

# Evidence-Based Practice Review

## White Paper

A contextual review of working programs and strategies for safe patient handling activities.



soteria

# Acknowledgements

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This white paper was prepared by the Nova Scotia Soteria Strains Working Group made up of members from Nova Scotia's District Health Authorities and The IWK Health Centre, the Workers Compensation Board of Nova Scotia, and AWARE-NS.

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## Executive Summary

Patient handling activities (which, for the purpose of this document refers to all tasks associated with assisting and moving patients such as lifting, transferring, repositioning and turning) can place health care workers at a high risk of musculoskeletal injury (strains and sprains), especially when the workplace does not have the administrative and engineering controls in place to reduce this risk.<sup>1</sup>

Past efforts to reduce the number of injuries related to manual patient handling activities, and to reduce the costs associated with these injuries, have almost invariably focused on trying to teach health care workers how to safely assist their patient.<sup>2</sup>

Research suggests that, to be successful, safe patient handling programs need to incorporate a wide range of elements. Well-designed, well-implemented safe handling programs have a real and significant benefit on patient safety and patient care outcomes.<sup>3,4</sup>

## Introduction

While literature reveals more than 35 years of evidence to support safer practice around patient handling, health care workers continue to rely on outdated, unsafe, patient handling techniques.<sup>5</sup> These practices are placing health workers in harm's way. Health care workers have been performing patient handling tasks without appropriate access to safe patient handling equipment since before the time of Florence Nightingale.<sup>6</sup> Often, they move patients and perform other care-related tasks even though they link these tasks to increased pain and discomfort because that is the only way they are able to provide adequate patient care.<sup>7</sup>

Musculoskeletal injuries (strains) are costly to healthcare organizations in lost time for the injured health care worker, replacement costs, increased workload to the care team, lack of staff or staff presenteeism. These costs ultimately impact the quality of patient care.<sup>8</sup> Also, there is evidence that effective safe patient handling programs overlap with, and contribute to the success of, patient care quality improvement initiatives such as prevention of patient falls, reduction of pressure ulcers, and increased patient satisfaction.<sup>9</sup>

## Past Efforts to Address the Issue

Traditionally, it has been accepted that training employees in proper body mechanics and safe patient handling would reduce the occurrence of injuries during patient handling activities. The research indicates that training alone does not reduce the risk or frequency of musculoskeletal injuries.<sup>3</sup>

Biomechanics research conducted by the National Institute for Occupational Safety and Health (NIOSH) has determined that 35 lbs. should be the weight limit for patient handling tasks. If an individual is to lift a patient or any part of the patient weighing in excess of 35 lbs., assistive devices should be used.<sup>10</sup>



### **Example**

If a patient weighing 200 lbs. requires assistance from a sitting to a standing position and can only assist partially (approximately 50% of their own weight), 100 lbs. remain to be lifted by two caregivers. Even if both caregivers could evenly distribute this weight, they are still required to lift 50 lbs. each (15 lbs. greater than the recommended weight limit); thus, these caregivers require some type of assistive equipment to assist with this transfer.<sup>10</sup>

Significant risk of injury is also present when staff are assisting patients to move individual limbs for tasks such as wound care.

### **Example**

A patient's leg weighs approximately 16% of their total body weight. A caregiver holding the leg of a 250 lbs. person while another caregiver attends to a heel dressing is supporting at least 39 lbs. of weight statically for several minutes. This weight exceeds the recommended weight limit and places the caregiver at risk of injury.<sup>10</sup>

## Evidence-Based Practices for Safe Patient Handling Programs

We conducted a thorough review of research that reported on the impact of various programs and/or sought to identify the elements required for successful safe patient handling program. Based on this review, the following elements should be included in evidence-based safe patient handling programs:

### **Senior leadership commitment**

Commitment must begin with senior leadership, be reinforced at all levels of an organization and become part of daily practice in Nova Scotia health care. Senior leadership commitment is required for ongoing support, funding and staffing to make patient and health care worker safety a priority. Evidence supporting senior leadership commitment also emphasizes the importance of commitment at all levels of the organization.<sup>2,11</sup>

### **No lift (or variant) policy and procedures with defined roles and responsibilities**

Policy and procedures must provide health care workers with a framework from which to work safely and a clear understanding of their role and responsibilities. Safe patient handling policies are already in place in many Canadian and International organizations.<sup>2,12,13</sup>

### **Unit-based peer leaders**

Unit-based peer safety leaders who actively promote safe patient handling practices are essential to the success of the program. Peer leaders have been shown to be an effective model for knowledge transfer and informal unit leadership. They provide support for health care workers, particularly when encountering objections from patient, families and colleagues.<sup>2,14</sup>



## Safety Huddles (After-Action Reviews)

Safety Huddles are based on After Action Review (AAR), a highly successful method of knowledge transfer that is used in high performing organizations, such as the United States Army. AAR is a method for transferring knowledge a team has learned from doing a task from one setting to the next.<sup>15</sup> This process moves unique knowledge that an individual holds into a group setting so that the knowledge can be integrated, understood by the whole team and used when individuals face similar circumstances.<sup>16</sup>

## Ergonomic workplace hazard identification and risk assessment

Unit specific assessment of high risk tasks and ergonomic risk factors is critical to ensuring that appropriate control measures are put in place to reduce risks to within acceptable limits. The hazard identification and risk assessment process includes identifying hazardous tasks, evaluating and analyzing risk, and redesigning difficult and demanding jobs.

Redesign priorities are

1. eliminate the high risk task
2. redesign high risk tasks using equipment and devices (floor/ceiling lifts)
3. improve high risk tasks through risk reduction equipment (friction reducing devices, gait belts, etc.).<sup>12,17,18</sup>

## Patient mobility/risk assessment tool

To ensure all patient handling activities are performed safely and consistently, a tool is required to assist health care workers assess a patient's mobility status. This can be accomplished through a focused patient history and physical assessment of a few key movements. This tool ensures that health care workers use the proper administrative and engineering controls to safely lift, transfer or reposition the patient, thus reducing the risk of injury to themselves, their co-workers and patients.<sup>2,17,19</sup>

## Patient handling aids and equipment

A wide variety of equipment exists so it is important to identify and match needs with equipment features. A defined process (hazard/needs assessment) should be created to assess the need for equipment, and to evaluate what equipment would best meet the needs. It is valuable to trial equipment before purchasing it to ensure that it meets the identified needs. A defined preventative maintenance schedule is critical to keeping patient handling equipment in optimal and safe working condition. It is important to identify departments or individuals responsible for inspection and maintenance of equipment.<sup>2,3,12,17,18,20,21</sup>

## Awareness, education and training

Health care workers should receive “hands-on” training with patient handling equipment. This should include how and when to use equipment as well as regular maintenance and inspection procedures. Health care workers must also be educated on the benefits and objectives of a safe patient handling program.<sup>3,4,12,13</sup>



## Monitoring and evaluation of health care worker competencies, training and performance

Safe patient handling policy and procedures are necessary and should be incorporated into daily practice as a professional competency for health care workers. Patient handling skills have been recognized as a necessary competency for providing safe patient care by organizations such as the Royal College of Nurses, the College of Registered Nurses of Nova Scotia, etc. Employers need to recognize the value of this competency and to ensure it is reflected in regular performance evaluations, competency assessment and training.<sup>17,18,22,23</sup>

## Evaluate program outcomes

Regular reporting is required to ensure that health care leaders have an understanding of the human and financial impacts of the program and its value to the organization.<sup>24</sup>

## Establish channels for stakeholders to provide feedback on the program

Many patients and families consider it a health care worker's job to manually lift a patient out of bed, transfer them into a chair, or reposition them in bed. Patients and families must be engaged and educated about the benefits and objectives of safe patient handling programs to help them understand that manual patient handling activities puts both the patient and health care worker at risk for injury. Health care workers, patients and families should be provided with opportunities to provide feedback, report concerns or provide information regarding any aspect of the program. This will allow for appropriate review or discussion of concerns and will provide an avenue for continuous improvement of the program.<sup>24</sup>

# Conclusion

The research cited in this paper supports our assertion that safe patient handling programs need to incorporate a wide range of elements if they are going to be successful at reducing associated workplace illness and injury.

Evidence suggests that organizations using (at the very least) the eleven best practice elements described above should experience a significant reduction in injuries and injury related costs. A sustainable injury prevention program will contribute to more efficient, effective and safe healthcare for health care workers and patients alike.

*See the White Paper - Business Case Rationale for more details.*



## References

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