transferring, repositioning, lifting, and mobilization of patients are a leading cause of injury and disability for health care workers in all areas of health care in the US.

Nursing aides, nurses, emergency medical workers, rehabilitation professionals such as physical therapists, radiology technicians, and home care and personal aides have the highest rates of injury associated with manual patient handling.

Unfortunately, specific injury and cost data related to overexertion related injuries such as WMSDs from lifting patients in Nevada healthcare facilities is not available. According to 2020 occupational injury data reported by the Nevada Department of Business & Industry Industrial Relations (DIR), *overexertion* accounted for the *highest rate* of injuries resulting in days away from work among healthcare practitioners, technical occupations, and healthcare support roles within Nevada's private sector. In 2020, healthcare support occupations had the *fourth highest* rate of sprains and strains resulting in days away from work among all occupations in private industry in Nevada.

WMSDs can affect the physical and psychological well-being of healthcare workers and may lead to the end of their professional careers. WMSDs can lead to increased absenteeism, burnout, turnover, lower efficiency, and higher workers' compensation costs for employers.

Patients may not receive essential care such as repositioning in bed and ambulation when HCWs must perform these tasks manually leading to a risk for pressure injuries and falls. Manual handling can also cause pain, skin tears, bruising, and compromise patient dignity.

The true costs of patient handling related injuries are likely much worse than currently realized due to high rates of underreporting of work-related injuries and illnesses by HCWs.

Over 35 years of research supports that:

- The cumulative exposure to biomechanical risk factors such as forceful exertion and the awkward and static postures required to manually handle non-mobile patients, plays the most significant role in development of low back pain and injury and
- Training HCWs to use 'proper' body mechanics and manual lifting techniques has failed to prevent and reduce WMSDs associated with patient handling tasks.

Evidence-based research supports that SPHM interventions, which replace manual patient handling with safer methods guided by ergonomic principles, can significantly reduce the incidence and severity of WMSDs. These interventions include the use of mechanical and non-mechanical lifts and other assistive technology and ergonomics work practices to reduce the biomechanical demands on caregivers.

Successful SPHM programs require a multifaceted participatory approach, including support structures and change management strategies to facilitate the use of patient handling equipment and foster a culture of safety.

The implementation of SPHM programs has shown to decrease WMSDs, reduce workers' compensation costs, and improve job satisfaction and retention among healthcare workers.

Why SPHM Programs are Needed

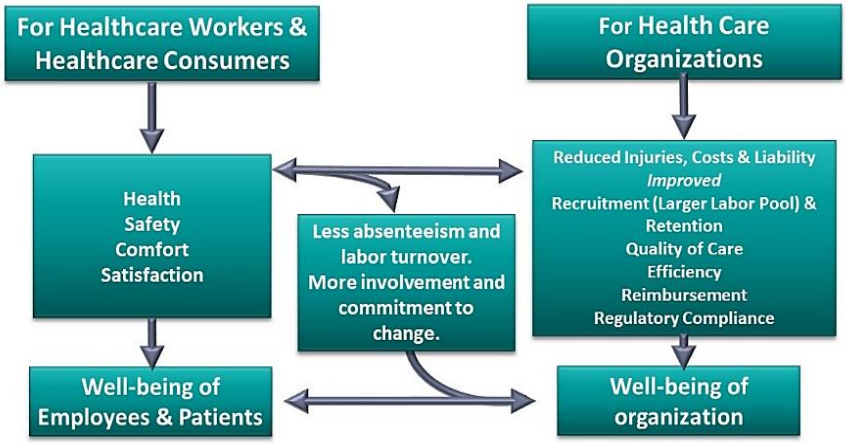
Additionally, SPHM programs benefit patients by improving mobility, comfort, and safety, and reducing the risk of health-facility acquired conditions such as pressure injuries and falls.

In summary, SPHM plays a critical role in safeguarding both healthcare workers and patients.

As the patient population ages and develops complex conditions affecting mobility, protecting the health and safety of HCWs is essential for safe care. Rising rates of obesity, diabetes, and related illnesses increase injury risks for both staff and patients.

The integration of SPHM programs and technologies within healthcare systems enables organizations to meet this increasing need and to foster safer working conditions, enhance patient outcomes, and realize substantial economic advantages.

Goals and Benefits of SPHM Programs



Source: Enos, 2012

Refer to Section 1 for more information about the benefits and elements of SPHM programs.

References

Enos, L. (2012). Evaluating a safe patient handling program: Beyond injury rates. Proceedings Safe Patient Handling and Mobility Conference 2012. VISN 8 Patient Safety Center of Inquiry and the Tampa VA Research and Education Foundation.

State of Nevada Department of Business & Industry, Industrial Relations. (2020). Table 16. Incidence rates 1 for nonfatal occupational injuries and illnesses involving days away from work 2 per 10,000 full-time workers by selected worker characteristics, major occupational group, and selected natures of injury or illness, private industry.

Table 18. Incidence rates for nonfatal occupational injuries and illnesses involving days away from work per 10,000 full-time workers by selected worker characteristics, major occupational group, and selected events or exposures leading to injury or illness, private industry. Retrieved from https://dir.nv.gov/BLS/Nonfatal_Occupational_Injury_Data/

Table i. *Why SPHM Programs are Needed.*

Common Terms Used in This Toolkit

For the purposes of this toolkit the following terms and definitions apply.

Caregiver is any person of varying clinical disciplines and educational/licensure levels, involved in the delivery of care to a patient that includes the tasks of moving, handling, and mobilization, across the continuum of care. In a home care setting caregivers may include family members.

Employees and ***Staff*** are terms that may be used interchangeably. An ***"employee"*** is defined as an individual who has a contract with an organization and is considered a member of its permanent workforce. The term ***"staff"*** refers to all individuals engaged in work for an organization, such as employees, contractors, and temporary workers.

Ergonomics is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system (IEA, ND). Ergonomics when applied in the occupational setting such as health care, is about designing work/management systems, physical environment, workspaces and equipment, and work processes to fit the physical and cognitive capabilities of workers with the goal of preventing or reducing worker injuries such as musculoskeletal disorders (WMSDs), worker error and improving work quality and operations efficiency.

High-risk patient handling tasks are tasks that can result in work-related musculoskeletal disorders (WSMDs) in caregivers. These tasks are considered as high-risk due to the prevalence and magnitude of postural stressors, such as awkward and static positions; biomechanical loading or physical strain on the spine and other musculoskeletal structures resulting from the exertion of high forces during activities like lifting, carrying, pushing, pulling, or gripping; frequency of repetitive motions particularly when combined with postural stress or forceful exertion; and prolonged exposure to these stressors or risk factors.

Musculoskeletal disorders (MSDs) are injuries or disorders of the musculoskeletal systems including muscles, nerves, tendons, ligaments, joints, cartilage, connective tissue, and spinal discs that can occur in the upper and lower limbs, neck, and back. Examples of MSDs include strains and sprains, tendonitis, bursitis, carpel tunnel syndrome, and spinal disc herniation.

Patient applies to all individuals receiving care in hospitals, outpatient, long term care, and community-based settings.

Patient of size (also known as a bariatric patient or individual of size) refers to a person whose height, weight, and body shape may require increased space and specialized SPHM technology for care and mobilization. For this toolkit this includes those individuals who have a body weight of 300 pounds, or greater body mass index (BMI) of 30.0 or higher (Matz et al., 2019).

Safe Patient Handling and Mobility (SPHM) involves applying ergonomic principles to minimize the risk of injury caregivers and patients during the physical lifting, transferring, repositioning and mobilization of patients, and to enhance the health outcomes of patients, and the financial wellbeing of healthcare organizations (ANA, 2021).

SPHM technology refers to the equipment, devices, and accessories that are used to perform high-risk patient handling and mobility tasks with the goal of minimizing the risk of injury to the patient and the caregiver. Examples include but are not limited to, powered overhead or ceiling lifts, mobile floor-based or full-body sling lifts, sit-to-stand lifts and aids, together with sling accessories, and friction reducing devices.

High-risk patient handling tasks, WMSDs, safe patient handling and mobility and ergonomics are further defined in ***Section 1*****.**

References:

American Nurses Association. (2021). Safe patient handling and mobility: Interprofessional national standards across the Care Continuum (2nd ed.). Silver Springs, MD: American Nurses Association. https://www.nursingworld.org/nurses-books/safe-patient-handling-and-mobility-2nd-edition2/

International Association of Ergonomics. (n.d.). What is ergonomics (HFE) https://iea.cc/about/what-is-ergonomics/

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