Predicted work-related injuries for nurses and home healthcare workers are on the rise given the many risk factors in the home environment and the escalating demands for home healthcare workers in the United States. Fortunately, safe patient handling and mobility programs can dramatically decrease injuries. Despite strides being made to promote safe patient handling and mobility programs in acute care, more can be done to establish such initiatives in the home care setting.

SAVING OUR BACKS

Safe Patient Handling and Mobility for Home Care

Audrey Beauvais, DNP, MBA, CNL, RN, and Lenore Frost, PhD, OTR/L, CHT

Introduction/Background and Significance

Nurses and healthcare workers have the greatest rate of nonfatal work-related injuries of any industry sector (U.S. Bureau of Labor Statistics, 2011). Research into the effect of work-related musculoskeletal injuries (WMSI) on nurses demonstrated that 52% of those surveyed complained of chronic back pain and 12% reported they left the profession permanently because of back pain (Nelson, 2006). A more recent study performed by the American Nurses Association (ANA) (2011) revealed that 62% of the 4,600 plus nurse participants rated developing a disabling musculoskeletal disorder as a top health and safety concern. Additionally, 56% of

nurses reported musculoskeletal pain was exacerbated by job tasks such as patient handling (ANA, 2011). Finally, 80% of those who reported WMSI continued to work despite their pain. The cost of such injuries varies, but one study estimated an average direct cost of $27,407 per claim and an even higher indirect costs of $54,804 to $82,206 per claim (Hunter et al., 2010).

Nurses and home healthcare workers are at risk for injury while caring for patients in their homes because of many factors such as uncontrolled home environments with small work spaces, patients' varied level of physical and cognitive ability, job tasks that put undue stress and strain on the worker's body from awkward postures and positions, repetitive tasks associated with patient care, increased patient acuity, an aging workforce, and increased prevalence of obesity (Durham, 2007; Hunter et al., 2010; Trossman, 2009). Predicted injury rates are on the rise given the many risk factors in the home environment and the escalating demand for home healthcare workers in the United States. The U.S. Bureau of Labor Statistics (2011) estimated the number of home healthcare worker positions will increase by 48% from 2012 to 2022 partly because of the increasing number of chronic conditions, such as diabetes and obesity, and need for healthcare services for the baby boomers.

Traditional Manual Patient Handling

Numerous studies determined that traditional manual patient handling (TMPH) training programs that promote proper body mechanics as the best method and most effective strategy to prevent and/or decrease healthcare worker injuries did not decrease injury incidence (ANA, 2011; Waters et al., 2007). With injuries on the rise, researchers suggested that traditional programs were based on theoretical principles that did not translate well to real-life situations. They suggested a patient's physical and cognitive status had the propensity to fluctuate without notice and healthcare workers were not able to maintain the "proper" body mechanics and forced them into awkward postures that had the potential to put undue stress and strain on the body (Darragh et al., 2009; Nelson & Baptiste, 2006; Waters, 2007). The National Institute of Occupational Safety and Health (NIOSH) has added that healthcare workers should not lift more than 35 pounds, under optimum ergonomic conditions (ANA, 2013; Waters, 2007). The ANA is taking this one step further by advocating for policies and procedures that will lead to the elimination of all manual patient handling (ANA, 2013).

Safe Patient Handling and Mobility

Safe patient handling and mobility (SPHM) programs have evolved due to the extensive research performed over the past 3 decades. SPHM programs dramatically decreased healthcare worker injuries (ANA, 2013). Some reports stated that SPHM programs decreased the occurrence of healthcare worker injuries anywhere from 30% to 95% (Hospital Employee Health, 2007; Veterans Health Administration and Department of Defense, 2001). No one solution can solve the epidemic of injuries, but rather multiple solutions are needed to control the growing number of WMSI associated with patient handling (Nelson, 2006; Nelson & Baptiste, 2006; Waters, 2007). Researchers from the ANA, NIOSH, and the Veterans Health Administration analyzed patient handling from an ergonomic perspective and developed three categories of controls required for SPHM programs to be effective: engineering, administrative, and behavioral (Nelson & Baptiste, 2006).

Engineering Controls

Nelson (2006) referred to engineering controls as modified work environments and job tasks and suggested using low and powered tech equipment to handle, position, and move patients. The different types of equipment are available in various forms and are used to assist the patient, the healthcare worker, and caregiver during patient handling tasks. A list of equipment is provided below but is not inclusive. Not all equipment is created equally as there are a wide range of quality, features, extras, and price points (Benson & Hallum, 2003). The authors of the article are not endorsing any products but rather listing equipment for the readers' review and evaluation. Descriptions are provided for those products that are relatively new to the industry. It is imperative that healthcare workers are trained in the appropriate use of equipment.

Standard low-tech equipment:

- Gait belts with handles,
- Transfer slide boards,
- Friction reducing slide sheets,

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- Manual standing aids (floor-to-ceiling pole, hand rail, trapeze bars over bed, etc.),
- Shower chairs/benches, and
- Raised toilet seats (convertible commodes).

Powered tech equipment:

- Height-adjustable beds and stretchers: These beds and stretchers come in various styles. The healthcare workers should be trained in the different types to best decide what is most appropriate for the patient and caregiver. Some stretchers are equipped with lateral slides and the ability to change position from lying to sitting.
- No-lift bed–wheelchair transfer system: This is a new innovation that allows patients to transfer from a hospital-type bed to a wheelchair in approximately 90 seconds with no manual lifting and only minimal assistance from a single caregiver (NextHealth, 2011). The caregiver and home healthcare worker can operate the transfer with a handheld device. The bed can reposition a patient with the touch of a button. The system has a shower chair with commode access.
- Ceiling-mounted lifts with various types of slings: This is a motorized ceiling tract system with a sling attachment. The track is installed in one or multiple rooms depending on the layout of the home. The purpose of a multiple room track system is to allow the patient to move from room to room without having to transfer multiple times.
- Portable floor lifts with various types of slings: Floor lifts are either manual or powered. Powered lifts are preferable.
- Powered air-assist inflatable transfer systems: Inflatable systems are positioned under the patient when deflated, and inflated to bring the patient to a different surface or position.

Administrative Controls

Nelson (2006) determined administrative controls to be the organization's no-lift or minimal lift patient handling policies and procedures. Researchers determined the most effective controls were developed and instituted from the top down and required a collaborative effort among all workers at all levels (Nelson, 2006). Policy and procedures vary between facilities and are dependent on patient population and funding.

Administrative controls:

- Establish type of program (no-lift, zero-lift, minimal lift, lift teams),
- Write SPHM policies and procedures for home care,
- Policy and procedure staff training,
- Procure access to appropriate equipment for home use,
- Train all staff on equipment use, and
- If possible, minimize multiple dependent patient caseloads.

No-lift, zero-lift, minimal lift, and lift teams are types of policies, which suggest that TMPH techniques should be avoided in all situations (Charney et al., 2006; Nelson, 2004; Nelson & Baptiste, 2006). This strict definition proved to be difficult to institute and has been modified such that policies may state TMPH techniques are to be avoided at all times except in emergencies. This being said, care in the home poses a unique set of challenges in that home care agencies may not have SPHM policies and may not have access to the high-tech equipment found in inpatient facilities.

Behavioral Controls

Nelson (2006) referred to behavioral controls as education and training of staff in the use of engineering and administrative controls. Researchers investigated staff compliance and injury rates in healthcare facilities that provide ongoing education and training in the use of patient equipment and concluded that ongoing education and training programs increased equipment use compliance and decreased the incidence of WMSI (Charney et al., 2006; Chhokar et al., 2005; Li et al., 2004; Nelson & Baptiste, 2006). Behavioral controls also included cultural change within the healthcare environment and researchers suggested that SPHM programs were successful if all workers

were educated to change behaviors and supported during the transition phase of the program.

Patient Handling in Home Care

More and more inpatient facilities are implementing SPHM programs as state regulations and laws are adopted and healthcare workers become more educated about SPHM practices. Despite strides being made to promote SPHM in the acute care setting, more can be done to establish such initiatives in the home care setting. While establishing these initiatives in home care, it is helpful to understand the benefits as well as barriers and misconceptions associated with SPHM implementation in this setting.

Benefits of SPHM programs in home care are:

- Improved quality of patient care;
- Increased patient mobility;
- Decreased patient falls, pressure ulcers, and skin tears;
- Improved patient and caregiver satisfaction;
- Increased healthcare employee satisfaction;
- Decreased work-related injuries;
- Decreased workers compensation; and
- Improved employee retention. (ANA, 2013)

Along with benefits, there are barriers and misconceptions to SPHM practices in home care:

- Third party coverage of equipment varies:
  - Semielectric beds that have adjustable height options are covered by insurance, but total electric beds are not.
  - Most high-tech lift equipment is not covered. That is to say, the electric mechanism of the lift is not. A low-tech lift (nonmotorized) may be covered if the person requires the assistance of more than one person to transfer from the bed to chair/wheelchair to toilet.
- Although some home care agencies purchase lift equipment and rent them to patients, it is a capital expense and some agencies may not have the budget to cover the initial investment.
- Liability concerns if the agency rents the equipment to the patient (Trossman, 2009).
- Patients and family caregivers may resist using equipment and/or will be inconsistent with use (Connecticut Nursing News, 2007).
- The misconception that equipment is impersonal (ANA, 2013).
- Home care workers may be resistant to change (Trossman, 2009).
- Home care workers may have a misconception that it "takes more time" to use equipment and it is easier just to manually move the patient (ANA, 2013; Nelson, 2006).
- Lack of or minimal SPHM education/training programs for home care staff (Connecticut Nursing News, 2007; Hospital Employee Health, 2007).
- Homes may not have adequate space to use/store floor-based equipment.
- Home environment is unpredictable and uncontrolled in terms of space and accessibility.
- The home environment is usually limited to one home care health worker at a time. Therefore, assistance in the use of equipment may not be available (Connecticut Nursing News, 2007).
- Laws preventing use of certain equipment in homes (Trossman, 2009).

Possible strategies and solutions for home care agencies to consider:

- Administrators begin to explore evidence-based SPHM literature, policies, and procedures and develop strategies to adapt them to the home care setting.
- Administrators begin to explore incidence of injuries among patients and employees to determine what job tasks pose the most risk.
- Administrators begin to facilitate a change in culture related to patient handling practices.
- Administrators designate a "program leader" to develop and implement a SPHM program.
- Program leader attends SPHM conferences.
- Program leader networks with other home care agencies to share program success and challenges.
- Program leader explores/develops/implements policies, procedures, and guidelines for SPHM practices with the total support of administration (Connecticut Nursing News, 2007).
- Develop a series of SPHM education programs for employees.
- Develop strategies to acquire equipment: contact vendors to explore the various types of equipment that are appropriate for home care; explore options to trial the equipment; organize a vendor event to

educate employees and other community home care agencies (Benson & Hallum, 2003).

- As more home care agencies implement SPHM programs, begin research efforts to add to the body of evidence that supports programs in home care.
- Advocate for equipment coverage from insurance agencies.
- Contact your state's Nurses Association to discuss what SPHM efforts are occurring in that particular state and be involved in the decision-making process that promotes SPHM programs in all areas of practice.
- Be a change agent (Durham, 2007).

Although there are barriers and misconceptions regarding SPHM programs, they should not deter home care organizations from their implementation as the benefits will most likely outweigh the challenges. The above strategies provide a framework to home care agencies contemplating implementation of SPHM programs.

Conclusion

Given the growing number of home healthcare workers as well as the rising number of work-related injuries in this industry, action should be taken to implement SPHM programs that have engineering, administrative, and behavioral controls. Implementing such a program will require a thoughtful, comprehensive, and personalized approach that includes procedural as well as cultural changes (Connecticut Nursing News, 2007). Although implementation of a SPHM program within the home care setting will be fraught with challenges, the benefit of protecting our home healthcare workers, caregivers, and patients is vital and will most likely improve the quality of care received and increase satisfaction of all involved. ☗

Audrey Beauvais, DNP, MBA, CNL, RN, is an Assistant Professor and Director, Undergraduate Nursing, Sacred Heart University, Fairfield, Connecticut.

Lenore Frost, PhD, OTR/L, CHT, is a Clinical Assistant Professor, Sacred Heart University, Fairfield, Connecticut.

Audrey Beauvais serves on the Advisory Board for NextHealth, a company that has launched the AgileLife Independent Living System for transfer assistance at home. Lenore Frost declares no conflicts of interest.

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Address for correspondence: Audrey Beauvais, DNP, MBA, CNL, RN, 5151 Park Ave., Fairfield, CT 06825 (beauvaisa@sacredheart.edu).

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