Moving into the Future: Promoting safe patient handling for worker and patient safety in Massachusetts hospitals

Report of the Massachusetts Hospital Ergonomics Task Force

Occupational Health Surveillance Program
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Hospital Ergonomics Task Force

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Executive Summary

Workers in Massachusetts hospitals, like workers in hospitals nationwide, are exposed to a wide range of workplace hazards and are at high risk of being injured on the job. Manually lifting, transferring, repositioning and mobilizing patients are high risk tasks routinely performed in the course of providing care. Musculoskeletal disorders (MSDs) that occur while carrying out these tasks are among the most common injuries experienced by hospital workers. These patient handling MSDs are costly. In addition to preventable suffering and direct health care costs, these injuries result in thousands of lost work days and other indirect costs borne by injured workers, hospitals and ultimately the health care system at large. Today our population is living longer and is heavier than in the past, increasing the musculoskeletal risks that health care workers face. The physically demanding patient handling tasks necessary for routine care of hospital patients can also pose risks for patients.

The Occupational Health Surveillance Program in the Massachusetts Department of Public Health (OHSP-DPH) has a long history of collaborating with hospitals and hospital workers to reduce the incidence of injuries due to needles and other sharp devices. In January 2012, prompted by finding consistently high rates of MSDs among Massachusetts hospital workers and state and federal policy initiatives to promote safe patient handling (SPH), OHSP-DPH built on this successful partnership and established the Hospital Ergonomics Task Force. DPH asked the Task Force to review the available evidence and develop recommendations to reduce the high rate of MSDs and related disability among workers in Massachusetts hospitals with a focus on MSDs associated with patient handling.

To address this charge, the Task Force reviewed new findings provided by DPH on patient handling MSDs among workers in Massachusetts hospitals and their associated costs, the research on effectiveness of interventions to reduce patient handling injuries among both workers and patients, and current practice guidelines. It also examined policy initiatives to promote SPH in other states and at the federal level. Informed by this review as well as their own experiences, the Task Force members worked to define essential elements of effective and sustainable hospital SPH programs. The Task Force also collaborated with DPH to conduct a survey to learn more about the current status of SPH programs and practices in DPH licensed hospitals. Based on all of these inputs, the Task Force developed recommendations to reduce MSDs associated with patient handling among Massachusetts hospital workers. These recommendations are directed not only to DPH but to hospitals and other stakeholders with roles to play in improving worker and patient safety.

Findings

The Burden of Work-Related MSDs Associated with Patient Handling Is Significant

- According to Bureau of Labor Statistics estimates, during 2004-2011, more workers were injured in Massachusetts hospitals than any other industry. The large number of injuries may not be surprising given that the hospital industry is the largest industry in the state, employing approximately 6% of the Massachusetts workforce. However, the rate of injury

among Massachusetts hospital workers was also high – over double that for workers in all industries.

- MSDs were among the most common injuries experienced by Massachusetts hospital workers, accounting for half of all injuries resulting in days away from work. Patient handling was the leading cause of MSDs among hospital workers.

- During 2004-2011, the rates of all MSDs and of MSDs associated with patient handling were consistently higher among workers in Massachusetts hospitals than the comparable rates for workers in hospitals nationwide. While there are a number of possible explanations for this marked difference in rates (e.g., better reporting, varied options for modified duty, higher underlying risk), these findings highlight that patient handling MSDs are an important public health problem in Massachusetts that needs to be addressed.

- In 2010, an estimated 1,000 workers in Massachusetts hospitals suffered patient handling MSDs that resulted in lost work time. Close to 70% of these workers lost at least five days, with 30% losing at least a month. It is conservatively estimated that in 2010, Massachusetts hospital workers lost at least 21,500 days of work as a result of patient handling MSDs.

- According to data from the Massachusetts Department of Industrial Accidents, during 2008-2010, an average of 683 workers' compensation claims for patient handling MSDs resulting in five or more days of lost work were filed by Massachusetts hospital workers each year.

- The rate of patient handling MSDs for workers in acute care hospitals was almost double the rate for workers in non-acute care hospitals.

- Rates among workers in acute care hospitals increased with hospital size although there was large variation in rates within hospital size categories.

- Direct and indirect costs of patient handling injuries among health care workers are substantial. Data on the costs of patient handling MSDs in Massachusetts are extremely limited. However, the large number of lost work days from these injuries highlights not only their severity and impact on health care workers but also the substantial monetary costs to hospitals.

Safe Patient Handling Interventions Are Effective

- Multiple studies have found that comprehensive safe patient handling (SPH) programs involving use of equipment to minimize manual handling of patients have proven successful in reducing the frequency and severity of worker injuries and associated costs.

- Use of equipment for patient handling is central to these SPH programs. However equipment alone is not sufficient. Comprehensive programs are needed to support use of this equipment and sustained attention to SPH over time. Management commitment and worker involvement are essential to program success.

- While there are initial and ongoing costs involved in implementing a SPH program, a growing body of scientific evidence indicates that the benefits gained from comprehensive SPH programs outweigh the costs through reduction in workers' compensation and other costs, and improved patient outcomes. Both hospitals and long term care facilities have been found to recover initial investments in implementing SPH programs within 1 to 4 years through reductions in workers' compensation costs and lost and restricted workdays.

- SPH programs have been found to reduce risks of skin tears and patient falls occurring during manually assisted transfers. There is also a small but growing body of evidence that SPH programs reduce pressure ulcers and may improve patient functionality outcomes related to increased mobilization. More systematic research is needed on these topics.

- There is increasing recognition of the link between patient and worker safety in general and of the need for integrated approaches to protect workers and patients. This is underscored in the report *Improving patient and worker safety: Opportunities for synergy, collaboration and innovation,* published in 2012 by the Joint Commission. Similarly, according to a recent report from the Lucian Leape Institute, "Workplace safety is inextricably linked to patient safety."[1]

States and Professional Organizations Have SPH Policy Initiatives

- Nine states have enacted legislation requiring acute and/or long term care facilities to implement SPH programs to minimize manual handling of patients. All of these laws require comprehensive programs with multiple programmatic components including establishment of "minimal (manual) lift" or "no lift" policies, use of patient handling equipment, and training in SPH. Most also require facility wide patient handling hazard assessments and use of injury data to inform prevention and continuous quality improvement.

- A number of national organizations have introduced detailed guidance for developing comprehensive SPH programs or have outlined guidelines for safe work practices involving the handling or movement of patients. These include, among others, the Facility Guidelines Institute, the American Nurses Association, the Veterans Administration and the Association of Occupational Health Professionals (AOHP). The AOHP guidance was developed in collaboration with the Occupational Safety and Health Administration (OSHA).

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[1] Lucian Leape Institute (2013). Through the Eyes of the Workforce: Creating Joy, Meaning, and Safer Health Care. National Patient Safety Foundation. Available from URL: http://www.npsf.org/about-us/lucian-leape-institute-at-npsf/lli-reports-and-statements/eyes-of-the-workforce.

Comprehensive Safe Patient Handling Programs Have Essential Elements

Based upon review of the scientific evidence, existing state and federal SPH policies and published guidance on SPH programs, and informed by their own experiences, Task Force members identified essential components of effective, sustainable SPH programs.

Essential Elements of Comprehensive Safe Patient Handling Programs

- Management commitment
- Direct care worker involvement
- Statement of SPH policy
- SPH committee
- SPH needs assessment
- SPH equipment
- Patient functional mobility assessments
- Training
- Injury surveillance
- Assessment of program effectiveness

Some populations of patients present unique patient handling challenges that warrant special equipment and techniques. These include, among others, patients with disabilities, bariatric patients and patients with acute psychiatric conditions. Hospitals need to consider the patient populations served in developing their SPH programs to assure that there are appropriate equipment and procedures in place to meet the range of needs of patients and health care workers. All facilities should be committed to removing barriers and improving access for persons with special needs in order to provide the highest quality of care and treatment in an accessible environment.

Current SPH Policies and Programs in MA Hospitals Vary Significantly

- The survey of hospitals licensed by DPH revealed that most hospitals have taken steps to improve patient handling to protect worker and patient safety. However, much remains to be done. Massachusetts hospitals are in different stages of developing comprehensive SPH programs that minimize manual handling of patients, and there is an opportunity for hospitals to learn from each other, across service types, as they move forward.

- Overall, 44% (37) of the 88 responding hospitals reported having a written SPH policy in practice. Non-acute care hospitals were more likely to have a written SPH policy compared to acute care hospitals.

- Two thirds of the hospitals (57) had a committee or group working to prevent patient handling injuries while one fifth had neither a SPH policy nor a committee in place.

- Almost all hospitals had a protocol for the assessment of patient functional mobility and transfer needs on admission for inpatients. Only 62% (49) of hospitals had the same for outpatients.

- Almost all hospitals had systems for tracking injuries to workers associated with patient handling, yet in only 61% (54) of these hospitals were the data reviewed by the departments in which the injuries occurred.

Recommendations

The Task Force concluded that MSDs associated with patient handling among hospital workers are a significant public health problem that needs to be addressed. They adversely affect quality of life and result in substantial costs that further stretch an overburdened health care system. These MSDs are in large part preventable. Improvements in patient handling practices within our hospitals provide an important opportunity to pursue the "Triple Aim" of promoting the health and safety of both health care workers and patients, improving the experience of care, and, within a short time frame, reducing health care costs.

Based on its findings, the Task Force offers the following recommendations to promote SPH to improve both worker and patient safety in Massachusetts hospitals. These recommendations are offered with the understanding that reducing the risks associated with patient handling will take a collaborative effort of hospitals and hospital workers, government and other stakeholders. The Task Force recognizes that change takes time and resources, but strongly encourages organizations to move forward to establish priorities, objectives and timelines for meeting the recommendations outlined in this report.

Hospitals are strongly encouraged to:

1. Implement comprehensive and sustainable SPH programs to minimize manual lifting and mobilization and provide the patient handling equipment needed to protect workers and patients.

2. Design their injury surveillance systems to be able to distinguish incidents associated with patient handling and to record job title, department, and other variables that are potential indicators of risk.

3. Include in their SPH programs a timely process for employees to be able to communicate and resolve concerns about patient handling tasks that workers believe in good faith expose a patient or hospital worker to an unacceptable risk of injury. Workers should be informed about the process and protected so that they can raise concerns without fear of negative repercussions.

4. Incorporate physical infrastructure needs of the SPH program into the design and planning phase of both new construction and renovation of patient care facilities.

DPH is strongly encouraged to:

5. Collaborate with other state agencies as appropriate to produce an annual report on MSDs associated with patient handling among Massachusetts hospital workers, using available state data sources, to target statewide prevention efforts and monitor progress in reducing these injuries.

6. Continue to maintain a website that serves as a clearing house for useful resources on SPH and allows for sharing of lessons learned among hospitals and hospital workers.

7. Provide advice to hospitals regarding the collection and analysis of key data on patient handling incidents, including near misses, to inform ongoing injury prevention efforts.

8. Incorporate the Facility Guidelines Institute "Patient Handling and Movement Assessment" requirements in the design review and approval process for the construction or renovation for health care facilities.

9. Collaborate with other stakeholders (e.g., MNA, MHA) to hold periodic meetings bringing together staff involved in SPH programs from hospitals throughout the state to share information on SPH and discuss lessons from the field in implementing programs.

10. Issue guidance to hospitals to promote implementation of comprehensive SPH programs under its existing authority.

Additional recommendations:

11. An ongoing coalition of stakeholders should be established to promote awareness of SPH and effective injury prevention strategies, monitor progress in implementing these Recommendations, and identify evolving needs and priority research questions. DPH should initiate this effort.

12. Organizations providing risk management and accident prevention services to hospitals should provide assistance in developing and maintaining SPH programs.

13. All training programs for direct health care workers should include, as core curriculum components, education and training on SPH.

    A. Accrediting or certifying organizations should make competency in SPH a core criterion for approved academic programs
    B. Other training programs for direct health care workers, such as in-house hospital training programs and independent certificate programs, should incorporate SPH as a core training component.

14. Professional educators in field such as architecture, engineering, and other fields related to the design of health care facilities should examine their curricula to assure the inclusion of training on the physical infrastructure and functional requirements for SPH that need to be incorporated into building design.

The Task Force recognizes that workers and patients in other health care settings, for example, long term care and home care, face similar risks associated with patient handling and mobility. The focus of this Task Force was on hospitals, however, many of the findings and