

# No Unsafe Lift

*Workbook*



Cover and Section Break  
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## Purpose of this workbook

In 2002, Work Safe Alberta was established with the goal of reducing injuries to Alberta workers by 40%. While the majority of industries in Alberta made significant progress towards this injury reduction target, the Health Services Industry has improved more slowly. The majority of injuries for healthcare workers were musculoskeletal injuries related to patient handling. For healthcare organizations, this comes as no surprise. Patient handling tasks often present unexpected difficulties and movement that may increase the risk of overexertion for the caregiver.

Healthcare organizations have identified several challenges in trying to reduce injuries related to patient handling tasks. These include the following:



- » Lack of appropriate numbers and types of patient lifting devices.
- » Shortage of direct caregivers that may result in inadequate lifting or transfer practices.
- » Facility design issues that compromise the ability to provide proper ergonomic solutions to lifting and transferring tasks.
- » Reluctance of staff to employ mechanical lifting aids in patient handling tasks.
- » Reluctance of patients or their families to support the use of lifting devices.
- » Inadequate training of caregivers in biomechanics.
- » Lack of communication about the status of patients (requirements for specific lifting/transferring strategies).
- » Higher acuity patients requiring a higher level of care.
- » Increased weight of many patients, impacting the ability to use standard lifting devices.

The “No Unsafe Lift ” workbook is designed to provide a provincial framework for healthcare employers to develop and implement comprehensive musculoskeletal injury prevention programs for their facilities. While the framework is broad in scope and does not focus solely on musculoskeletal injury prevention, the recognition of the key role of overexertion injuries deserves concentrated effort and resources. This framework identifies critical components of a musculoskeletal injury prevention program to ensure all factors are optimized to prevent injuries.


In Alberta, we recognize the unique nature of employers in the healthcare industry. With challenges specific to the client population and varied organizational cultures, a musculoskeletal injury prevention program cannot be a “one size fits all” solution. Rather, awareness of the key features of an effective musculoskeletal injury prevention program will enable healthcare employers to tailor a program to meet their specific environments. This workbook is designed to provide a description of these key features, templates to enable an organization to customize its approach, and references to assist the organization in further study and program development.

There is an integral connection between the health and safety of healthcare workers and the quality of services they can provide. In these days, where the focus is on patient safety, it is worth noting that, to be effective, a culture of safety must encompass both the workers as well as the clients served in a healthcare environment.

## How to use this workbook

This workbook has been designed for you to use as a tool for reviewing your current musculoskeletal injury prevention program and/or developing or improving your program. For many organizations, some of the components described in this workbook are already well-established parts of their injury prevention program. For others, integrating many of these features into their current programs will provide significant benefits. This workbook is not meant to be prescriptive, but rather to present ideas, concepts, references and examples to assist you in developing, evaluating and maintaining your programs. The selection of the title “No Unsafe Lift ” reflects the flexibility that is necessary in a program that must take into account variations in risk, resources, patient assessments, and organizational culture. An organization committed to “No Unsafe Lift ” is committed to using professional judgement in the assessment of all factors that contribute to the safety of the task.

Section 1 of this workbook provides the reader with a brief review of the literature as it pertains to musculoskeletal injury prevention in the healthcare industry, with a particular focus on patient handling tasks.

Section 2 identifies the major features to be considered in the framework for a “No Unsafe Lift ” Program plan. These major features include:

- » Management Commitment – Policies and Promotion
- » Employee Participation
- » Coordination
- » Risk Assessment
- » Equipment
- » Biomechanical Considerations
- » Training
- » Communication
- » Area Design Consideration

Section 3 covers program requirements, including:

- » Preparation of a multi-year budget for the program,
- » Identification of timelines and accountabilities for program components,
- » Implementation and enforcement strategies,
- » Change management, and
- » Examples of outcome measures and program evaluation processes.

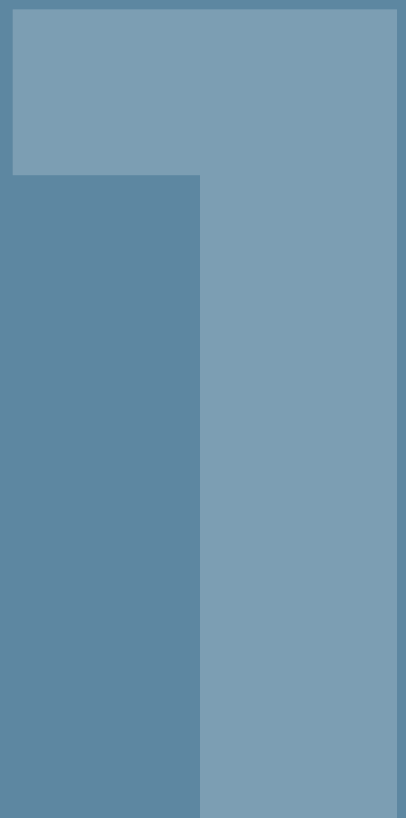
Each feature will include examples of options that address each of the features and templates to assist the participant in identifying/selecting desired program component details that are feasible and consistent with the organization’s culture. Periodically, material will include short self-assessment questions to help identify organizational issues.

Ideally, this workbook will be used by a program planning team from the healthcare organization. As any program of this nature requires the input and effort of many people and is multidisciplinary in nature, representatives from groups most directly impacted should be included on the planning team. These may include representatives from Human Resources, Education/ Training, Occupational Health and Safety, frontline patient care management, support services, and frontline workers. It may be useful to include others specific to functions in your organizations as well.

This workbook can be used by reviewing the material and completing the templates in the order in which they are presented, or sub-groups may choose to work on specific framework features. To obtain the maximum benefit, attempt to answer all questions and complete the templates for each section. These have been designed to guide you through program development and implementation planning.

# Section 1

.....  
A Brief Review of the Literature  
.....







## SECTION ONE – A Brief Review of the Literature<sup>1</sup>

There have been numerous reviews conducted to identify causes and solutions for the high prevalence of musculoskeletal injuries (MSIs)<sup>2</sup> in the healthcare industry sector. In a comprehensive review of “Evidence-Based Practices for Safe Patient Handling and Movement”, authors Audrey Nelson and Andrea S. Baptiste reviewed over 130 studies and papers to summarize evidence of successful interventions to reduce injuries to caregivers. Their findings indicate that strategies such as classes in body mechanics, training in safe lifting techniques, the use of back belts, and manual resident lifting procedures have not been successful in reducing resident-handling injuries, though they remain the most common interventions used in many long-term care organizations. “Although it is widely accepted that classes on body mechanics and/or training in lifting techniques prevent job-related injuries, thirty-five years of research reveal that these efforts have consistently failed to reduce the job-related injuries in patient care settings.” This comprehensive review paper suggests a need for a “major paradigm shift” towards evidence-based practices that incorporate the extensive use of lifting devices, improved resident/patient care ergonomic assessment tools, true “no lift” policies, effective and required training on the use of lifting devices, and the use of lifting teams where possible. The article also encourages the use of unit-based peer leaders and clinical tools (including algorithms and assessment tools).

An industrial hygiene approach considers the use of several levels of controls. Audrey Nelson and Andrea S. Baptiste suggest that evidence indicates effectiveness of engineering, administrative and behavioural controls. Engineering controls have been shown to be extremely effective in reducing risk at the source and creating a more permanent solution. Engineering controls reviewed include changes to the work environment, layout, and equipment (such as lifting devices, lateral transfer aids, or electric beds). Administrative controls discussed included the modification of jobs and procedures to incorporate more rest periods, job rotation and shift length adjustments, and training of workers to appropriately assess risk. Examples are a safe lift policy, resident assessment protocols and the use of decision trees, algorithms, etc. Behavioural controls included employee training in the proper use of lifting devices and the use of unit-based peer leaders.

1. Modified and adapted from a project document written by GMS & Associates, Ltd. for the Continuing Care Safety Association in September 2006 entitled “Musculoskeletal Injury Prevention in Alberta’s Long Term Care Workplaces Status of Programs, Issues and Recommendations”
2. Evidence-Based Practices for Safe Patient Handling and Movement, Audrey Nelson, Andrea Baptiste, *Online Journal of Nursing Issues* - September 2004; <http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Volume92004/Number3September30/EvidenceBasedPractices.aspx>

In “An evaluation of a best practices musculoskeletal injury prevention program in nursing homes”<sup>3</sup>, the authors conducted an extensive literature review and identified the following best practices that have been determined to be successful features of an effective musculoskeletal injury prevention program:

- » Mechanical lifting equipment and repositioning aids.
- » Training on the use of lifts.
- » Medical management program.
- » Written policy.

The authors designed a six year intervention trial in six nursing homes covering 552 beds and facilities ranging in size from 60 to 120 beds, and involving 1728 nursing personnel. Implementing a prevention program employing these selected best practices resulted in a decrease from 5.8 to 2.0 lost time injuries per 100 nursing personnel, and a decrease in total lost work days from 488 to 229. At this time, there was no decrease in other types of injuries in the facilities. Interestingly, the study also found that there was a decline in injuries associated with resident violence towards staff during resident handling. The authors suggested that “...using mechanical equipment to lift residents increases a resident’s comfort and feeling of security when compared to manual methods... The physical separation from the caregiver and the resident afforded by the use of a lift, particularly those with a known history of violence, could also explain the reduction in assaults on caregivers while using mechanical lifts.”

Many healthcare organizations have developed musculoskeletal injury prevention programs targeting the healthcare industry sector. In developing these programs, most have conducted an initial review of the literature to determine critical success factors. For example, a Lifting in Healthcare Task Force<sup>4</sup> collaborated with the Washington State Department of Labor and Industries to address the increasing frequency and severity of musculoskeletal injuries in healthcare organizations in the state. Their study included site visits, surveys, and interviews to learn about the issues, as well as identify barriers and successes in addressing the issues. The findings were consistent with those of other studies and included the following:

- » The meaning of “no lift” varied considerably from site to site, with no consistent understanding or application of the principles.

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3. An evaluation of a “best practices” musculoskeletal injury prevention program in nursing homes; JW Collins, L. Wolf, J Bell, B Evanoff; *Injury Prevention* 2004;10:206-211 [www.injuryprevention.com](http://www.injuryprevention.com)

4. *Lifting Patients/Residents/Clients in Healthcare*; Washington State 2005; Report to the Washington State Legislature House Commerce and Labor Committee January 2006.

- » Management commitment was often low, with inconsistent enforcement of policies and inadequate support for the program (through the provision of time, training, equipment, etc.). There was often little evidence of reinforcement or of consequences (unless a resident was injured).
- » Most staff in the nursing homes (80%) believed that more mechanical equipment would reduce the potential for injury; however, 50-60% felt this would require more help from co-workers and take more time to use this equipment.
- » There was an increased need for specialized equipment to handle obese residents.
- » Ceiling lifts have been shown to be cost-effective and well received by most nursing home staff. Older facilities presented barriers to the installation of ceiling lifts.
- » Positioning the slings under the resident is a physically demanding process, sometimes requiring awkward postures and forceful exertions. There has been a greater recognition of the value of leaving slings in place to reduce this effort.
- » Some facilities have expanded their program to include support staff rather than solely care giving staff.

Conclusions in this report were that the hazards of manually handling residents could be reduced by a program that includes:

- » Policies for risk assessment and control,
- » Having adequate equipment,
- » Having adequate staffing,
- » Ongoing resident handling training,
- » Management commitment,
- » Staff involvement, and
- » Incident investigation, follow-up and communication.

A survey in eight healthcare organizations which had implemented “zero –lift programs” (no manual resident lifting) was conducted by Dr. Arun Garg<sup>5</sup> at the University of Wisconsin – Milwaukee (sponsored by the National Institute for Occupational Safety and Health). This study reviewed the components of successful programs, particularly focusing on the participatory approach to the program development and implementation. Findings showed significant improvement in number of injuries, Workers’ Compensation Board (WCB) costs, lost work days and restricted work days.

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5. Long-Term Effectiveness of “Zero-Lift Program” in Seven Nursing Homes and One Hospital; Arun Garg; University of Wisconsin – Milwaukee; August 1999.

Data showed:

- » 62% decrease in patient transfer injuries, 32% decrease in all injuries.
- » 86% decrease in work days lost from patient transfers, 62% decrease in all lost work days.
- » 64% decrease in modified work days from patient transfers, 6% decrease in all work days lost.
- » 84% decrease in workers' compensation costs from patient transfers; 55% decrease in workers' compensation costs for the entire facilities.

This study also revealed intangible benefits such as older and pregnant nursing aids continuing to work longer, staff reporting less fatigue and pain following their shifts, improvement in employee morale, and improved patient care.

In the comprehensive Patient Care Ergonomics Resource Guide<sup>6</sup> developed in 2001 by the Patient Safety Center of Inquiry (Tampa, FL), Veterans Health Administration and Department of Defense, the authors reviewed many studies and made known the following “myths” about safe patient handling and movement by providing evidence that the facts DO NOT support these widely held beliefs:

» ***Education and training are effective in reducing injuries***

Twelve reviewed studies led to the conclusion that “traditional injury prevention programs based primarily on training and attempts to modify behaviour of workers have not demonstrated widespread success.”

The authors summarize that “There are several reasons why training alone is not effective, including the following: (1) body mechanics training is based on research that is not likely generalizable to nursing practice, (2) it is difficult for nurses to translate classroom content to direct patient care, (3) experts do not agree on what proper body mechanics include, and (4) manual patient handling tasks are intrinsically unsafe because they are beyond the capabilities of the general workforce.”

» ***Back belts are effective in reducing risks to caregivers***

Four studies were cited, including the extensive review by the NIOSH Back Belt Working Group, which indicate that there is no evidence that these belts are effective. “On the basis of available evidence, the potential effectiveness of back belts in reducing the occurrence of low back injuries remains unproven. There has been some concern that wearing a back belt may increase the potential for injury...” in that they may provide a false sense of confidence to the lifter which may lead to lifting more weight than they are capable of handling.

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6. Patient Care Ergonomics Resource Guide: Safe Patient Handling and Movement; Patient Safety Center of Inquiry (Tampa, FL), Veterans Health Administration and Department of Defence, USA, 2001

» ***Mechanical lifts are not affordable***

Nine studies reviewed indicate that the benefits (both financial and other) of having mechanical lifts balance or exceed their costs.

» ***Use of mechanical lifts eliminates all the risk of manual handling***

Human effort is always required to move, steady, or position the patient. In using some equipment, the resident must first be rolled over in order to insert a sling.

» ***High risk tasks in nursing are restricted to lifting patients***

Two studies cited identified the following stressful tasks:

“(1) transferring patient from toilet to chair, (2) transferring patient from chair to toilet, (3) transferring patient from chair to bed, (4) transferring patient from bed to chair, (5) transferring patient from bathtub to chair, (6) transferring a patient from chair lift to chair, (7) weighing a patient, (8) lifting a patient up in bed, (9) repositioning a patient in bed side to side, (10) repositioning a patient in a chair, (11) changing an absorbent pad, (12) making a bed with a patient in it, (13) undressing a patient, (14) tying supports, (15) feeding a bedridden patient, (16) making a bed while the patient is not in it.”

» ***If you buy equipment and devices for safe patient handling and movement, staff will use them***

Four cited studies indicated that even though equipment may have been purchased, there is a reluctance to use the equipment by many caregivers. The reasons for this include: equipment that is not user-friendly or patient-friendly, unstable equipment, lack of storage that would make the equipment easily available, and poorly maintained equipment.

» ***If you institute a no lift policy, nurses will stop lifting***

“In order to institute a no lift policy successfully, the infrastructure must first be shaped to support the policy, including the provision of sufficient quantities of appropriate technological solutions.” Many organizations that have tried to institute no lift policies have failed without this necessary support.

» ***Various lifting and handling equipment and devices are equally effective***

Three studies were cited that indicate that some types of equipment may pose increased caregiver injury. Examples given include differences in spinal cord loading provided by using different friction reducing devices, lifting devices requiring pumping resulting in shoulder strains, and some specialty mattresses that increase required exertion by caregivers.

» ***Nurses who are physically fit are less likely to be injured***

Twenty-two studies were cited that identified a variety of caregiver characteristics that affect risk. These included: level of fitness, obesity, genetics, muscular strength, age, stress, previous history of back injury, with confounding factors of drug/alcohol consumption and cigarette smoking. Observations at the Tampa VA Hospital indicated that a better predictor might be the social relationships on the unit. "...Nurses that were well integrated on a unit were able to secure assistance from peers easier and more quickly than staff members who were marginally accepted. In addition to staff who were not well-liked or respected by peers, other staff that had difficulty securing assistance included new staff and staff who floated to the unit. Once an injury occurred, staff that had positive relationships with their nurse manager was more likely to return to work sooner than staff with poorer relationships with management."

Many of these myths are held as beliefs in healthcare organizations.

In some cases, the "myths" are seen as fact, in others, they have proven to be untrue. In the development of a musculoskeletal prevention program, it may be important to recognize and discuss these assumptions early in the communication of a program.

The relationship of healthcare worker injuries to patient safety is being evaluated and openly discussed in the literature. With the increased imperative to improve patient safety, the understanding of the correlation of healthcare worker safety to patient safety has led to a call for greater resources to improve worker safety. In the November 2007<sup>7</sup> AAOHN Journal, the authors suggest that "high rates of injury are linked to the national nursing shortage and also to the high turnover rates experienced in both acute and long-term care facilities." An American Nurses Association website<sup>8</sup> article Safe Staffing/Patient Outcomes states "An area of more recent research is that of nurse fatigue and patient outcomes. As mandatory overtime plus the use of voluntary overtime became an issue for practicing nurses, the question arose for researchers as to the effect of prolonged nursing work hours and the impact fatigue "might" have on patients and the nurses themselves. Groundbreaking work by Dr. Ann Rogers, RN, PhD and Dr. Linda Scott, RN, PhD and their team demonstrated that as worked hours increase past 8 hours, but most dramatically past 12.5 hours, the probability of errors and near misses rise. In addition, the rate of the nurses having accidents or near misses when out of work increases."

It is becoming well recognized that healthcare worker injuries are not a simple cause and effect relationship. Numerous studies have evaluated the impacts of staffing levels, nursing skill mix, and work schedules on healthcare worker injuries. Any program that will be successful must involve all aspects of the work environment. However, providing an effective musculoskeletal injury prevention program is an excellent first step to improving healthcare worker safety.

In an attempt to positively impact the injury rates in healthcare organizations, many associations and regulatory bodies worldwide have developed programs and training materials to assist healthcare organizations. In some cases, there has been pressure to ensure that the programs in use are consistent in their details, as this allows for greater applicability across organizations, particularly important when many organizations share a common pool of employees. For this workbook, best practices that are common features of many of these programs are discussed and templates are provided to assist Alberta healthcare organizations in choosing suitable options for implementing each component. In particular, best practice features were chosen based on their inclusion in several effective programs including:

» **LITEN UP**

The LITEN Up approach is described in the New Zealand Patient Handling Guidelines.

» **TAMPA VA PROGRAM**

The Patient Care Ergonomics Resource Guide Safe Patient Handling and Movement was developed by the Veterans Health Administration and the Patient Safety Center of Inquiry in Tampa, Florida.

» **HANDLE WITH CARE - ONTARIO**

This program has been designed by the Ontario Safety Association for Community and Healthcare (OSACH).

» **HANDLE WITH CARE - BC**

This program was developed by Work Safe BC.

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7. Nursing Injury Rates and Negative Patient Outcomes – Connecting the Dots, by William Charney and Joseph Schirmer, AAOHN Journal, November 2007, Vol. 55, No.11.

8. <http://www.nursingworld.org/MainMenuCategories/ThePracticeofProfessionalNursing/workplace/Workforce/ShortageStaffing/Staffing/SafeStaffingPatientOutcomes.aspx>

These programs are only examples of comprehensive guidelines developed by various organizations and this list is not to be considered exhaustive. However, it is noted that these programs, as well as many others, have some common “critical features”. These features include:

- » Management Commitment – Policies and Promotion
- » Employee Participation
- » Coordination
- » Risk Assessment
- » Equipment
- » Biomechanical Considerations
- » Training
- » Communication
- » Area Design Considerations

In the next section, we will delve into each of these features in greater detail and provide tools to assist you in identifying how these features can be incorporated into your organization’s program.



# Section 2

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Features for an Effective Musculoskeletal Injury  
Prevention Program in Healthcare Organizations  
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## SECTION TWO – Features for an Effective Musculoskeletal Injury Prevention Program in Healthcare Organizations

### FEATURE ONE – MANAGEMENT COMMITMENT

For every program or initiative of an organization, success is closely tied to the level of management commitment. In healthcare organizations, management has an extensive scope of responsibilities, and must respond to critical patient-related situations (such as bed shortages, outbreaks, etc.) as well as societal pressures (such as labour shortages, the aging workforce, etc.). Internal problems related to physical structure and employee health and safety issues must also be dealt with. For healthcare organizations, staffing represents a major cost and often impacts the number of beds that can be kept open and the quality of patient care. Keeping staff healthy and safe is a legal, moral and business responsibility. For this reason, management commitment is the pre-requisite for a successful musculoskeletal injury prevention program. The key aspects of management commitment that will be discussed in this workbook include:

- » Understanding the scope of the problem,
- » Defining objectives,
- » Establishing the policies,
- » Roles, responsibilities and accountabilities, and
- » Follow through – attention and evaluation.

### Understanding the scope of the problem (locally)

There is a general consensus that the most costly workplace injuries in healthcare are musculoskeletal injuries. Recovery time is often prolonged, and injured employees are more susceptible to re-injury. Resumption of regular work after an injury is a gradual process, requiring a “build-up” to full duties. To assist in obtaining management support for musculoskeletal injury prevention efforts, it is useful to identify the impacts of this type of injury. While WCB data is clearly related to workplace incidents, short and long-term disability data can also reveal the impacts of musculoskeletal injuries to the organization. Increased patient acuity, increased weights of patients, and the aging workforce all contribute to the potential for greater ergonomic stress and musculoskeletal injury (both at work and off the job). Creating an effective comprehensive musculoskeletal injury prevention program will provide positive impacts affecting productivity and the health and wellbeing of staff and patients. *This template may be used to summarize the impact of musculoskeletal injuries in your organization.*

## Impacts of Musculoskeletal Injuries

Information available? Y or N	Parameter	Result
	Number of lost time injuries in the last year	
	Number of lost time injuries in the last year related to “overexertion”, sprains, strains or lifting	
	Number of immediate modified work opportunity/ programs in in the last year related to “overexertion”, sprains, strains or lifting	
	% of lost time injuries in the last year related to “overexertion”, sprains, strains or lifting compared to all lost time injuries	
	Total costs to date of lost time injuries in in the last year related to “overexertion”, sprains, strains or lifting	
	Average cost of lost time injuries in in the last year related to “overexertion”, sprains, strains or lifting	
	Average number of days/hours missed in in the last year due to “overexertion”, sprains, strains or lifting (coded WCB)	
	Total costs of lost time injuries in in the last year related to “overexertion”, sprains, strains or lifting divided by number of full time equivalents (FTE)	
	Total cost of immediate modified work opportunity/plans in the last year related to “overexertion”, sprains, strains or lifting divided by number of FTEs	
	Total number of hours coded WCB for lost time injuries in in the last year related to “overexertion”, sprains, strains or lifting divided by 2000 (equals time loss stated as number of FTEs )	
	Total WCB premium costs – in the last year	
	Employer’s WCB lost time injury frequency rate	
	Employer’s WCB lost time injury severity rate	
	Trends in lost time injury rates (increasing/decreasing)	
	Trends in lost time severity rate (increasing/decreasing)	
	Comparison of Employer’s WCB lost time injury frequency rate with industry average	
	Comparison of Employer’s WCB lost time injury severity rate with industry average	
	Number of short and long-term disability claims related to musculoskeletal injuries in the last year	
	Costs related to short and long-term disability claims related to musculoskeletal injuries in the last year	

Summary of impact:	
Number of FTEs equal to time lost for musculoskeletal injuries	
Direct costs of musculoskeletal injuries (WCB) and STD, LTD	

To prevent injuries, it is important to identify what causes the injuries to target prevention efforts accordingly. In many cases, insufficient information about how the incident occurred or investigation to determine root causes results in only a vague perception of what needs to be done to prevent similar injuries. To fully understand the scope of employee incidents related to musculoskeletal stresses, a system must be in place to investigate the incidents fully. When management is aware of the impacts of musculoskeletal injuries on the organization (both financial and productivity impacts), there is greater impetus to reduce injuries. But to ensure that any intervention is successful, a clear understanding of what causes these injuries should direct the interventions. For many years, it was assumed that the cause of nurses' patient handling injuries was lack of training on proper biomechanics. The majority of healthcare organizations instituted training programs to address the perceived problem. However, for most, the incidents continued, with greater number of nurses injured each year. It became apparent that a closer look at the causal factors of incidents was warranted.

*The following templates may assist with incident investigation information gathering.*

### QUESTION 1.1

Does your organization track WCB claims and associated costs related to musculoskeletal injuries?

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### QUESTION 1.2

Are you able to summarize the direct costs of musculoskeletal injuries and translate this cost into the number of FTEs it represents?

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## Root Causes of Musculoskeletal Injuries

Root causes – check as many as applicable			
<input type="checkbox"/>	Inadequate training	<input type="checkbox"/>	Improper work area design
<input type="checkbox"/>	Inadequate enforcement of rules	<input type="checkbox"/>	Lack of policy or procedure
<input type="checkbox"/>	Unresolved workload issues	<input type="checkbox"/>	Conflicting demands
<input type="checkbox"/>	Improper storage/disposal	<input type="checkbox"/>	Unsafe procedure
<input type="checkbox"/>	Inadequate risk assessment	<input type="checkbox"/>	New equipment or materials posing hazard
<input type="checkbox"/>	Defective equipment	<input type="checkbox"/>	Lack of emergency response planning or training
<input type="checkbox"/>	Inadequate maintenance	<input type="checkbox"/>	Poor communication
<input type="checkbox"/>	Unavailable controls (assistive devices)	<input type="checkbox"/>	Inadequate staffing
<input type="checkbox"/>	Lack of controls identified	<input type="checkbox"/>	Other _____

## Gathering Information from Incidents

Gathering Information from Incidents			
<input type="checkbox"/>	Transferring patient : bed to stretcher	<input type="checkbox"/>	Rushing to perform service
<input type="checkbox"/>	Transferring patient: bed to wheelchair	<input type="checkbox"/>	Worker with previous injury
<input type="checkbox"/>	Transferring patient: wheelchair to toilet/ commode	<input type="checkbox"/>	Unavailable equipment
<input type="checkbox"/>	Assisting falling/fallen patient	<input type="checkbox"/>	Defective equipment _____
<input type="checkbox"/>	Bathing patient	<input type="checkbox"/>	Insufficient lighting for task
<input type="checkbox"/>	Repositioning patient in bed	<input type="checkbox"/>	Inadequate space to manoeuvre around patient
<input type="checkbox"/>	Assisting patient to stand	<input type="checkbox"/>	Patient unable to support body weight
<input type="checkbox"/>	Used a lifting device _____	<input type="checkbox"/>	Patient over 200 pounds
<input type="checkbox"/>	Used transfer device _____	<input type="checkbox"/>	Patient over 400 pounds
<input type="checkbox"/>	Used 2 persons for lift/transfer	<input type="checkbox"/>	Unaware of status of patient vis-à-vis lift/ transfer requirements
<input type="checkbox"/>	Used more than 2 persons for lift/transfer	<input type="checkbox"/>	Status of patient changed
<input type="checkbox"/>	Unavailable staff member to assist	<input type="checkbox"/>	Patient uncooperative
<input type="checkbox"/>	Uncoordinated lift with more than 1 caregiver	<input type="checkbox"/>	Aggressive patient
<input type="checkbox"/>	Heavy items placed above shoulders	<input type="checkbox"/>	Inappropriate/inadequate storage space
<input type="checkbox"/>	Extensive bending required	<input type="checkbox"/>	Cluttered area
<input type="checkbox"/>	Repetitive motion required	<input type="checkbox"/>	Unexpected weight of item to be moved
<input type="checkbox"/>	Inadequate/inappropriate technique used	<input type="checkbox"/>	Other: _____

### QUESTION 1.3

Does your incident reporting process require a description of the activities being performed when the incident occurred?

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### QUESTION 1.4

Does your organization have an incident investigation program in place that requires investigation of ALL incidents where there is an employee injury?

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### QUESTION 1.5

Does your incident investigation program require the identification and correction of root causes of incidents?

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## Defining Objectives

Management indicates the importance of specific issues by setting goals and objectives related to that issue. When it comes to injury prevention, goals and objectives must be carefully determined to ensure that they:

- » Are realistic and achievable,
- » Are relevant to the issue,
- » Have measurable outcomes, and
- » Identify accountabilities.

Identifying a goal such as “reducing WCB claims by 50%” with the introduction of a training program is an example of an objective that DOES NOT meet many of the criteria listed above. First, it is not likely to be realistic, as the training program is not likely to correct many of the root causes that led to the incidents. Second, the focus should be on reducing injuries, not claim numbers. A focus on reducing claim numbers may discourage reporting of incidents, which prevents the collection and analysis of information pertinent to injury prevention efforts. The number of claims can be reduced by immediate modified work opportunities for injured employees, but this will not assist in reducing the injuries in the first place. Holding supervisors and front line managers accountable for their injury rates is appropriate if they can control the work environment. This means ensuring they have the proper tools, equipment, processes and staff in place to perform optimally and ensure adequate injury prevention is in place.

Goals are critical tools for program success. If well designed, they focus attention and effort to the desired objectives. The following table lists some objectives that meet the criteria listed above.



## Examples of Musculoskeletal Injury Prevention Objectives

- » All work areas perform risk assessments for musculoskeletal injuries and determine required equipment to reduce injuries.
- » All musculoskeletal injuries are fully investigated, with root causes identified and corrective action taken.
- » All new or transferred employees receive orientation to the Safe Patient Handling Program and understand their roles and responsibilities. Competency assessments are performed for all new hires or transferred workers and include assessments on all available equipment using a practical “return demonstration”, as well as an annual education for all workers.
- » All performance appraisals include an element of following the Safe Patient Handling Policy and Program. For example, provide the opportunity to explore barriers to safe patient handling.
- » Communication strategies regarding assessment of patient status are consistent throughout the organization, reviewed and updated regularly, and include communication to all appropriate staff.
- » Modified work will be offered to all employees who have sustained work injuries to allow for a gradual “work hardening” to prevent re-injury.

These examples can be assessed from the perspective of “% completed”, with the goal set at 100%. If objectives are tied to program elements rather than final impacts, a greater focus on implementing the program elements will occur, and this focus will ultimately drive the activities that will alter the outcomes.

### QUESTION 1.6

Do you have current goals related to musculoskeletal injury prevention? If so, what are they?

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### QUESTION 1.7

Identify objectives that may be feasible in your organization. For each, identify:

Who is accountable?

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What will be measured?

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What are the targets?

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## Establishing Policies, including Roles and Responsibilities

Most organizations indicate the importance of topics by creating a policy which clearly defines management commitment, the goals, expectations, roles and responsibilities related to the topic. From a due diligence perspective, employers indicate the organization's approach to ensuring certain behaviours are identified and enforced through the development and communication of policies. When it comes to health and safety, policies are critical management tools to ensure that all workplace parties work together to create and maintain a safe working environment. Policies are often structured to clearly identify roles and responsibilities for each workplace party, identify expected actions, and indicate ramifications of not following policy.

A policy generally contains the following sections:

- » Statement of commitment/ Purpose
- » Statement of consistency with legislated standards
- » Goals & Objectives
- » Definitions
- » Required actions
- » Roles and Responsibilities
- » Available resources
- » Enforcement /Accountabilities

In developing a Safe Patient Handling Program, each organization should select wording appropriate to the culture of the organization and ensure that definitions are clearly understood. Ideally, the policy will be developed by a multidisciplinary group and be reviewed in draft stages for comments prior to being accepted.

The following examples are provided to assist healthcare organizations in drafting specific policy components.

### ***Examples of statements of commitment/Purpose:***

- » ABC Hospital Centre is committed to providing a healthy and safe environment for all staff and patients. We demonstrate that commitment by putting into place a Safe Patient Handling Program aimed to ensure that all lifts, transfers or repositioning tasks are performed as safely as possible. This organization will provide the training, equipment, and processes to ensure that no unsafe lifts are undertaken. As a healthcare organization, we recognize the need for a proactive approach to injury prevention. We greatly value the health and safety of all staff and patients.

- » ABC Hospital is committed to providing a Safe Patient Handling Program with the support, training, and equipment to enable staff to perform lifting tasks with no adverse effects on themselves or the patients. We have recognized the human and financial toll of workplace injuries related to ergonomic overexertion in the healthcare industry and are committed to reducing the risks associated with our work.
- » ABC Hospital Centre is committed to excellence in patient care and recognizes the importance of staff health and safety in attaining our goals. Given the human and financial cost of workplace injuries, ABC Hospital Centre has developed a Safe Patient Handling Policy to reduce the risk of injuries related to patient handling as well as other lifting activities in the workplace. We demonstrate our commitment to the principles embodied in the Safe Patient Handling Program by providing the equipment, resources, and training required for the program's success. We greatly value the health and wellbeing of our staff and our patients.

***Examples of statements of consistency with legislated standards***

- » Our Safe Patient Handling Program is designed to meet or exceed legal requirements (*Alberta OHS Code*, part 14) by ensuring the provision of appropriate lifting devices, identifying hazards and controls related to lifting tasks, and investigating and taking action when employees report symptoms of musculoskeletal injuries sustained at work.
- » ABC Hospital Centre will meet or exceed legislated requirements related to lifting and handling loads and will demonstrate due diligence by fully documenting all procedures.
- » Our Safe Patient Handling Program will meet or exceed all applicable legislated standards and strive to demonstrate that it is consistent with best practices in the healthcare industry.

***Examples of statements of Goals & Objectives***

- » To create a safety culture in which all workplace parties consider staff and patient safety as an underlying value that drives all actions.
- » To reduce the number and severity of musculoskeletal injuries sustained by workers as a result of patient handling tasks.
- » To ensure that consistent lifting, transferring and repositioning techniques are used throughout the facility.
- » To assign specific responsibilities that will ensure that the Safe Patient Handling Program is fully operationalized and maintained.

- » To ensure that all employee injuries are reported, investigated, and analyzed for corrective action aimed at reducing musculoskeletal injuries.
- » To ensure that all employees receive the appropriate training in all aspects of the Safe Patient Handling Program.
- » To ensure the effective assessment and communication of patient status related to ergonomic requirements for safe lifting by staff.
- » To ensure that all staff are able to assess risks related to lifting and transferring tasks and respond with appropriate controls.
- » To ensure the provision of appropriate tools, equipment and training to all implicated staff in a timely manner.

### **Examples of definitions <sup>9</sup>**

- » **High-Risk Patient Handling Tasks:** Patient handling tasks that have a high-risk of musculoskeletal injury for staff performing the tasks. These include but are not limited to transferring tasks, lifting tasks, repositioning tasks, bathing patients in bed, making occupied beds, dressing patients, turning patients in bed, and tasks with long durations.
- » **High-risk Patient Care Areas:** Inpatient hospital wards with a high proportion of dependent patients, requiring full assistance with patient handling tasks and activities of daily living. Designation is based on the dependency level of patients and the frequency with which patients are encouraged to be out of bed. These areas include Spinal Cord Injury Units, Nursing Home Care Units, and other specified areas.
- » **Manual Lifting:** Lifting, transferring, repositioning, and moving patients using a caregiver's body strength without the use of lifting equipment/ aids to reduce forces on the caregiver's musculoskeletal structure.
- » **Mechanical Patient Lifting Equipment:** Equipment used to lift, transfer, reposition, and move patients. Examples include portable base and ceiling track mounted full body sling lifts, stand assist lifts, and mechanized lateral transfer aids.
- » **Patient Handling Aids:** Equipment used to assist in the lift or transfer process. Examples include gait belts with handles, stand assist aids, sliding boards, and surface friction-reducing devices.
- » **Culture of Safety:** Describes the collective attitude of employers and employees taking shared responsibility for safety in a work environment and by doing so, providing a safe environment of care for themselves as well as patients.

9. These definitions are excerpted from information provided by the *Patient Care Ergonomics Resource Guide: Safe Patient Handling and Movement*; Tampa Veteran's Administration and Department of Defense; Patient Safety Center of Inquiry; October 2001.

### ***Examples of statements of Required Actions***

- » ABC Hospital Centre will ensure that equipment needs will be identified to support the Safe Patient Handling Program in each area and that a system will be put in place to maintain the equipment.
- » ABC Hospital Centre is committed to meaningful employee involvement in the process of selecting equipment, identifying risk, developing communication strategies and implementing the Safe Patient Handling Program.
- » A Safe Patient Handling Steering Committee will be established to assist in designing program details and implementation plans. This Steering Committee will include representation from impacted workplace parties (frontline supervisors, managers, employees, maintenance, Human Resources, Occupational Health & Safety (OH&S), education, etc.).
- » Training is required for employees on the use of all lifting devices prior to their use.
- » The use of mechanical lifts is expected wherever possible, based on risk assessments.
- » Algorithms for patient handling will be designed and communicated to all staff for consistency in interpretation of lifting requirements.
- » Any staff member experiencing a disabling injury related to lifting shall be reassessed for fitness prior to assuming full duties. Where possible or indicated, a modified return to work will be offered.
- » All employee incidents will be reported and investigated. Root causes will be identified and corrective action implemented to prevent further incidents.

### ***Examples of Roles and Responsibilities<sup>10</sup>***

#### **FACILITY SENIOR MANAGEMENT shall:**

- » Support the implementation of this policy.
- » Support a “Culture of Safety” within this health region.
- » Furnish sufficient lifting equipment/aids to allow staff to use them when needed for safe patient handling and movement.
- » Furnish acceptable storage locations for lifting equipment/aids.
- » Provide for the routine maintenance of equipment.
- » Provide staffing levels sufficient to comply with this policy.

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<sup>10</sup>. These definitions are excerpted from information provided by the *Patient Care Ergonomics Resource Guide: Safe Patient Handling and Movement*; Tampa Veteran's Administration and Department of Defense; Patient Safety Center of Inquiry; October 2001.

**SUPERVISORS** shall:

- » Ensure high-risk patient handling tasks are assessed prior to being undertaken and they are completed safely, using mechanical lifting devices and other approved patient handling aids and appropriate techniques.
- » Ensure mechanical lifting devices and other equipment/aids are available, maintained regularly, in proper working order, and stored conveniently and safely.
- » Ensure employees complete initial and annual training, and provide training as required if employees show non-compliance with safe patient handling and movement or equipment use. Maintain training records for a period of three (3) years.
- » Refer all staff reporting injuries due to patient handling tasks to Occupational Health and Safety.
- » Maintain incident/accident reports and injury statistics as required by the facility.
- » Support a “Culture of Safety” within their facility.

**EMPLOYEES** shall:

- » Comply with all parameters of this policy.
- » Use proper techniques, mechanical lifting devices, and other approved equipment/aids during performance of high-risk patient handling tasks.
- » Notify their supervisors of any injury sustained while performing patient handling tasks.
- » Notify their supervisors of the need for re-training in use of mechanical lifting devices, other equipment/aids and lifting/moving techniques.
- » Notify their supervisors of mechanical lifting devices in need of repair.
- » Support a “Culture of Safety” within their facility.

**ENGINEERING SERVICES** shall maintain mechanical lifting devices in proper working order.

***Examples of statements identifying available resources***

- » ABC Hospital Centre will provide patient lifting devices/assistive devices as required based on a determination of risk which will include the nature of lifting tasks, the level of hazard presented to both the patient and the caregiver, the location and area design, and available options.
- » ABC Hospital Centre will provide a comprehensive orientation and training related to the Safe Patient Handling Program for all employees when it is first implemented and to all new employees prior to starting regular work requiring lifting.
- » The OH&S Department will provide statistics on incidents to each department.
- » A Safe Patient Handling Program coordinator will be appointed to coordinate the design and implementation of all program components.

***Examples of statements defining enforcement/compliance accountabilities***

- » All workplace parties are accountable for their delegated responsibilities under this program. Failure to follow program procedures will be noted on performance appraisals and may result in disciplinary action.
- » All workers have the right and responsibility to refuse lifting or transfer work they consider to be imminently dangerous to their health. Supervisors are responsible for immediately investigating any situation believed by workers to present imminent danger.
- » Any non-compliance with this policy will result in a documented note in the employee's personnel file. Workers found in non-compliance may be subject to disciplinary action.

*The above statements are **examples only**. Use the following template to assist in developing your Safe Patient Handling Policy.*

## Template - Safe Patient Handling Policy

Policy Title:	Policy Number:
Approved By:	Date:
Applicable to:	Review date:
<b>Purpose of Policy</b>	
<b>Goals &amp; Objectives</b>	
<b>Definitions</b>	
<b>Requirements</b>	
<b>Roles and Responsibilities</b>	
Senior Management	
Directors	
Managers	
Supervisors	
Workers	
Steering Committee	
OHS Department	
Education Department	
<b>Available Resources</b>	
<b>Accountabilities/compliance issues</b>	



## Follow Through – Attention and Evaluation

Management commitment does not end with establishing policies and providing resources and accountabilities. To be effective, management needs to actively promote the Safe Patient Handling Program and set up processes to continually evaluate and improve the Program. The adage “what gets measured gets done” applies in this case, as unmeasured processes often become “paper processes” that no one follows or complies with. Some examples of actions senior management can undertake to demonstrate on-going commitment include:

- » Attending Steering Committee meetings,
- » Providing opening remarks and encouragement at training sessions,
- » Sending out memos or newsletters identifying the equipment that has been purchased,
- » Reinforcing the policy at numerous opportunities,
- » Assigning a program coordination role to a well-respected senior team member,
- » Scheduling “walk-arounds” to speak about the program at the unit level or to observe the program in action, and
- » Celebrate successes.

To measure program implementation, it is important to identify what parameters will be measured early in the program design. Where possible, collecting “before” and “after” data should be attempted.

Types of information that may be used to gauge progress may include:

- » Employee perception survey results,
- » Number of lifts where lifting devices have been used,
- » Number of employees attending training sessions,
- » Number of senior management communications issued regarding the program,
- » Percentage of incident investigations that have led to correction of root causes, and
- » Percentage of injured workers offered modified work in a return to work program.

The critical component of any effective OH&S Management System Program is management commitment and leadership. Once management demonstrates its intent and commitment to take this program seriously, the foundation is set to fully develop and implement an effective Safe Patient Handling Program.

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## FEATURE TWO – EMPLOYEE PARTICIPATION

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A major feature of a successful program is the active participation of employees in the development, implementation and review of the program. In a NIOSH-sponsored study<sup>11</sup>, author Arun Garg provides a focused and detailed discussion on the merits of a participatory approach to MSI prevention. “The following are some of the reasons why worker participation is important in a nursing home environment:

1. Worker participation in all phases of the program (problem identification, control development, evaluation and selection, training, control implementation and evaluation) reduces resistance to change. This is especially true in nursing homes as engineering controls (patient transferring devices) take longer to make a transfer (90 seconds) than manual lifting methods (12 seconds).... This increased time has been mentioned as a major concern for non-compliance with engineering controls...
2. The average turnover rate for nursing assistants is 80%. Thus, training the new staff is a major problem. The nursing assistants play a crucial role in providing ongoing training to the co-workers.
3. Employee-management advisory Committees lead to much better communication between management and nursing aides. Without effective communication between administrative staff, nurses and nursing assistants, management is often not aware of problems encountered by the caregivers in implementing controls. Problems cited included resident/family refusal to use specific equipment or techniques, changes in resident physical or mental conditions requiring a change in equipment or techniques, equipment break down, equipment storage and battery charging requirements.”

Though this study focused on the nursing home environment, the findings can easily be extrapolated to an acute care environment. It is well-acknowledged that greater buy-in for the program will be achieved with multi-stakeholder involvement. In addition to front line employees and supervisors, facility ergonomists, designers, purchasing agents, trainers, infection prevention and control professionals and OH&S staff can have valuable input. In the New Zealand LITEN UP Program documentation, the following opportunities to involve employees and ensure two-way communications are identified.<sup>12</sup>

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11. Long-Term Effectiveness of “Zero-Lift Program” in Seven Nursing Homes and One Hospital; Arun Garg; University of Wisconsin – Milwaukee; August 1999.

12. From *The New Zealand Patient Handling Guidelines*, 2004, used with permission.

13. Handle with Care; available at [www.worksafefbc.com](http://www.worksafefbc.com)

“Staff need to be involved and have a sense of ownership from the start. Effective two-way communication can help achieve this. Here are some suggestions:

- » Seek staff input before drafting the policy and procedures – circulate drafts for comments and feedback.
- » Set up a formal feedback process, but also use informal means such as suggestion boxes and talking to staff on the job.
- » Include staff representatives in the review, plan and action cycle.
- » Seek staff input before making big changes such as buying equipment or altering facilities.
- » Maintain a regular stream of communication about what’s happening and make sure results are communicated to everyone.
- » Encourage regular staff meetings to review progress, and use forums like training sessions to gain staff views and suggestions.
- » Seek comment on issues using means such as feedback forms in newsletters, questionnaires and email polls.”

Many program manuals highlight the advantages of employee participation in all aspects of program design and implementation. Another good example of this is in the WorkSafe BC manual “Handle with Care”<sup>13</sup>. Several consultation models are discussed, as the style of consultation should fit in with the culture of the organization and take into account consultation processes already established, as well as locations of workers, size of facilities, and available resources. Some consultation models include using the regular joint occupational health and safety Committee to develop, implement and monitor the program. An expert will be designated to be responsible for drafting the program guidelines and the implementation strategy. The expert will also: consult with the joint occupational health and safety Committee for input, establish a specific Safe Patient Handling Program team to undertake the design implementation and monitoring of the program, and provide opportunities through the use of a series of “input sessions” where employee input is sought.

For specific elements of the program, employee input and participation will greatly assist in gathering accurate information as well as obtaining buy-in and program ownership by all. In particular, employee input into risk assessments, equipment selection, training and communication aspects should be solicited.

### QUESTION 2.1

Does your current OH&S Committee (s) deal with program development and implementation?

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### QUESTION 2.2

Are there any other formal mechanisms in place that could be used for employee input in this program development?

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### QUESTION 2.3

Who needs to be involved in your facility to ensure the appropriate people are involved?

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The following is an example of Terms of Reference for a Project Steering Committee.

## **Terms of Reference –Safe Patient Handling Program Project Steering Committee**

### **PURPOSE:**

To provide guidance in the development and implementation of ABC Hospital Centre's Safe Patient Handling Program.

### **MEMBERSHIP AND STRUCTURE:**

- » Members of the Project Steering Committee will include management representatives from Nursing Operations, Support Services, Maintenance, Education, Human Resources and Occupational Health and Safety. In addition, there will be at least 4 employee representatives from departments impacted by this program (nursing, Support Services). This Project Steering Committee should ideally have 6-12 members.
- » The Committee chair will be appointed by senior management.
- » The Committee will meet as required and at the call of the chair. Initially bi-weekly meetings are anticipated.

### **FUNCTIONS OF THE COMMITTEE:**

- I. To develop or review major components of the Safe Patient Handling Program including:
  - Readiness assessment
  - Review of incident data
  - Policy development
  - Patient mobility assessment procedures, including communication tools
  - Equipment needs assessment
  - Equipment evaluation
  - Lifting & transfer techniques – biomechanical guidelines
  - Area design consideration
  - Orientation and training programs

2. To assist in formulating and implementing change management processes relative to this program.
3. To identify issues impacting implementation of the program and develop solutions.
4. To receive regular reports on the status of program development and implementation.

#### COMMITTEE COMMUNICATIONS:

- » Minutes will be maintained for all meetings.
- » The Committee will produce a quarterly report of the current progress/ status of the program implementation efforts and disseminate the report widely.
- » The Committee chair will report quarterly or more often, as required, to senior management.

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### FEATURE THREE – COORDINATION

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Many studies indicate that a program with accountability designated for program coordination is more likely to be successful. The Veterans Health Administration and Department of Defense Program – Safe Patient Handling and Movement states that “To be successful, the implementation of any new program necessitates a knowledgeable person with enthusiasm and leadership capabilities to direct the charge.” Often, a coordinator is chosen from a group of peers and may be any staff member interested in the subject and considered to be informal leaders in their units. Coordinators should receive special training that includes how to effectively train, coach and motivate co-workers, and they must be assured of administrative support to enable them to be successful.

In many healthcare organizations, new endeavours become “added on” to already busy schedules. While it may seem reasonable to add on the coordination of the Safe Patient Handling Program to one of the organization’s educators, or to the OH&S manager, it is recommended that the coordinator be appointed as a full time position until the program is up and running smoothly. This will ensure that adequate time is available to coordinate the various aspects of the program and ensure that there are no gaps in the comprehensiveness of the program. To facilitate the work of the coordinator, a close reporting relationship to senior management is recommended, as this serves to ensure that issues are properly addressed and to raise the perceived level of importance of the program to front line staff.

### QUESTION 3.1

Do you currently have a coordinator for your program?

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### QUESTION 3.2

What is/should be the job description for the coordinator?

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### QUESTION 3.3

Does the coordinator provide regular status reports?  
If so, to whom?

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14. Tampa Veteran's Administration and Department of Defense; Patient Safety Center of Inquiry; October 2001

All levels of management and staff should have designated accountabilities for the program, but these must be coordinated to ensure the greatest effectiveness. Designating a coordinator ensures that no program element “falls through the cracks” without clear accountabilities assigned. A coordinator should have a performance appraisal that includes the major accountabilities of the position. Coordinators should be required to keep regular logs of activities and report regularly to senior management on the status of the program.

An example of a job profile for a Safe Patient Handling Program Coordinator is provided here.

### Job profile – Coordinator of the Safe Patient Handling Program

This position is a full time position reporting to the Vice President of Nursing Services. Qualifications and desired qualities for this position include:

- » Formal/informal leadership experience.
- » Effective communication skills (both written and oral).
- » Enthusiastic motivator.
- » Good problem solving abilities.
- » Training and “coaching” experience.
- » Works well in a team environment.
- » Awareness of work unit pressures, activities and timetables.

#### DUTIES INCLUDE:

- » Coordinating the development and implementation of patient assessment tools, algorithms, patient handling plans.
- » Coordinating the area risk assessment process.
- » Maintaining and analyzing incident reports related to patient handling tasks; assisting in incident investigation of these incidents.
- » Providing on-site support services for the implementation of the Safe Patient Handling Program, including site visits to assess status of program implementation efforts.
- » Meeting with employees who sustained work injuries related to patient handling tasks prior to their return to work to assess processes and the potential for modified work.

- » Coordinate the development of orientation and training materials related to the program.
- » Provide encouragement and support for supervisors in the implementation of all program elements.
- » Complete a monthly log of activities, issues arising and solutions.
- » Meet with and regularly update the Safe Patient Handling Steering Committee.
- » Provide quarterly reports of program status and outcome measures.

## FEATURE FOUR – RISK ASSESSMENT – PATIENT HANDLING TASKS

Alberta OH&S legislation requires the assessment and control of workplace hazards. For patient handling tasks, the assessment is not a one-time static assessment, but changes constantly to consider caregiver, task, equipment, environment, and patient variables. An effective Safe Patient Handling Program will assist in providing a systematic approach to assess risk. Five key risk assessments are required to determine what procedures or equipment should be used for patient handling. These include a self-assessment by the caregiver, a patient assessment, a workplace assessment (including equipment and environment), and a task assessment. Healthcare workers rarely consider themselves first; however, in order to protect the patient's safety, they must ensure their own safety.

A self-assessment for the caregiver should include:

- » Assessment of whether the task can be done safely while protecting both the patient and the caregiver,
- » Whether additional assistance from another caregiver is required,
- » Level of communication between caregivers assisting in the task,
- » Level of awareness about the proper use of equipment, and
- » Physical readiness to perform the task (properly warmed up, proper footwear, etc.).

For environment and equipment, key considerations include:

- » The staff to patient ratio
- » Types of patients
- » Individual needs of patients
- » Equipment availability and accessibility

### QUESTION 4.1

Do you have a process in place to evaluate risks related to patient handling?

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### QUESTION 4.2

Does it include assessing workplace, patient and task related risks?

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### QUESTION 4.3

Who does the risk assessment?

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#### QUESTION 4.4

How would you develop/change your risk assessment process?

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#### QUESTION 4.5

How frequently are the risks re-assessed?

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- » Bed locks and adjustable heights
- » Position of bed rails needed
- » The existence of patient care plans that include handling requirements
- » Languages required for effective communication
- » Workload issues
- » Workers wearing appropriate clothing and footwear
- » Communication protocols for patient status information
- » Emergency response patient lifting and transfer plans
- » Trained staff
- » Preventive and reparative maintenance programs for equipment in place
- » Sufficient space to perform tasks, including use of mechanical lifts
- » Walkways free of clutter and patient equipment moved out of the way
- » Floor surfaces in good order
- » Stable, suitable furniture
- » Electric, adjustable beds
- » Adequate lighting for tasks

For patients, key factors include:

- » Capability to bear weight, assist and cooperate with the task, and tolerate basic tasks.
- » Level of understanding and ability to cooperate in the task.
- » Assessment of bed mobility and patient factors including lying to sitting capability, sitting balance, and strength of quadriceps.
- » Any changes in transfer status.
- » Patient conditions that may impact risk such as history of falls, impaired movement, pain, loss of sensation, skin issues, communication issues, medical equipment used, surgical conditions, sensory deficiencies, mental state (confusion), aggression, etc.
- » Types and frequency of transfers, lifts, repositioning required.



For a task assessment, consideration should be given to whether the task needs to be done, as well as the risks associated with the tasks. These may include:

- » Static positions that may be required
- » Duration of task
- » Equipment required
- » A planned route of movement
- » Awkward postures for caregivers
- » Task requiring extended reach
- » Restrictions posed by protective equipment
- » Inflexibility of time for task

Each organization may develop risk assessment procedures consistent with the risk management process in place. The examples provided here are examples only and may be used to obtain ideas about the types of risk information that may be important to collect.

In some programs, detailed algorithms are designed to assist in decision making related to required patient handling strategies. In the VA Program<sup>15</sup>, six general algorithms and seven algorithms specific to bariatric patients are provided. An example of one of the algorithms is reproduced here.

#### QUESTION 4.6

How do you ensure risks are communicated to all caregivers?

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#### QUESTION 4.7

Does your policy and Safe Patient Handling Program include guidance to effectively integrate and utilize the risk assessment to reduce musculoskeletal injuries?

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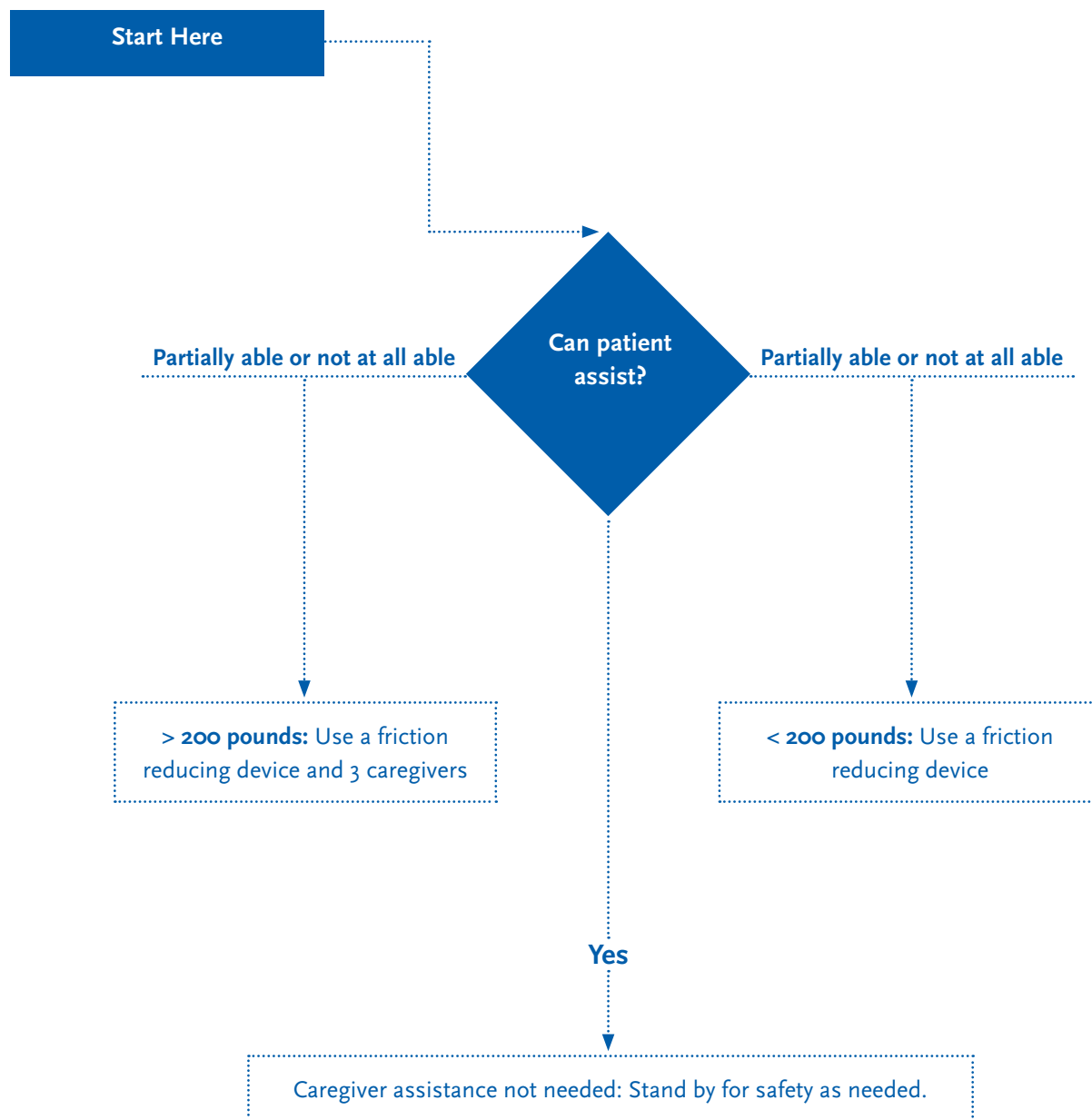
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15. *Patient Care Ergonomics Resource Guide: Safe Patient Handling and Movement*; Tampa Veteran's Administration and Department of Defense; Patient Safety Center of Inquiry; October 2001

## Algorithm 1: Lateral Transfer to and from: Bed to Stretcher, Trolley



- » Surface should be even for all lateral patient moves.
- » For patients with Stage III or IV pressure ulcers, care must be taken to avoid shearing force.
- » During any patient transferring task, if any caregiver is required to lift more than 35 pounds of a patient's weight, then the patient should be considered to be fully dependent and assistive devices should be used for the transfer.

\* In developing and using algorithms for Alberta programs, the Alberta *Occupational Health and Safety (OHS) Act, Regulation and Code* must be utilized.

The New Zealand Patient Handling Guidelines<sup>16</sup> provides excellent templates for each type of risk assessment. The authors graciously permitted reproduction of the following risk assessment forms:

WORKPLACE PROFILE				
ORGANIZATION:		YOUR NAME:		
WARD OR UNIT:		MANAGER/ADVISER:		
EMPLOYEE REPRESENTATIVE:				
PART 1: WORKPLACE DETAILS				
LOAD: Patients				
Number of patients:		Staff-patient ratio:		Ward or unit specialty:
Age range:	Neonates	Paediatric	Adult (16-64)	Geriatric (65+)
Type of care:	Acute	Long-term	Residential	Community
Number needing specialized handling: _____% (for example due to weight beyond equipment tolerances, medical condition or other)				
Special programmes in place:				
Calm and restraint	Falls	Specialized communications	Other	
INDIVIDUAL: Caregivers				
TASK: Task and equipment				
Build an inventory of equipment available for the tasks performed in your ward or unit.				

16. New Zealand Patient Handling Guidelines – The LITEN UP Approach, 2003; complete program details and forms available at <http://www.acc.co.nz/injury-prevention/safer-industries/health/resources/index.htm>

TASK	LIST EQUIPMENT AVAILABLE	NO. REQUIRED	COMPONENTS REQUIRED	CONDITION	ACCESSIBILITY	STORAGE
Standing and sitting				Good Poor	Good Poor	Good Poor
Walking				Good Poor	Good Poor	Good Poor
Rolling in bed				Good Poor	Good Poor	Good Poor
Sitting up in bed				Good Poor	Good Poor	Good Poor
Moving in bed				Good Poor	Good Poor	Good Poor
Sitting to edge of bed				Good Poor	Good Poor	Good Poor
Sitting to sitting transfers				Good Poor	Good Poor	Good Poor
Non-weight-bearing				Good Poor	Good Poor	Good Poor
Reposition fallen patient				Good Poor	Good Poor	Good Poor
Assisting fallen patient				Good Poor	Good Poor	Good Poor
Transfer – lying to lying surfaces				Good Poor	Good Poor	Good Poor
Other tasks				Good Poor	Good Poor	Good Poor
ENVIRONMENT: <i>Facilities</i>						
Number of beds per unit			Type of flooring			
Number of bath/shower rooms			Adequate access for equipment?			
Number of toilets			Adequate storage for equipment?			
Specialized FACILITIES:						

## PART 2: WORKPLACE RISK ASSESSMENT

In this part of the profile, the questions help you rate your current position and identify issues and priorities for action. Please score each question on a sliding scale with 1 being the lowest risk (always done or action completed) and 5 the highest risk (never or no action taken).

LOAD: <i>Patients</i>	ALWAYS DONE □ □ NO ACTION				
1. Do all patients (and families) receive information on patient handling?	1	2	3	4	5
2. Do your admission procedures cover safe patient handling?	1	2	3	4	5
3. Is your patient handling policy displayed in the ward or unit?	1	2	3	4	5
4. Are patient profiles/safe patient handling plans completed?	1	2	3	4	5
5. Are copies of patient profiles/handling plans available to all caregivers?	1	2	3	4	5
6. Do the patient profiles accompany patients when moved?	1	2	3	4	5
7. Can caregivers communicate with patients in languages other than English?	1	2	3	4	5
Notes:	<div style="text-align: center;"> <hr/> <b>Sub-totals</b> </div>				
INDIVIDUAL: <i>Caregivers</i>	ALWAYS DONE □ □ NO ACTION				
8. Do you always have a full complement of staff?	1	2	3	4	5
9. Do staff have a comprehensive level of clinical experience?	1	2	3	4	5
10. Do caregivers take regular breaks?	1	2	3	4	5
11. Are workloads manageable and the pace of work reasonable?	1	2	3	4	5
12. Do all staff know the policy and follow the defined procedures?	1	2	3	4	5
13. Are patient handling responsibilities included in employment contracts?	1	2	3	4	5
14. Are patient handling performance measures included in appraisals?	1	2	3	4	5
15. Do you have procedures for non-compliance?	1	2	3	4	5
16. Do you have procedures for emergency situations?	1	2	3	4	5
17. Have all caregivers completed basic patient handling training?	1	2	3	4	5

INDIVIDUAL: <i>Caregivers</i>	ALWAYS DONE <input type="checkbox"/> <input type="checkbox"/> NO ACTION				
18. Do you provide extra training for specialized needs?	1	2	3	4	5
19. Do new caregivers receive basic patient handling training during induction?	1	2	3	4	5
20. Do all caregivers attend annual refresher training?	1	2	3	4	5
21. Do you have access to a patient handling adviser?	1	2	3	4	5
22. Do all caregivers know where to get advice on complex handling situations?	1	2	3	4	5
23. Do caregivers wear suitable clothing that doesn't restrict movement?	1	2	3	4	5
24. Do caregivers wear suitable non-slip footwear?	1	2	3	4	5
25. Are caregivers involved in planning and feedback for patient handling?	1	2	3	4	5
26. Are all caregivers able to communicate clearly in and understand English?	1	2	3	4	5
27. Do you record and review all incidents and injuries?	1	2	3	4	5
28. Do you encourage early reporting of conditions that limit handling ability?	1	2	3	4	5
29. Do you provide modified work for caregivers with limiting conditions?	1	2	3	4	5
Notes:	<div> <div></div> <div>Sub-totals</div> </div>				
TASK: <i>Task and Equipment</i>	ALWAYS DONE <input type="checkbox"/> <input type="checkbox"/> NO ACTION				
30. Do caregivers always consider patient profiles before starting handling tasks?	1	2	3	4	5
31. Are only approved safe patient handling techniques used for tasks?	1	2	3	4	5
32. Do you always have enough caregivers to carry out handling tasks?	1	2	3	4	5
33. Do you stagger handling tasks? e.g. bathing patients over different shifts	1	2	3	4	5
34. Is sufficient time allowed to carry out handling tasks?	1	2	3	4	5
35. Do you rotate handling tasks between caregivers?	1	2	3	4	5

TASK: <i>Task and Equipment</i>	ALWAYS DONE <input type="checkbox"/> <input type="checkbox"/> NO ACTION				
36. Do you have procedures for preparing patients before handling tasks?	1	2	3	4	5
37. Are patient self-help techniques used to reduce handling requirements?	1	2	3	4	5
38. Do all caregivers know how to check and use the equipment properly?	1	2	3	4	5
39. Do caregivers routinely check equipment and components before use?	1	2	3	4	5
40. Do you regularly reassess your equipment needs?	1	2	3	4	5
41. Do you have sufficient equipment for the staff and tasks in your work area?	1	2	3	4	5
42. Is equipment easy to store and retrieve – do you have enough storage space?	1	2	3	4	5
43. Do you regularly check, repair and replace equipment and components?	1	2	3	4	5
44. Do you get staff input and arrange trials before acquiring new equipment?	1	2	3	4	5
45. Do you have sufficient resources to buy or hire new items when required?	1	2	3	4	5
Notes:	<div> <div></div> <div>Sub-totals</div> </div>				
ENVIRONMENT: <i>Facilities</i>	ALWAYS DONE <input type="checkbox"/> <input type="checkbox"/> NO ACTION				
46. Is there sufficient space in handling areas to perform tasks and manoeuvre equipment around beds?	1	2	3	4	5
47. Is there good lighting and clear visibility for tasks?	1	2	3	4	5
48. Have you made special lighting provisions for night staff?	1	2	3	4	5
49. Are floors non-slip, stable and even?	1	2	3	4	5
50. Are floor surfaces in handling areas in good order?	1	2	3	4	5
51. Do all wet areas have non-slip flooring?	1	2	3	4	5
52. Can equipment be easily moved over flooring?	1	2	3	4	5
53. Are steps and slopes well lit and properly designed?	1	2	3	4	5
54. Are work areas free of trip hazards? e.g. trailing cords, rugs	1	2	3	4	5

ENVIRONMENT: <i>Facilities</i>	ALWAYS DONE □ □ NO ACTION				
55. Do you have procedures for preparing patients before handling tasks?	1	2	3	4	5
56. Are patient self-help techniques used to reduce handling requirements?	1	2	3	4	5
57. Do all caregivers know how to check and use the equipment properly?	1	2	3	4	5
58. Do caregivers routinely check equipment and components before use?	1	2	3	4	5
59. Do you regularly reassess your equipment needs?	1	2	3	4	5
60. Do you have sufficient equipment for the staff and tasks in your work area?	1	2	3	4	5
61. Is equipment easy to store and retrieve – do you have enough storage space?	1	2	3	4	5
62. Do you regularly check, repair and replace equipment and components?	1	2	3	4	5
63. Do you get staff input and arrange trials before acquiring new equipment?	1	2	3	4	5
64. Do you have sufficient resources to buy or hire new items when required?	1	2	3	4	5
Notes:	Sub-totals _____				
	Total score _____				

## 1. THE RANKING FOR EACH QUESTION

The ranking for each question identifies areas where you could take action to improve patient handling in your organization. The lower the score the better in terms of managing patient handling risks.

- » A ranking of 1-2 indicates a lower level of risk.
- » A ranking of 2-3 indicates a medium and possibly important risk.
- » A ranking of 3-5 indicates a higher and possibly substantial risk.

## 2. THE TOTAL SCORE

Your total score gives an overall picture of your current position. It is a simple measure, but covers the issues important to building an effective patient handling program.

.....  
 Even if your total score is low, any individual item ranked 3-5 should be addressed immediately.  
 .....

*This risk assessment and score is a guide only. Testing on reliability and validity will be undertaken in conjunction with the healthcare industry.*



## Patient Profile

<b>ORGANIZATION:</b>		<b>COMPLETED BY:</b>				
<b>WARD OR UNIT:</b>						
<b>LAST REVIEW DONE:</b> __ / __ / __		<b>NEXT REVIEW DUE:</b> __ / __ / __				
<b>PATIENT DETAILS</b>						
Name:			Preferred name:			
Height:		Weight:		Date of birth:		
Relevant medical conditions – <i>past and current</i>						
Capabilities – Patient:						
Can move normally		Can bear weight		Can assist with task		
Is stable		Can tolerate basic activity				
<b>PATIENT HANDLING RISK</b> ( <i>complete checklist overleaf first</i> )						
1. Falls risk		5. Skin at risk		9. Medical equipment		
2. In pain		6. Incontinence		10. Co-operation issues		
3. Impaired movement		7. Medical needs		11. Communication issues		
4. Loss of sensation		8. Surgical needs		12. Barriers		
				13. Vision needs		
				14. Hearing needs		
				15. Footwear needs		
				16. Mobility aids used		
<b>HANDLING PLAN REQUIRED? ● NO ● YES □ COMPLETE</b>						
TASK	ELIMINATE, ISOLATE OR MINIMIZE? Circle One	TECHNIQUE TO BE USED	EQUIPMENT TO BE USED	SUITS CARE PLAN?	NOTES	CHECKLIST
Standing and sitting	E   I   M					<p>Before starting task check:</p> <p><b>Lighting:</b> Is lighting adequate?</p> <p><b>Floors:</b> Are floors non-slip, stable, no trip hazards?</p> <p><b>Equipment:</b> Is it in good working order?</p> <p><b>Equipment:</b> Are all components in place and working?</p> <p><b>Access:</b> Are route and access ways clear?</p> <p><b>Destination:</b> Is it unoccupied/ready? eg. toilet/bath</p> <p><b>Clutter:</b> Is there enough clear space for the task?</p> <p><b>Noise:</b> Is clear communication possible?</p> <p><b>Assistance:</b> Are all caregivers ready and available?</p> <p><b>Weather:</b> Will rain, wind etc. have an impact?</p> <p><b>Any changes:</b> Is handling plan still appropriate?</p>
Walking	E   I   M					
Rolling in bed	E   I   M					
Sitting up in bed	E   I   M					
Moving in bed	E   I   M					
Sitting to edge of bed	E   I   M					
Sitting to sitting	E   I   M					
Non-weight bearing transfers	E   I   M					
Reposition in chair	E   I   M					
Assisting fallen patient	E   I   M					
Transfer – lying to lying surfaces	E   I   M					
Other tasks	No      Yes □	attach task analysis sheet				

Attach completed task analysis to patient profile

NO EFFECT ON MOBILITY		POSSIBLE EFFECT ON MOBILITY (Please complete – then note brief details on front of form)	
1. Falls	No risk	Falls risk management	
2. Pain	Pain free	In pain – describe	
3. Movement	Normal	Impaired muscle strength Abnormal reflex Unstable Joint needs protection	Impaired muscle tone Decreased activity tolerance No balance Other:
4. Sensation	Normal	Loss of sensation or body awareness Hypersensitive areas: Other:	
5. Skin	Normal	Integrity impaired Wet/slippery skin likely	At risk of impairment Wound needs protection
6. Continence	Continent	Continent with frequent toileting management:	Incontinent
7. Medical treatments or medications	No/no effect	Treatments or medications affect:	
		Perception	Activity tolerance    Proprioception    Balance
8. Surgical intervention	No/no effect	Protection of wound required	Restricted movement required
		Describe location, severity and implications for mobility:	
9. Medical equipment	None	IV catheter    Oxygen Chest tube    Traction	Monitors    Drain Other:
10. Co-operation	Co-operative	Unwilling/unable to co-operate Refuses equipment/best practice	Aggressive    Abusive
11. Comprehension	Good	Reduced hearing	Difficulty following simple commands
12. Barriers	None	Isolation – chemical biological hazards Poor hygiene    Cultural/religious	Behavioural Family/friends    Obese
13. Vision	Good	Needs glasses Totally impaired and uses devices	Impaired vision but won't wear glasses
14. Hearing	Good	Uses hearing aid Uses sign language	Impaired hearing but won't wear hearing aid
15. Footwear	Good	Specialized footwear	Inappropriate footwear
16. Mobility aids	None	Orthotics/prosthetics Walking stick Grab rail Hip protector Other:	Walking frame Standing frame Wheelchair Crutches

Handling Equipment Needed			
Slidesheet Other:	Transfer board	Profiling bed	Hoist
TASK ANALYSIS			
Can the task be eliminated? No      Yes <input type="checkbox"/> <i>attach task analysis sheet</i>			
<b>WHAT ARE THE RISK FACTORS?</b> Please check all that apply.		<b>HOW CAN THE RISK BE CONTROLLED?</b> Eliminate <input type="checkbox"/> Isolate <input type="checkbox"/> Minimize	
Repetition required			
Long duration of task			
Static posture required – such as supporting a limb or patient			
Awkward posture required – such as twisted or bent postures due to space constraints or equipment in use			
Requires extended reach – for example reaching over a bedrail			
Performed over distance – for example from bed to chair in another room			
Lack of space for task and equipment			
Staff fatigue or stress – for example due to staff shortages or emergencies			
Hazardous weights			
Unpredictable movements are likely			
Restrictions of protective gear – such as gloves, surgical gown or booties			
Inflexibility – for instance inflexible schedules that cause time pressures			
Other contributing risks – please describe:			
TECHNIQUE TO BE USED	EQUIPMENT REQUIRED	COMMENTS	

## RISK ASSESSMENT - NON-PATIENT HANDLING TASKS

Not all lifting and transferring tasks in healthcare are related to patient handling. A comprehensive Safe Patient Handling Program addresses risks for all who handle loads. For this reason, the Safe Patient Handling Steering Committee should include a member of the Support Services or materials management group. This will ensure that issues specific to those not involved in patient handling are also addressed.

The following template/checklist may be useful in identifying workplace ergonomic risks related to handling non patient-related loads.

### Risk Assessment for Lifting and Moving Tasks (for non-patient areas)

Task	No <input type="checkbox"/>	Yes <input type="checkbox"/>	If yes, suggest control
Do tools weigh more than 5 kg.?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the task involve frequent lifting of loads?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the task require repeated bending at the waist?	<input type="checkbox"/>	<input type="checkbox"/>	
Is lifting or lowering loads a significant part of the task?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the task involve moving loads while on a ladder?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the task involve moving loads up or down stairs?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the work require the use of one specific hand only?	<input type="checkbox"/>	<input type="checkbox"/>	
Does the work involve sustained muscle contraction for a period of time	<input type="checkbox"/>	<input type="checkbox"/>	
Are workplace floors slippery?	<input type="checkbox"/>	<input type="checkbox"/>	
Are workplace floors uneven?	<input type="checkbox"/>	<input type="checkbox"/>	
Is there sufficient space to perform the required tasks safely?	<input type="checkbox"/>	<input type="checkbox"/>	
Is proper footwear worn by workers?	<input type="checkbox"/>	<input type="checkbox"/>	
Is the task repetitive, using the same muscles for extended periods?	<input type="checkbox"/>	<input type="checkbox"/>	
Is the view of the task obstructed?	<input type="checkbox"/>	<input type="checkbox"/>	
Are workers working without proper training?	<input type="checkbox"/>	<input type="checkbox"/>	

Task	No <input type="checkbox"/>	Yes <input type="checkbox"/>	If yes, suggest control
Are mechanical devices available to assist in lifting or moving items?	<input type="checkbox"/>	<input type="checkbox"/>	
Are workers trained in the use of mechanical devices?	<input type="checkbox"/>	<input type="checkbox"/>	
Are containers of the size that enables easy handling?	<input type="checkbox"/>	<input type="checkbox"/>	
Are tasks rotated to reduce physical stress?	<input type="checkbox"/>	<input type="checkbox"/>	
Are tasks able to be performed with two hands?	<input type="checkbox"/>	<input type="checkbox"/>	
Is assistance available from other workers?	<input type="checkbox"/>	<input type="checkbox"/>	
Is equipment adjustable?	<input type="checkbox"/>	<input type="checkbox"/>	
Is personal protective equipment available if needed?	<input type="checkbox"/>	<input type="checkbox"/>	
Are workers trained in proper work procedures?	<input type="checkbox"/>	<input type="checkbox"/>	
Do workers report any injuries or near misses?	<input type="checkbox"/>	<input type="checkbox"/>	

In healthcare organizations, handling loads may be necessary tasks in several areas including:

- » Food Services
- » Laundry
- » Maintenance
- » Materials Management
- » Biomedical Engineering
- » Purchasing
- » Laboratories

Ensure that these areas are also involved in the Safe Patient Handling Program.

## Informal Pre-Task Risk Assessments

In addition to formal risk assessments, more regular informal risk assessments should be conducted by employees whenever they approach a lifting task. The following example may serve to remind employees of issues to consider:

## Employee Pre-Lift Scan

Consideration	<input type="checkbox"/> if true	Suggested plan/solution
The patient is unable to assist with the movement.	<input type="checkbox"/>	
The patient is likely to be uncooperative or aggressive.	<input type="checkbox"/>	
The patient is very heavy.	<input type="checkbox"/>	
Medical equipment used with the patient may impact the movement.	<input type="checkbox"/>	
The non-patient load is awkward to handle (size, shape).	<input type="checkbox"/>	
The non-patient load is heavy.	<input type="checkbox"/>	
The location of the load may make movement difficult.	<input type="checkbox"/>	
The task will require prolonged use of specific muscle groups.	<input type="checkbox"/>	
The task must be performed quickly.	<input type="checkbox"/>	
There is insufficient space around the patient or load to enable the use of mechanical handling devices.	<input type="checkbox"/>	
Lifting and transfer assistive devices are not available.	<input type="checkbox"/>	
I am currently experiencing back or shoulder pain or have other conditions that may make the task higher risk for myself or the patient.	<input type="checkbox"/>	

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## FEATURE FIVE – EQUIPMENT CONSIDERATIONS

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One of the critical controls for reducing patient handling injuries is the provision of mechanical devices to assist in patient lifts, transfers and repositioning tasks. Successful musculoskeletal injury prevention programs in healthcare facilities are those that reduce the use of manual lifting techniques and increase the use of technological advances that limit the biomechanical stress on employees. A variety of equipment is available and includes height-adjustable beds, electric beds, mobile resident lifts, ceiling lifts, repositioning devices, lateral transfer and turning aids, etc. Choosing appropriate equipment can be quite challenging, as the need for flexibility in the healthcare environment is significant. There are potential workplace health and safety risks associated with equipment as well as advantages and disadvantages of specific pieces of equipment.

There has been a desire in many facilities to standardize the lifting devices available. Advantages of standardizing the equipment include interchangeability of slings and parts, easier maintenance, and potential discounts in cost because of volume purchasing. However, a balance should be struck between standardized lifting devices across the site and the variety of devices needed to meet the spectrum of needs.

An inventory of equipment and evaluation of equipment needs are important first steps. Several tools are available to make this task more systematic. A simple inventory<sup>17</sup> can be created from the following template.

For an excellent review of most types of patient handling equipment prepared as part of New Zealand's Patient Handling Guidelines<sup>18</sup>, access program materials at <http://www.acc.co.nz/injury-prevention/safer-industries/health/resources/index.htm>. The equipment section describes each piece of equipment, identifies safety and worksite issues to consider in its use, and describes potential risks of the equipment and the equipment uses and limitations.

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17. From *Patient Care Ergonomics Resource Guide: Safe Patient Handling and Movement*; Tampa Veteran's Administration and Department of Defense; Patient Safety Center of Inquiry; October 2001; used with permission.

18. *New Zealand Patient Handling Guidelines – The LITEN UP Approach*, 2003.

Type of equipment	Brand Name/ Model	Unit/Ward	# of devices	In working order?	Current usage	Recommended changes, purchases



Employee involvement in choosing equipment motivates greater employee buy-in and compliance with the requirement to use equipment. Most manufacturers permit an on-site trial of equipment prior to purchase, with a training program provided for those who will trial the equipment. Employees should be provided with an appraisal form to record their impressions of the equipment – noting any potential problems, strong points, risks, and other comments.

As with any equipment, in addition to evaluating and choosing equipment, a preventive as well as reparative maintenance plan is important for the program's success. Maintaining log sheets for each piece of equipment and scheduling regular preventive maintenance will assist in detecting or preventing any problems before they cause an incident.

Another excellent plan is to develop an ongoing equipment replacement program, which can ensure that outdated equipment is replaced on a regular basis.

Employees are sometimes reluctant to make use of mechanical lifting devices because they are not trained or experienced in their use. The equipment can appear intimidating and employees sometimes consider it to be “dehumanizing” as an alternate to manual lifts and transfers. Employers should not assume that if the equipment is there and there is a policy requiring its use, employees will use the equipment. Rather, it is important to respect and address an employee's insecurity in using mechanical devices by providing thorough training on their use and ensuring that employees are competent to use each device.

The proper use of mechanical lifting devices reduces physical injuries to workers as well as risk of patient injuries that may occur in manual lifting. While general mechanical patient handling devices have greatly reduced risk and improved safety for both patients and employees, the use of these devices is not risk-free.

In 1997, a notice<sup>19</sup> from Health Canada to hospital administrators and long-term care facilities warned of certain risks associated with mechanical lifting devices and provided recommendations to reduce the risk.

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19. <http://www.hc-sc.gc.ca/index-eng.php>

“March 20, 1997. No. 109

**TO:** Hospital and nursing home administrators and home care providers.

To the attention of: nursing, CCU/ICU, biomedical engineering, maintenance, occupational health and safety, materiel management, housekeeping and laundry staff.

**SUBJECT:** Incidents Involving Patient Lifts

Since 1981, Health Canada has received reports of 11 deaths and over 50 injuries related to the malfunction, failure, or misuse of patient lifts in Canada. In the United States, there have been over 41 deaths and 443 injuries reported to the US Food and Drug Administration since 1985.

In 1996 alone, Health Canada received reports of seven incidents resulting in injury involving the malfunction or misuse of six different brands of mobile floor patient lifts. The injuries included one death, one skull fracture, and five cases of less serious injuries involving mostly minor bruising. Four of the incidents involved the release of the sling from the lift or the failure of the sling itself. In three of those four incidents, an unbalanced load caused by an improperly positioned patient leaning to one side or moving around was confirmed or suspected as the cause.

Further investigations of these incidents revealed the following scenarios for the various brands:

- » The patient fell to the floor when straps attached to the hygiene sling released or the sling ripped at the strap.
- » The patient was dropped from the lift when the gravity-activated locking clip which holds the sling onto the bar apparently failed. The clip may open when the load becomes unbalanced, allowing the strap to slip out of the bar.
- » The sling slipped out of the spreader bar during use; the patient was reported to be moving while in the lift.
- » The toileting sling used was too large for the patient, and the patient's arms were not placed outside the sling as indicated in the sling's instructions. The patient fell through the opening of the sling, hitting her head on the floor.
- » The patient fell when a leg from the base of the lift separated from the rest of the lift after a split pin holding the leg pivot broke.
- » A failure of the lift's hydraulic mechanism used to raise and lower the patient resulted in a sudden drop of the jib.

In view of these incidents, Health Canada recommends that hospitals, nursing homes and home care providers take the following safety measures:

1. Ensure staff are adequately trained and receive regular reviews on the safe use of patient lifts, following the manufacturer’s directions.
2. Examine before each use, all lift support systems to ensure that they are structurally sound. Examine components including slings and chairs for any signs of wear. For example, examine slings for frayed material or weak stitching, and check straps, chains and hooks used to attach the sling to the lift. If wear is noticed, replace the component immediately. Also examine all hooks to ensure that they will not unhook during use, even if the load is unstable. Note that holding or supporting the patient while in the sling or chair may allow straps or hooks to disengage. Also check that the lift can be propelled in a normal manner, making sure that the castors are in good condition and are free in their movements. Check that all external fittings are secure and that all screws and nuts are tight. Ensure that all safety labels are firmly attached and in good readable condition.
3. Follow the manufacturer’s maintenance instructions at the required intervals and as required by the health facility’s maintenance procedures for that device.
4. Follow the manufacturer’s cleaning instructions for slings and chairs. Strong bleaches or other disinfecting agents may weaken fabrics and cleaning products may also weaken the base of permanently mounted lifting devices.
5. Use slings and other lift accessories that are either original equipment or compatible with the brand and model of lift being used. Ensure that the accessory is suitable for the application and is of the appropriate size and strength for the weight of the patient. Also make sure not to exceed the overall maximum rated load for the lift.
6. When using a sling, ensure that the patient’s limbs are properly placed as per the manufacturer’s instructions in order to help secure the patient.
7. Ensure that any belts and/or restraining devices used to secure the patient are sufficiently tight.

**QUESTION 5.1**

What type of equipment inventory does your organization currently have?

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**QUESTION 5.2**

Has your organization completed and documented an equipment needs assessment?

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### QUESTION 5.3

Do you have a comprehensive equipment preventive maintenance program in place for patient handling devices?

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### QUESTION 5.4

Do you have an effective reparative maintenance program for any patient handling devices that need repair?

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### QUESTION 5.5

Do employees know how to report defective equipment to ensure that it is not used (which may create a hazard to both worker and patient)?

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8. Never leave the patient unattended in a lift.
9. Instruct the patient to remain motionless while being lifted to reduce the chance of lift instability.
10. Ensure that the base of the lift is kept as wide open as possible to maintain its overall stability. If the width of the base must be reduced in order to go through a doorway, ensure it is re-opened afterwards. Note that some lifts may become unstable if they are pushed and pulled by the jib or mast; always use the device's handles designed for this purpose.
11. Do not move the lift with a patient in it over a threshold. In such a case, move the patient in a wheelchair or stretcher.
12. Take care when moving an unloaded lift over raised thresholds or unevenness in the floor so as not to damage its base or tip it.
13. Do not use the lift to transport the patient for long distances. If moving the patient over short distances, ensure that the patient is kept in the lowest position possible to help maintain the lift's stability.

Health Canada has contacted the manufacturers involved in the above reports in order to discuss corrective actions. Health Canada is also participating on a Canadian Standards Association (CSA) Committee drafting a standard to improve the safety of lifts and their use.

Inquiries concerning these incidents and reports of similar problems should be addressed to the Director, Drugs and Medical Devices Directorate, Health Canada, Tunney's Pasture, Address Locator 0301H1, Ottawa, Ontario, K1A 0L2. Telephone: (613) 957-4786, Fax: (613) 957-7318. Medical device problems may also be reported through the toll free Medical Devices Hotline at 1-800-267-9675."

## FEATURE SIX– BIOMECHANICAL CONSIDERATIONS

A positive approach to biomechanical considerations encourages flexibility, thinking and problem solving skills at the caregiver level. Rather than have a specific set of “rules” that are strictly applied, the program should encourage caregivers to focus on several key aspects of the situation before determining the most effective technique to use for moving or repositioning a resident. These aspects are key components of New Zealand’s “LITEN UP” Program and include:

1. A focus on the load; reviewing load characteristics that may impact the handling risk. These may include age, gender, diagnosis, dependency, neurological status, size, weight, ability to cooperate, and fall risk for patients; size, shape and weight for other loads.
2. A focus on the individual worker capabilities; these may include language, education, training, physical limitations, stress, and fatigue.
3. A focus on the specific task; the nature of the task, what has to be done, how, and when. Different tasks have different requirements, each needing assessment and a unique approach.
4. A focus on the environment, including consideration of the facility design, staffing levels, culture and resources.

Biomechanical considerations should be a major factor in designing a musculoskeletal injury prevention program. A consistent approach using standard, well-accepted good body mechanics is preferable to an approach which attempts to teach completely new theories of movement that may be useful in some specific instances, but may be counter-intuitive or inconsistent with basic techniques used from site to site. This is particularly important when staff are shared between various sites or employers. Staff should be encouraged to systematically scan the situation, evaluating each of these components.

Another important factor in ensuring that biomechanics are well considered is planning for a coordinated move or transfer using several caregivers. Prior to attempting a two, three or four person transfer, a plan should be discussed so that all participants are aware of the role they play in the move. Ideally the patient will also understand how the move will be undertaken, as this will prevent any unexpected responses from the patient that might have negative consequences on the movement. Incident report reviews suggest that a lack of coordination has sometimes played a major factor in caregiver injuries. This factor may be effectively eliminated with good planning and communication.

### QUESTION 6.1

Are biomechanics a part of your current training program?

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### QUESTION 6.2

Does your training incorporate the concepts of focusing on the load and worker capabilities?

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## FEATURE SEVEN – TRAINING

### QUESTION 7.1

Does your organization currently have a documented training program for safe lifts & transfers?

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### QUESTION 7.2

How does your organization ensure that all those who should have this training attend the sessions?

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### QUESTION 7.3

Does your training include a competency assessment that is documented?

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### QUESTION 7.4

What additional elements are needed in your training program to improve it?

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Back injury prevention training has long been the staple (and often the only component) of a musculoskeletal injury (MSI) prevention program for many healthcare organizations. However, training on proper lifting techniques alone has not been shown to be effective in reducing MSIs. As a best practice, training must be focused on proper patient assessment, proper environmental evaluation, proper use of appropriate patient handling devices, effective communication, and the management commitment to enforce the policy. Increasingly successful is the practice of using peer leaders or trainers, with many programs offering advanced training to trainers.

Training must occur before the employee starts regular work as well as reinforced regularly through required refresher training. Successful programs encourage “big picture thinking” and problem solving skills which enable the employee to consider all relevant aspects of the situation in a timely manner to determine the best technique to use. Training should be designed to educate staff to evaluate the risks associated with resident handling tasks and make appropriate decisions to reduce risk. This provides the knowledge that allows flexibility to meet the challenges of specific situations that arise in daily work activities.

Training should include both theoretical and hands-on components, with competency assessed and documented. Training should also be developed for support staff who do not perform patient handling tasks. Competency evaluation should incorporate manual patient handling tasks as well as the use of equipment. Training records should be maintained to demonstrate due diligence. The following checklist may be used to develop/assess the training component of your Safe Patient Handling Program.

## Training Checklist – Patient Handling

Training program aspect	<input type="checkbox"/> In place	Action/solution to consider
Training is provided for all new staff prior to assuming full responsibilities on the Unit.	<input type="checkbox"/>	
New hire training includes a theoretical component and a hands-on component.	<input type="checkbox"/>	
There is a competency assessment in the new hire training program.	<input type="checkbox"/>	
Additional training is provided for those who do not “pass” the competency assessment.	<input type="checkbox"/>	
New hire training is documented.	<input type="checkbox"/>	
Refresher training is required on an annual/biannual basis for all staff.	<input type="checkbox"/>	
There is a system to “flag” when refresher training is required.	<input type="checkbox"/>	
Refresher training includes a theoretical component and a hands-on component.	<input type="checkbox"/>	
There is a competency assessment in the refresher training program.	<input type="checkbox"/>	
Refresher training is documented.	<input type="checkbox"/>	
Training includes biomechanical principles.	<input type="checkbox"/>	
Training includes patient risk assessment procedures.	<input type="checkbox"/>	
Training includes an environmental or pre-lift scan to identify risks.	<input type="checkbox"/>	
Training includes a hands-on use of patient lifting devices.	<input type="checkbox"/>	
Training includes communication procedures.	<input type="checkbox"/>	
Training includes all aspects of the Safe Patient Handling Policy and Program guidelines.	<input type="checkbox"/>	
Remedial training/assessment is provided for employees returning to work after sustaining a patient-handling related incident.	<input type="checkbox"/>	
Training requirement compliance is evaluated for supervisors, managers and all employees.	<input type="checkbox"/>	

## Training Checklist – Non -Patient Handling

Training program aspect	<input type="checkbox"/> In place	Action/solution to consider
Training is provided for all new staff prior to assuming full responsibilities in the Department.	<input type="checkbox"/>	
New hire training includes a theoretical component and a hands-on component.	<input type="checkbox"/>	
There is a competency assessment in the new hire training program.	<input type="checkbox"/>	
Additional training is provided for those who do not “pass” the competency assessment.	<input type="checkbox"/>	
New hire training is documented.	<input type="checkbox"/>	
Refresher training is required on an annual/biannual basis for all staff.	<input type="checkbox"/>	
There is a system to “flag” when refresher training is required.	<input type="checkbox"/>	
Refresher training includes a theoretical component and a hands-on component.	<input type="checkbox"/>	
There is a competency assessment in the refresher training program.	<input type="checkbox"/>	
Refresher training is documented.	<input type="checkbox"/>	
Training includes biomechanical principles.	<input type="checkbox"/>	
Training includes an environmental or pre-lift scan to identify risks.	<input type="checkbox"/>	
Training includes a hands-on use of any lifting or moving devices.	<input type="checkbox"/>	
Training includes all aspects of the Safe Patient Handling Policy and Program guidelines.	<input type="checkbox"/>	
Training requirement compliance is evaluated for supervisors, managers and all employees.	<input type="checkbox"/>	

20. New Zealand Patient Handling Guidelines – The LITEN UP Approach, 2003; complete program details and forms available at <http://www.acc.co.nz/injury-prevention/safer-industries/health/resources/index.htm>

Assessing competency is an important function to ensure that training is successful. A short competency assessment form may be useful during the hands-on orientation of staff to using patient handling devices. Different levels of competencies may be required for caregivers, advisors and instructors. The following chart of competencies is available in the New Zealand LITEN UP<sup>20</sup> program materials (modified and reproduced here with permission).



Competency	All caregivers, advisors and instructors	Extra requirements for advisors/supervisors	Extra requirements for instructors
Organizational and planning issues	<ul style="list-style-type: none"> <li>» Understand legal responsibilities</li> <li>» Know &amp; follow policy and procedures</li> <li>» Contribute to decision-making and reviews</li> </ul>	<ul style="list-style-type: none"> <li>» Help with policy development and implementation</li> <li>» Gain management support for implementation</li> <li>» Organize a process to monitor and review patient handling practices</li> <li>» Maintain up to date resources</li> <li>» Ensure employees are up to date with guidelines and legislation</li> </ul>	<ul style="list-style-type: none"> <li>» Ensure training follows guidelines</li> <li>» Update training to keep current</li> <li>» Ensure training covers policy and procedures</li> </ul>
Operational Issues	<ul style="list-style-type: none"> <li>» Understand principles of safe patient handling</li> <li>» Act as advocate for patient needs</li> <li>» Identify and assess risks as per procedures</li> <li>» Use proper handling techniques and equipment</li> <li>» Seek help when needed</li> <li>» Report incidents, concerns, and unsafe practices or tasks</li> <li>» Suggest improvements</li> </ul>	<ul style="list-style-type: none"> <li>» Mentor staff and supervise performance</li> <li>» Ensure compliance</li> <li>» Promote evidence-based research to improve practice</li> <li>» Review progress and identify areas for improvement</li> <li>» Communicate and consult with staff</li> <li>» Provide solutions for complex handling situations</li> <li>» Monitor training and evaluate outcomes</li> <li>» Identify &amp; eliminate unnecessary tasks</li> <li>» Manage testing &amp; evaluation of new equipment</li> <li>» Be involved with facility design issues</li> </ul>	<ul style="list-style-type: none"> <li>» Teach and advise staff and monitor their performance</li> <li>» Attend relevant meetings and pass on information through training</li> </ul>
Record keeping	<ul style="list-style-type: none"> <li>» Keep accurate and up to date records of risk assessments</li> <li>» Report and/or record safety issues</li> </ul>	<ul style="list-style-type: none"> <li>» Keep reports of meeting outcomes</li> <li>» Keep central registry of patient handling documents and records, including training records</li> <li>» Ensure adequate equipment and maintenance records are kept</li> </ul>	<ul style="list-style-type: none"> <li>» Keep a training register showing attendees, course content, and assessment details</li> </ul>
Professional development	<ul style="list-style-type: none"> <li>» Take personal responsibility for continued professional development</li> <li>» Increase skills and knowledge to stay up to date with best practice</li> <li>» Share skills and knowledge with others</li> </ul>	<ul style="list-style-type: none"> <li>» Maintain contact with professional bodies to gain advice and guidance on latest research and best practice</li> </ul>	<ul style="list-style-type: none"> <li>» Take and act on advice from the patient handling advisor</li> </ul>

## FEATURE EIGHT – COMMUNICATION PROCEDURES

### QUESTION 8.1

How does your organization communicate the status of the patient's handling needs requirements?

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### QUESTION 8.2

Who is responsible for updating the risk assessment and changing it on the communication tool?

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The success of any program introduced into a healthcare environment is dependent upon communication of expectations and procedures and the provision of a follow-up mechanism to ensure that issues that arise are dealt with in a timely manner. In Feature One, management communication of commitment and policy highlighted its importance in implementing a successful Safe Patient Handling Program.

Communication about the details of the program will ensure that all those involved are aware of specific requirements. Risk assessment is a critical factor in determining the safest approach to conducting a patient lifting, transfer, or movement task. However, having a patient risk assessment properly done does not in itself ensure that the tasks will be done safely. Communication of the results and of the risk assessment will ensure that all employees are aware of the risks and safe handling procedures. A variety of mechanisms currently exist for communicating patient risk assessments in an efficient and effective manner. These can be both formal (written into care plans) and informal (mention at daily report); however, the information is not always readily available to all those who should have access to it. Time may not permit checking the care plan, and various schedules may leave some workers without the verbal briefing. Patient status may change gradually or suddenly, and reliance on a previous risk assessment may be insufficient. Some healthcare organizations have developed quick visual cues to indicate the patient handling requirements for each patient. From a program perspective, consistency in the use of the cues is needed.

An example of effective communication of patient handling requirements is the use of “logo cards” developed by OSACH<sup>21</sup>. Their program manual describes each lift in great detail, with accompanying photographs. Using this type of communication aid near the bedside will provide immediate information for the caregiver. A process must be in place to ensure that the assessment (and any communication tool used for the assessment) is updated regularly to reflect the most up to date information about the patient.

21. OSACH Planning Guide – Implementation of Client Mechanical Lifts, 2nd edition, 2006. Available for order at <http://www.hchsa.on.ca/>

## FEATURE NINE – AREA DESIGN CONSIDERATIONS<sup>22</sup>

As we increase the experience and knowledge of the impacts of ergonomics in the workplace, it becomes apparent that many of the older facilities cannot be easily modified to incorporate good ergonomic principles. As a result, retrofitting is sometimes undertaken, but more often, caregivers must “work around” poor area design to accomplish patient handling tasks. Even in newly designed facilities, attention to best ergonomic practices in patient handling are sometimes not considered. A Safe Patient Handling Program must address area design issues and should include a proactive consultative approach in the design of new or renovated facilities.

The following criteria should be considered in area design/configuration to assist in reducing patient-handling injuries to patients and caregivers:

- » Ceiling lifts, where patient population warrants them, and the facility’s physical structure can support them; ensure ceiling lifts track all the way into the bathroom.
- » Furniture in patient rooms to include adjustable beds, under-bed clearance to accommodate patient lifting devices, castors on furniture legs for easier moving of beds, and chairs with armrests to assist in standing.
- » Sufficient electrical outlets arranged to reduce the need for long electrical cords or extension cords.
- » Call systems with easy access for patients to obtain help if necessary.
- » Sufficient clearance beside, at the foot of, and on the transfer side of the bed to allow for two caregivers and equipment as necessary (equipment may include a stretcher, wheelchair, lifting device, etc.).
- » In bathrooms, doorway entrances should accommodate wheelchairs, lifts and up to two caregivers in addition to the patient; consider equipment such as bariatric equipment. (For example, consult the Arjo Guidebook for architects and planners, which provides specific clearances for room designs.)
- » In bathrooms, space from the toilet bowl to the wall should accommodate one or two caregivers.
- » In bathrooms, toilet height should take into account types of commode chairs.
- » In bathrooms, grab rails near toilets, sinks and baths; baths should have sufficient area to accommodate access by wheelchairs or lifting devices; access from both sides of the bathtub.

### QUESTION 8.3

Does your communication plan include communication across all shifts and include all appropriate staff?

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### QUESTION 8.4

How would you improve current communication procedures in your facility?

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<sup>22</sup>Information for this section has been adapted from the *New Zealand Patient Handling Guidelines – The LITEN UP Approach*, 2003 and used with permission; complete program details and forms available at <http://www.acc.co.nz/injury-prevention/safer-industries/health/resources/index.htm>

- » Clearance around sinks should accommodate caregivers and equipment.
- » Shower areas should be without curbs to enable wheelchair access; adequate drainage to prevent pools of water from forming; a seat in the shower for the patient with a grab rail positioned closely to the seat; detachable shower hose and head; sufficient area to dry off.
- » Handrails in corridors; unobstructed corridors of sufficient width to allow patient equipment/furniture to be moved.
- » Doorways that are wide enough to accommodate patient equipment.
- » Hard, smooth flooring (no carpet), that allows for easy movement of patient wheeled equipment; permanently sealed joints in flooring to reduce tripping; non-slip flooring in bathrooms.
- » Sufficient storage space for patient handling equipment and supplies to ensure they are readily available.

Building Codes and a variety of best practice guidelines<sup>23</sup> are useful in providing more specific details in the design of new facilities or in a renovation project.

While consideration of these factors may be possible in determining new area design or renovation of existing facilities, “making do” with the current situation is often required. The New Zealand Patient Handling Guidelines offers the following suggestions for “Immediate changes to improve patient handling safety.”

## Immediate changes to improve patient handling safety

### PATIENT ROOMS

- » Keep rooms tidy and free of clutter.
- » Create a permanent clear passage from the foot of the bed to the door, so there is always clear access to move equipment from the door to the bed.
- » In small rooms, and where space is at a premium, attach castors to the furniture so it can be easily moved out of the way during patient handling tasks.
- » Make sure beds are height adjustable.
- » Make sure chairs have armrests to help patient transfers.
- » Try to locate patients who need to be assisted with wheelchairs as near to day or dining rooms as possible, to minimize the distance they have to travel.

23. New Zealand Patient Handling Guidelines – The LITEN UP Approach, 2003; complete program details and forms available at <http://www.acc.co.nz/injury-prevention/safer-industries/health/resources/index.htm>; OSACH Handle With Care; Ontario Safety Association for Community & Healthcare; Resource Manual; Second edition, May 2003. Can be ordered from the OSACH website <http://www.hchsa.on.ca/>

- » Provide plenty of electrical sockets, to prevent trailing leads.
- » Maintain a policy regarding acceptable furniture for patients to bring into the facility (e.g. long-term care facilities), to avoid clutter and heavy lifting for workers.

### TOILETS, SHOWERS AND BATHROOMS

- » If toilets are small, inaccessible and in difficult places in which to perform patient handling tasks safely, consider using other toileting methods such as commodes, pans or bottles.
- » Consider the loading weight of the toilets, especially for bariatric patients.
- » If the shower or bathroom is too small and inaccessible for large patient handling equipment, consider:
  - Bed bathing the patient until an alternative is found, or
  - Using a shower chair that can be pushed into the shower or bathroom.

### CORRIDORS, DOORS AND FLOORING

- » Check corridors and access routes are free of items that restrict minimum recommended widths.
- » Check that:
  - Corridor doors swing in the direction of the exit,
  - Door swings do not restrict recommended minimum corridor widths,
  - Toilet doors do not swing inwards, and
  - Items are not stored behind doors that can restrict them fully opening.
- » Check floor coverings are tightly fixed to the floor, and permanently seal all gaps and loose edges.
- » Check carpet edging strips are bevelled and not more than 10mm above the floor.

### QUESTION 9.1

Has your organization reviewed facility space issues with a view to optimizing them for safe patient handling?

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### QUESTION 9.2

Have you considered storage requirements for new equipment purchased?

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### QUESTION 9.3

Are worker and patient safety related to patient handling tasks considered in the prioritization list for capital expenditures?

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### QUESTION 9.4

Are you planning on building a new facility in the near future? If so, are experts in patient handling tasks and ergonomics involved in the design of the new facility?

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### QUESTION 9.5

Are you planning renovations of patient care units in the near future? If so, are experts in patient handling tasks and ergonomics involved in the design of the new facility?

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### PATIENT HANDLING EQUIPMENT

- » Ensure patient handling equipment is well maintained, and repaired or replaced when damaged.
- » Use temporary ramps for wheeled equipment to eliminate the risks associated with lifting equipment over thresholds. Install grab rails in toilets, showers and bathrooms to encourage patients to stand and sit independently.
- » Install continuous handrails along corridors and stairs.
- » Consider installing ceiling tracks and wall-hung or gantry hoists because these require less room to move patients than mobile hoists.

### STORAGE

- » Ensure your storage area is well organized with clearly defined areas for patient handling equipment.
- » Locate storage areas in the ward or unit, preferably within 20 meters of handling areas and within 10 meters of the nurses' station.

It is advisable to ensure those with expertise and experience in patient handling tasks are included on the design team for new facilities or on the renovation design team.

# Section 3

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Program Planning, Implementation and Administration  
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## SECTION THREE – Program Planning, Implementation and Administration

This section will cover program planning, implementation and administration activities to support a Safe Patient Handling Program. To obtain the maximum benefit for the resources provided to reduce injuries related to handling of patients and objects, a comprehensive approach is necessary.

- » Understanding the key features of a good program will assist in planning efforts.
- » Identifying key stakeholders to participate in planning will facilitate buy-in and participation.
- » Developing a budget to address initial and on-going funding requirements will reduce the likelihood of surprises and support sustainability of the program.
- » Being aware of implementation issues and obstacles will enable identification of problems and solutions early in the program.
- » Defining accountability will provide the necessary criteria for evaluating performance.
- » Designing a program evaluation plan will provide the building blocks for continuous improvement efforts and provide the necessary feedback to assess progress.

This section provides templates to assist you in development and implementation planning.

### A. Developing a Budget for a Safe Patient Handling Program

Considerations for a multi-year budget for this program will need to include:

#### INITIAL COSTS

- » Program planning and development costs
  - Staff time – Steering Committee, equipment inventory taking, employee surveys, policy development, procedures, analysis of accident data, etc.
  - Coordinator
    - Salary & benefits
    - Recruitment costs
    - Office equipment and supplies

- » Initial purchase of equipment
  - Staff time for evaluation/pilot
  - Equipment purchase (capital)
  - Installation costs (ceiling lifts)
  - Accessories purchase
  - Lifting devices for materials handling
- » Communications
  - Production of forms, “logo cards” or equivalent, posters
- » Training
  - Development time for training material
  - Equipment and equipment storage for hands on training
  - Rooms/locations for training
  - Selection/training of trainers
  - Development of competency assessment criteria/forms, etc.
  - Scheduling time for staff to attend training
  - Staff time to attend training (initial blitz)
  - Trainer time
  - Training equipment – projector(s), laptop(s)
  - Costs of documentation/handbooks produced for distribution, etc.
- » Maintenance
  - Redesign of storage space
  - Time for development of preventive maintenance program
  - Time for repair of current equipment
- » Evaluation-related costs
  - Information systems capable of recording accident data
  - Staff time for development of performance appraisal criteria
  - Staff time for employee surveys

## ON-GOING COSTS

- » Program coordination
  - Coordinator
    - Salary & benefits
    - Office equipment and supplies

- Staff time – Steering Committee oversight, ongoing review of program
- » Equipment-related costs
  - Planned replacement of equipment (capital)
  - Additional equipment related to expansion
  - Accessories (slings, other transfer aids)
- » Communications
  - Ongoing production of forms, “logo cards”, posters, etc.
- » Training
  - Ongoing training of trainers
  - Scheduling time for staff to attend training (new and refresher)
  - Staff time to attend training (new and refresher)
  - Trainer time
  - Costs of documentation/handbooks, etc.
  - Time for specific training for employees returning to work post patient handling injury
- » Maintenance
  - Preventive maintenance – staff time
  - Reparative maintenance – staff time
  - Parts
  - Costs of sending equipment to supplier (when necessary)
- » Evaluation-related costs
  - Staff time for employee surveys
  - Staff time to collect, analyze and report on outcome data
- » Future facilities planning
  - Time to provide input on renovation and building projects

The following template may be useful in determining your budget needs. It is not designed to follow any specific organization’s format, but should provide prompts so that items are not forgotten when developing your budget. Remember to figure in equipment replacement costs over time, and any new equipment expected when expansion is planned.

## Safe Patient Handling Program Budget

Category #	Item code	Item	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total
Expenditures															
	Labour	Coordinator – 1 FTE													
		Coordinator benefits													
		Committee member hours/\$													
		Trainer hours/\$													
		Staff hours to attend training/\$													
		Management hours/\$													
		Return to work ergonomist time/\$													
		New facility/renovation OHS advisor time/\$													
	Equipment	Lifts – Type ____													
		Lifts – Type ____													
	Labour	Lifts – Type ____													
		Lifts – Type ____													
		Lifts – Type ____													
		Slings – Types/sizes													
		Transfer belts													
		Transfer boards													
		Other lifting aids													
		Pellet jacks, etc. (for materials)													

Category #	Item code	Item	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total
		Spare parts													
	Training equipment	Lifting devices													
		projector													
		Laptop													
	Office supplies - furniture	Desk													
		Chair													
	Office supplies - computer	computer													
		photocopier													
		Printer													
		laminator													
		software													
	Office supplies	Paper													
		Binders													
	Printing costs	Binders													
		Forms													
		Logo cards													
		handbooks													
		Training materials													
		Surveys													
	Facilities/ maintenance	Preventive maintenance time/\$													

Category #	Item code	Item	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total
		Repair time/\$													
		Shipping costs													
	Contracted services														
Cost offset (recoveries)		Funding Health & Wellness													
		Funding – Employment & Immigration													
		WCB Rebate or Discount													
Net															

Activity	Accountability	Timelines/Target Dates	Deliverables
Participate in WHS Workshop			
Establish Steering Committee and approve Terms of Reference			
Determine budget			
Collect and analyze past incident data			
Identify required improvements in incident cause tracking			
Define objectives			
Identify outcome measures and develop measurement systems			
Identify and document roles and responsibilities			
Develop a Safe Patient Handling Policy			
Complete inventory of current equipment			
Ensure equipment cleaned and repaired as necessary			
Determine storage spaces for equipment			

## B. Planning for Timelines and Accountabilities

In section two of this workbook, nine key features of a comprehensive Safe Patient Handling Program were described. In program planning and implementation, each of these features ideally would be covered in the organization's strategy. As with any activities, those related to the development and implementation of this program should be clearly identified, with accountabilities for the action and estimated timeframes for completion. The following template may assist the organization in developing its action list for program development and implementation.

Activity	Accountability	Timelines/Target Dates	Deliverables
Identify equipment needs			
Approve equipment requests			
Participate in selection of equipment			
Determine coordinator of program			
Develop job profile for coordinator			
If necessary, recruit and orient coordinator			
Identify change management requirements			
Lead and implement change management processes			
Develop risk assessment tools – patient handling tasks – workplace assessment			
Develop risk assessment tools – patient handling tasks – patient assessment			
Develop risk assessment tools – patient handling tasks – task assessment			
Develop tools for communication of risk assessment (charting, logo cards, etc.)			
Develop risk assessment tools – materials handling tasks			



Activity	Accountability	Timelines/Target Dates	Deliverables
Develop risk assessment protocols and accountabilities			
Develop employee pre-lift or task specific scans or assessments			
Identify training plans			
Identify trainers			
Purchase training equipment			
Produce training materials			
Schedule staff for training			
Determine equipment and space needs for training			
Identify training tracking process			
Provide input on new construction or renovation projects			
Produce reports of program implementation status			
Produce reports of program outcome measures			
Develop action plans based on outcome reports			

In most cases, it is a good idea to confirm with those who are assigned accountabilities to ensure that the deliverables are well understood and the timelines are feasible. In addition, if there are any resource requirements to enable the completion of activities, it is important to identify these and arrange to have them provided.

Once the planned activities and accountabilities are outlined, regular status checks should occur to ensure that activities are on schedule and no unforeseen issues have developed which impact the completion of activities. Regular reporting on the progress of program development and implementation is a useful mechanism to ensure that management is kept up to date.

## C. Implementation Considerations

Many organizations will choose to “trial” the implementation of the program to identify any issues that may arise, find and correct any program deficiencies, and show impacts to encourage greater “buy-in”. In choosing a location in which to implement the program as a “pilot”, consider the following:

- » Choose a location with sufficiently high injury rates related to patient handling so that impacts will be clearly seen.
- » Choose a location where the supervisors and managers are enthusiastic about the program and will actively participate.
- » Ensure that a local “implementation team” is chosen and includes all levels of staff in the area (unit, site, etc.).
- » Define a time period for the pilot that is sufficiently long to enable the program to be well-integrated into operations and to enable the collection and analysis of impact data.
- » Analyze all incidents for the previous year to determine causes and activities being undertaken when the incident occurs.
- » At the end of the trial, conduct the post-implementation employee survey, analyze outcome data and report on results prior to expanding the program.

Whether you choose to implement a program as a “pilot” in one area, or implement the program across all areas, consider the following:

- » Send out a pre-implementation employee survey to enable comparison with a post-implementation survey. Provide support in the area to answer questions and provide coaching and reinforcement.
- » Discuss the program at regular staff meetings to identify any issues that need resolution.
- » Determine what data will be collected and provide a mechanism to ensure that it is done (see section E).
- » Ensure any incident reports are completed and provide a detailed analysis of causal factors.

A survey such as the following (or one of your own design) can be completed by employees prior to program implementation and after the program has been implemented (on a trial basis or across the entire organization).

## Safe Patient Handling - Employee Survey

Unit:		Name (optional)		
Date:		Position:		
	Strongly Agree	Agree	Disagree	Strongly Disagree
1. I am aware of the policy related to patient handling.				
2. Senior management actively supports safe patient handling procedures.				
3. I have been involved in a workplace risk assessment with regards to patient handling.				
4. I am regularly involved with determining patient handling risks for each patient.				
5. We discuss patient handling risks on my unit regularly.				
6. We have a formal process to identify the appropriate handling requirements for patients.				
7. Patient handling requirements are always well communicated among staff.				
8. We have sufficient types of patient handling equipment to ensure tasks are handled safely.				
9. The patient handling equipment is readily available.				
10. Equipment accessories (slings, etc.) are readily available.				
11. There is a process in place to label and report equipment needing repair.				
12. There is a regular preventive maintenance program for patient handling equipment.				
13. Equipment is repaired in a timely manner.				
14. I have never used defective equipment.				

	Strongly Agree	Agree	Disagree	Strongly Disagree
15. There is enough space around the patient's bed to manoeuvre with equipment.				
16. When more than one person is needed for a safe lift, I always find someone to assist.				
17. I never perform unsafe lifts.				
18. The patient handling devices on my unit are easy to use.				
19. I have been trained in the use of all patient handling devices on my unit.				
20. I feel comfortable and competent to use all lifting devices on my unit.				
21. I have had hands-on training in proper lifting techniques.				
22. I have been regularly assessed for my competence in handling patients.				
23. My supervisor/manager actively supports safe patient handling practices and reinforces this often.				
24. Management solicits and listens to our suggestions to improve patient handling tasks to make them safer.				
25. We do not have patient handling-related injuries on my unit.				
26. The workload on the unit is manageable.				

	Strongly Agree	Agree	Disagree	Strongly Disagree
27. Staffing on the unit is appropriate.				
28. Enough time is allowed for patient handling tasks.				
29. Patient handling tasks are rotated with other activities for a work balance.				
30. Co-workers are willing to assist when I need them for patient handling tasks.				
31. I am willing to assist co-workers in patient handling tasks.				
32. All patient handling-related injuries are reported to the supervisor.				
33. All patient handling related incidents are completely investigated.				
34. All patient handling incidents are discussed with staff to prevent similar incidents.				
35. My safety performance is part of my performance appraisals.				

## D. Managing Change

Adopting a Safe Patient Handling Program may require a change in the organization's view of occupational health and safety. Healthcare organizations are generally focused on patient safety issues. Though many see the connection between employee safety and patient safety, attention is often directed at actions that can be demonstrated to directly impact patient safety (diagnostic errors, medication errors, etc.). This focus on "actions" tends to diminish the perceived importance of "conditions" and "attitudes" (unsafe working conditions, staffing issues, long working hours, etc.) on patient safety. Many healthcare organizations are tracking patient-related incidents and analyzing contributing factors to identify needed improvements. In some cases, worker health and safety issues are identified as contributing factors. A closer analysis of worker injuries and illnesses would likely result in identified risks to the quality and outcomes of patient care. The development of a comprehensive safety culture (for both patients and workers) is needed to improve safety and reduce errors and injuries.

24. Modified from the work of John Kotter, "A Force for Change: How Leadership Differs from Management", 1990 (Free Press) and from an article in strategy-business solutions magazine "10 Principles of Change Management" by John Jones, DeAnne Aguirre and Matthew Calderone, April 15, 2004.

The change in safety culture has already begun. Patient safety issues are brought forward and discussed frankly. Incident reporting is encouraged and mandated to ensure that all opportunities are taken to discover system issues that need solutions. Patient safety agencies publish volumes of data about patient safety statistics, accreditation bodies look for patient safety systems in place, and hospital departments have been established to focus on patient safety issues. This change did not happen overnight. The basic principles<sup>24</sup> of introducing change in an organization were followed:

- » Obtaining management commitment and leadership; define the vision; creating a sense of urgency,
- » Creating a team to lead the change process,
- » Identifying the current status; costs and benefits,
- » Assigning accountabilities; creating ownership; facilitate input,
- » Communicating the change process,
- » Defining accountabilities and involving all layers of the organization,
- » Addressing the human side to ensure a constructive (non-blaming) approach,
- » Identifying short and long-term goals, and
- » Making changes permanent and incorporated in the organization's culture.

The current challenge is to extend this "safety culture" to encompass worker safety. Once again, this change will not happen overnight. The development and implementation of a Safe Patient Handling Program may be an excellent building block for evolving to a comprehensive (patient and employees) safety culture. As the key components of successfully introducing change are necessary to meet this challenge, use the following template to assist in developing your change management plan to introduce the Safe Patient Handling Program.

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<sup>24</sup>. Modified from the work of John Kotter, "A Force for Change: How Leadership Differs from Management", 1990 (Free Press) and from an article in strategy-business solutions magazine "10 Principles of Change Management" by John Jones, DeAnne Aguirre and Matthew Calderone, April 15, 2004.

Issue	Action/Solution	Accountability/Timelines
Obtaining/Demonstrating management commitment to this change	Identifying scope of issue; reviewing options; “making the case”	
Identifying supporters and leaders for this change	Asking for volunteers; using a multidisciplinary approach; establishing a Steering Committee	
Determining scope	Deciding on a “pilot” approach to trial the program; scheduling implementation phases	
Getting “buy-in” from all levels of staff	Communicating needs and desired outcomes; providing extensive opportunities for input; involving employees in program planning and implementation	
Assigning roles and responsibilities	Asking for volunteers; discussing with all levels of staff	
Determining short term goals		
Determining long-term goals		
Communication of process		
Measurement of outcomes		
Communication of outcomes		
Evaluation and feedback		
Reinforcement		

In *Leading Change*<sup>25</sup>, John Kotter identified the following eight common errors made by organizations during their change management process.

- » Allowing too much complacency
- » Failing to create a sufficiently powerful guiding coalition
- » Underestimating the power of vision
- » Undercommunicating the vision
- » Permitting obstacles to block the new vision
- » Failing to create short-term wins
- » Declaring victory too soon
- » Neglecting to anchor changes firmly in the corporate culture

25. *Leading Change*, John P. Kotter, Harvard Business School Press, 1996.

Each healthcare organization will need to determine if the Safe Patient Handling Program will be an “add on” program, a revision or updating of its current program, or if it will be a building block towards a change to a comprehensive safety culture.


## E. Program Evaluation – Defining and Measuring Outcomes

Will your program be successful in reducing injuries related to handling patients, equipment and materials? To assess success, a mechanism must be in place to identify outcome measures, collect and analyze data, and report results. At the beginning of this workbook, you were asked to identify objectives of the program. Good objectives had these characteristics:

- » Are realistic and achievable,
- » Are relevant to the issue,
- » Have measurable outcomes, and
- » Identify accountabilities.

Determining what data to collect, where to obtain it, how to interpret it, and how to report on it is the first step. Using the framework identified by Regional Health Authorities to provide benchmarking capabilities through consistent application of data collection, analysis and reporting methods, you can design your measurement tools to provide an accurate evaluation of your program’s outcomes. This includes looking at both lagging (Tiers 1 and 2) and leading indicators (Tier 3) of program performance.

### TIER 1 METRICS

Implementing the “No Unsafe Lift ” Framework should impact the rates of injuries related to unsafe lifts. To determine what those rates are, however, it is important to have information related to the incident which caused the injury. Information from the Workers’ Compensation Board (WCB) will indicate the part of body injured (e.g., back, shoulder, etc.) and the nature of the injury (overexertion), but will not identify if this occurred while handling a patient or a load of some sort, or whether it was associated with another action. The Safe Patient Handling Program is targeted to lifting, transferring and moving tasks and is not likely to impact other activities that may cause injury.



Therefore it is necessary to understand more fully what activities were being performed at the time of the incident.

For this, one would need to review a detailed incident investigation report. If your organization has a comprehensive incident investigation process in place, obtaining accurate “pre-program” data will be relatively easy. If it does not have a process in place to identify activities being conducted when an injury occurs, the data obtained from the WCB may be used as a rough approximation, though its limitations must be clearly understood. If you have access to incident reports, it is advisable to review those filed over the past 1-2 years and tabulate the number that appear to be related to patient or materials handling activities. If you identify that, for example, 50% of all back injury (or overexertion, or shoulder/back/multiple parts, etc.) WCB claims are related to patient handling activities, you can use this as a rough approximation when you analyze WCB data. This way, you will not over or underestimate the impacts of your program by including injuries that are not addressed by the program.

Focus on identifying the categories of your WCB reports that reflect injuries that could be sustained as a result of unsafe lifting. For example, if you had 100 lost time injuries last year, and 60% of these could be reasonably attributed to lifting tasks (based on body part injured, nature of injury and supplemented by your review of incident reports), then 100% reduction (=elimination) of injuries related to lifting would result in a lost time injury number of 40 (all other things remaining unchanged) for this year. However, the likelihood of 100% reduction of injuries is very slim, so it would be more reasonable to consider a more realistic, achievable target (particularly given the phasing in of the program, the awareness of all process related to the program, and the communication of program details). A more realistic target may be a 40% reduction in the first year following program implementation. This would provide a target for lost time injuries related to lifting to go from 60 to 36 (60% of 60) lost time injuries related to lifting tasks. The total lost time injuries would then be 36 + 40 (other types of injuries) equalling 76. The reduction of 24% overall lost time injuries in the year after the program was implemented would accurately reflect a 40% reduction in the specific incidents the program is directed to impact.

A word of caution – do not utilize the reporting of all incidents (non claim) as a Tier 1 metric, as a good reporting system will encourage reporting of incidents. This will be covered in more detail when we discuss Tier 3 measures.

You may choose to use the following template to assist in reporting Tier 1 before and after program implementation measures. *(Data used here is fictitious and is only used as an example.)*

	Pre-Program	Year 1 of program	Year 2 of program
A. Number of WCB claims	100	90	80
B. % of WCB claims assessed to be potentially caused during lifting/handling tasks	60%	50%	50%
C. Number of WCB claims assessed to be potentially caused during lifting/handling tasks (AxB) or actual numbers (if known from incident investigations)	60	45	40

With the table above, you can provide information on the estimated impact of the program in reducing injuries potentially caused during lifting/handling tasks. You can readily see that if you considered total WCB claims, you only have a reduction of 10% of claims after year 1 and 20% after year 2; whereas, if you specify those claims which may be impacted by a Safe Patient Handling Program, you will note that there is a 25% decrease in claims after year 1 and a 33% decrease after year 2.

Program performance targets should be established for measures that are impacted by the program. The following table is an extension of the table above, but this time performance targets are established and reported on. The performance targets (rows D and E in the following table) reflect targets for reducing injuries specifically targeted by the Safe Patient Handling Program. Actual number of specific claims (row C) is compared to the targets established the year before to calculate performance in a given year (target established in 2007 used to assess performance in 2008). A cumulative performance assessment compares all future years with the pre-program year data.

	Pre-Program	Year 1 of program	Year 2 of program
A. Number of WCB claims	100	90	80
B. % of WCB claims assessed to be potentially caused during lifting/handling tasks	60%	50%	50%
C. Number of WCB claims assessed to be potentially caused during lifting/handling tasks (AxB) or actual numbers (if known from incident investigations)	60	45	40
D. Target for next year– % reduction in lift-related claims	30%	30%	50%
E. Target for next year– number of lift-related claims (C - (Cx D))	42	33	20
F. Performance = $(E/C) \times 100$ with E from last year, C from current year		93% of target reached in 2008	82.5% of target reached in 2009
G. Overall cumulative impacts (C pre-program) - (C current year) / C pre-program $\times 100$		60-45=15 $15/60 \times 100 = 25\%$ injury reduction	60-40=20 $20/60 \times 100 = 33\%$ injury reduction

This performance measure can be used for the entire organization, individual sites or departments, or for the pilot study group selected. Note that this representation of information does not take into account the total number of staff and assumes a relatively steady state for employee numbers. If your organization is expanding or annexing other facilities, or if you are expanding after the pilot project, you may consider expressing the WCB claim number relative to FTEs (e.g. 4 claims per 100 FTEs, etc.) for a more accurate comparison.

## TIER 2 METRICS

Tier 2 metrics are still lagging indicators, but provide much more information that can be used to target prevention efforts or to focus attention on specific areas/units. This data centers upon the costs per WCB claim and allows you to see the financial impact of prevention efforts. To access this information, you will need to access your own organization's WCB data using the WCB's eLink electronic system.

For those who have participated in the OH&S Leaders' Council Benchmarking Project, you would follow the directions under "Tier 2 – Fifth Measure – Costs Related to Type of Injury" and run your pivot table report looking specifically at number and costs of "inflammation of joints/muscles" and "sprains/strains" together by year. You can then either run a new pivot report or use the data to complete the following template:

Type of injury (unless there is knowledge from incident investigations of incidents related to lifting)	Pre-Program		Year 1 of program		Year 2 of program	
	Number	Total Cost	Number	Total Cost	Number	Total Cost
Strains/sprains						
Inflammation of joints/muscles						
Total						

If you know exactly which of the claims were related to lifting incidents, you can create another column on your template to include this, and sort by this information (rather than the general strains/sprains/ inflammation information). This gives you information more specific to incidents known to be targeted by the Safe Patient Handling Program. Keep in mind the limitations of this data – claims made in later years may not yet be closed and present a lower than accurate estimate of total accident costs; this may lead one to believe the program is more effective than it might be. It may be prudent to focus on numbers of claims rather than costs if using recent year data.

For those without experience in the OH&S Leaders' Council Benchmarking Project, the following information is reproduced with permission from the Guidelines<sup>26</sup>.

## Fifth Measure – Costs Related to Nature of Injury

As most Healthcare Organizations must focus on the bottom line, it is important to identify what types of accidents/incidents are currently posing the greatest financial risk. This enables a business case to be made to introduce methods to reduce these costs. Costs of incidents by type or by cause are more difficult to obtain, as this requires cross referencing information provided by the WCB (Claims summary monthly) and the organization's own incident tracking program.

In addition, it requires maintaining historical information about WCB claims, as the monthly reports only contain currently active claims information.

In the following chart, a breakdown of WCB claims by nature of injury (for Lost Time Claims – LTC and for Medical Aid Claims – MA) is provided with accompanying costs to date. This will allow management to understand costs and enable the business case to be made for corrective action. It also allows the employer to identify the most common and most costly injuries to help prioritize prevention efforts.

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26. OH&S Performance Measures – Data Collection, Analysis and Reporting Guidelines; GMS & Associates, 2007.

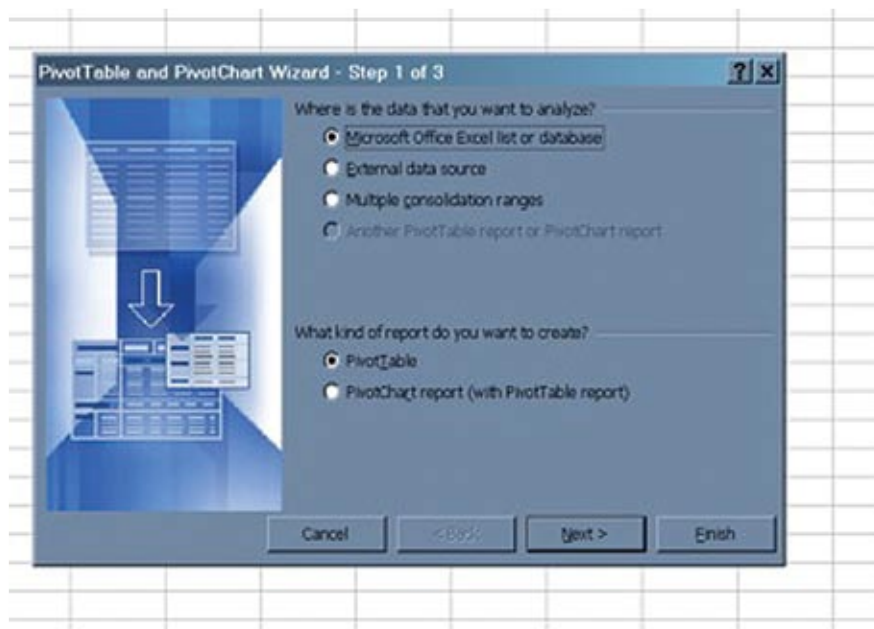
LOST TIME or MA	NATURE OF INJURY	Number of Claims	TOTAL COSTS TO DATE
LTC			
	Burns		
	Fracture/Dislocation/Nerve Damage		
	Inflammations of Joints/Muscles		
	Intracranial Injuries		
	Multiple Trauma Injuries		
	Open Wound		
	Oth System Diseases		
	Oth Traumatic Injuries		
	Sprains/Strain		
	Superficial Wounds		
LTC Count			
MA			
	Abnormal Symptoms/Conditions		
	Burns		
	Inflammations of Joints/Muscles		
	Open Wound		
	Oth System Diseases		
	Oth Traumatic Injuries		
	Peripheral Nerve damage/ Carpal Tunnel		
	Sprains/Strain		
	Superficial Wounds		
MA Count			
Grand Total			

## Where to Find the Data

The WCB on-line reporting system currently offers a Yearly claims summary that can be requested at any time in a “csv” (comma separated values) format by employers. This can be imported into an Excel spreadsheet for manipulation and reports can be produced using the “pivot report” function in Excel. The above report is an example of a report that can be obtained this way. It breaks up all claims for a specific period as either a Lost Time Claim (LTC) or a Medical Aid only (MA) claim; further, it provides the numbers of each type of claim by “nature of injury” as well as the total cost of claims by nature of injury.

The Excel template provided for this project can be used when transferring the csv report. This is how it is done: first, request the employer’s “yearly claims summary” in the csv format. Save it to your desktop. Click on the desktop icon for the saved file and choose to download it into Excel (NOT “text”). Next, once you have it, open it. Highlight all the columns except for the first two (A & B, which are the account and industry numbers) and the last one (R). While in the highlighted area, right click on the mouse and press copy. Next open the new Excel template provided and put your cursor on A 2, right click on the mouse, and press paste. Now your data is ready to be worked with.

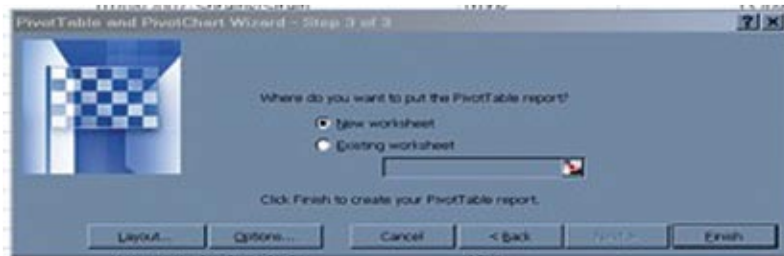
First, rename your file by selecting “Save As” under the File Tab. Type in a descriptive Title (e.g. Report of WCB costs 2007 incidents) and save the file. Next, under the “Data” tab on your Excel Template, select “Pivot Table and Pivot Chart Report”; The Pivot Table and Pivot Chart Wizard Appears:



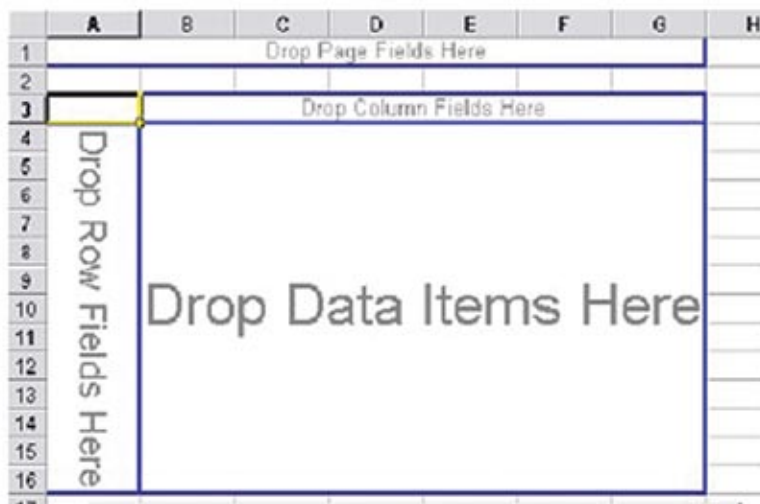
Press “next”. The next default is to include the whole worksheet as your selection, which is what you want to do:



Press “next” to continue; then select the default “new worksheet” by pressing “Finish”.



Your new worksheet should have this section in the upper left corner:



The Pivot Table Field List appears in a box on the right hand side. It includes the Column headings from the WCB Excel template. From your Pivot Table Field List, drag the “Nature of Injury” item and drop it into the left-most box (“Drop Row Fields Here”) somewhere below A4. You will see the nature of injury breakdowns in the first column. Next, click on the “Total Cost to Date” item and drag it and drop it into the large “Drop Data Items Here” Box;



Total costs are now in the second column. Third, to see the breakdown of lost time and no lost time claims, in the Pivot Field list, click on the “Lost Time or MA” item and drag it to the “Drop Column Fields Here” (place it in B3, right with the “Total” heading)

Your worksheet now looks like this (except that it includes all your cost information):

Sum of TOTAL COSTS TO DATE	LOST TIME or MA		
NATURE OF INJURY	LTC	MA	Grand Total
Abnormal Symptoms/Conditions			
Burns			
Fracture/Dislocation/Nerve Damage			
Inflammations of Joints/Muscles			
Intracranial Injuries			
Multiple Trauma Injuries			
NOT YET			
Open Wound			
Oth System Diseases			
Oth Traumatic Injuries			
Peripheral Nerve Dmg/Carpal Tunnel			
Sprains/Strain			
Superficial Wounds			
Grand Total			

Next, to create the pivot report, we will use a standard pivot report format. First put your cursor on any box in the “data” field (where you costs are). Then, go to the pivot table tool bar, which looks like this:



and click Pivot Table with the drop down box. Select “Format Report”, and choose the sample report format #2. Click on it, press OKAY and your data will be summarized as a printable report. To make the data even clearer, once you have the report, highlight the column of costs and press the \$ sign in the Excel toolbar to express the numbers as costs. The nice thing about the pivot table is that as you change or update numbers in the original database, they will be updated in the Pivot Tables also.

This WCB data can be used as the basis for many reports, including capturing the data quarterly in the current year to date information.

## INTERPRETATION

Costs related to incident type are very useful in determining incident types to target with more intense prevention efforts. The costs also lend themselves well to show potential cost savings related to prevention strategies. In addition, these values also are useful in demonstrating the effectiveness of prevention efforts by comparing pre and post implementation data.

## DISPLAYING THE DATA

Pivot reports are a useful way to present the data; there are a number of online tutorials to assist you in using these tools effectively. However, this data can also be manually collected from the Excel spread sheet by sorting and used in other reports and graphs.

## LIMITATIONS OF THE DATA

The data available from the WCB is considered accurate and can be used effectively in displaying the current status and financial risks associated with lost time claims. “No lost time” claims that do not involve medical aid or modified work are not captured in this data. The report can be requested at any time to obtain the most current information. Data will change regularly as claims are accepted, rejected, and cost relief is applied. When data is requested from the WCB, it can be accessed by date of injury or year of accident, which will be valuable in trending. Another limitation is that this data does not provide information about costs related to some parameters, such as department of root cause. However, if this information is available, it can be manually entered into the template and used for data manipulations.

Numbers of and costs of claims can also be tabulated by department to assist in identifying areas where desired results have not occurred.

Program Framework Feature	Specific activities	Target Dates	Actual Dates of implementation	% completed by target date	Supporting documentation (types, documents)
Management Commitment	Review of current status of program, including injury data				
	Develop/approve budget for program				
	Establishment of a Safe Patient Handling Policy				
	Identification, documentation of roles and responsibilities				
	Setting of objectives				
	Determine outcome measures and data collection mechanisms				
	Purchase of equipment				
	Active promotion of program by senior management				
Employee Participation	Establishment of Steering Committee or assignment to existing Committee				
	Development of Steering Committee Terms of Reference or Project Charter				

### TIER 3 METRICS

Tier 3 metrics consists of leading indicators of program success. These measures relate to the tracking of the implementation of major features of the Safe Patient Handling Program and the ongoing program monitoring. The following grid may be useful in tracking the leading indicators related to program implementation.

Program Framework Feature	Specific activities	Target Dates	Actual Dates of implementation	% completed by target date	Supporting documentation (types, documents)
	Participation in equipment selection and trials				
	Pre and post program implementation employee perception survey				
Coordination	Assignment of program coordination				
	Development of job profile for program coordinator				
Risk Assessment	Development of risk assessment tools (workplace, equipment, patient, task)				
	Determination of equipment needs				
	Development of preventive and reparative maintenance programs				
	Determine equipment replacement plan				
Biomechanical Considerations	Verification that proper biomechanics included in processes				
Training	Identification of trainers				
	Determination of training needs				
	Development of training materials				
	Development of competency assessments				
	Scheduling of training				

Program Framework Feature	Specific activities	Target Dates	Actual Dates of implementation	% completed by target date	Supporting documentation (types, documents)
	Provision of training				
	Documentation of training				
Communication	Identification/ development of patient status communication tools				
	Development of job profile for program coordinator				
	Development of communication protocols (frequency of updates, etc.)				
	Production of communication aids (logo card, etc.)				
Area Design Considerations	Determination of any interim changes to be made				
	Installation of equipment				
	Inclusion of safety considerations in new facility development or renovations				

## F. Program Progress Report

The following template may be used periodically to summarize overall program activities and general outcomes in a project progress report.

Objective or Measure	Completed <input type="checkbox"/>	Examples	Status/ Comments/ Next steps
Management Commitment Secured	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>» Policy developed</li> <li>» Budget prepared</li> <li>» Equipment purchased</li> <li>» Objectives identified</li> <li>» Roles and responsibilities identified</li> </ul>	
Employees Involved	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>» Multidisciplinary Committee established</li> <li>» Terms of reference approved</li> <li>» Pre –program employee perception survey sent out</li> <li>» Year one post-program employee perception survey sent out</li> <li>» Reports on employee perception survey results communicated</li> </ul>	
Coordination	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>» Coordinator named</li> <li>» Role of coordinator determined (job profile or statement of duties)</li> </ul>	
Risk assessment tools developed	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>» Equipment inventory completed</li> <li>» Equipment needs identified</li> <li>» Multi-year purchase plan developed</li> <li>» Patient risk assessment protocols developed</li> <li>» Workplace risk assessment protocols developed</li> </ul>	
Training plan developed	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>» Trainers identified</li> <li>» Training schedule made</li> <li>» Training equipment and materials secured</li> </ul>	
Training delivered	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>» For all current staff</li> <li>» For new staff</li> </ul>	
Area design considered ergonomic needs	<input type="checkbox"/>	<ul style="list-style-type: none"> <li>» Process requiring input developed</li> <li>» Process to provide input in place</li> </ul>	

Objective or Measure	Completed <input type="checkbox"/>	Examples	Status/ Comments/ Next steps
Outcome measures and targets determined	<input type="checkbox"/>	» Data collection mechanism put in place » Measures determined » Targets determined	
WCB claims related to lifting – target established	<input type="checkbox"/>	» % target achieved in year one » % target achieved in year two	
Other indicators:			

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Name and Position

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Signature

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Date

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Approved By

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