

HANDLE WITH CARE

Patient Handling and the Application
of Ergonomics (MSI) Requirements



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WorkSafeBC was born out of a compromise between BC's workers and employers in 1917 where workers gave up the right to sue their employers or fellow workers for injuries on the job in return for a no-fault insurance program fully paid for by employers. WorkSafeBC is committed to a safe and healthy workplace, and to providing return-to-work rehabilitation and legislated compensation benefits to workers injured as a result of their employment.

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PATIENT HANDLING AND THE APPLICATION OF ERGONOMICS (MSI) REQUIREMENTS



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Overview

The health care sector in British Columbia accounts for more worker injuries than any other sector, including forestry, construction, and transportation. WorkSafeBC statistics show that, on average, 890 health care workers in B.C. miss work each day because of work-related injuries. In the five-year period from 2001 to 2005, the direct cost of those claims was \$285 million.¹ When indirect costs are included (for example, replacing and retraining workers), the total cost of work-related injuries and diseases is much greater. In addition to the financial costs, there are substantial human costs.

Of particular concern is the manual handling of patients, which can result in musculoskeletal injuries (MSIs) such as back and shoulder strains. WorkSafeBC appreciates that the term *manual handling* may sound offensive to some people when used to describe the care of individual patients. In this context, manual handling means the lifting, lowering, holding, pushing, or pulling of patients while assisting them with their daily living activities. Patient handling activities account for almost 50% of musculoskeletal injuries in acute care and long-term care settings.

Many factors are related to the incidence of MSI among workers, including:

- Frequency, force, and postures associated with patient handling
- Design and layout of the care environment
- Availability and use of appropriate patient handling equipment
- Work organization
- Patient characteristics
- Knowledge of appropriate patient handling techniques
- Belief that back injuries are just part of the job

Research and experience show that injuries and claims costs are reduced when the risks of MSI are identified, assessed, and controlled as part of an effective occupational health and safety program.

This guide describes the process of identifying, assessing, and controlling the risks of MSI associated with patient handling. Specifically, it promotes the implementation of a “no-lift” policy (sometimes referred to as a minimal-lift or safer-lift policy) as a means of preventing MSI.

Note that this guide does not include specific patient handling techniques. It is intended to help health care employers, managers, and workers interpret and apply the requirements of the Occupational Health and Safety Regulation, specifically Sections 4.46 to 4.53, Ergonomics (MSI) Requirements (see Appendix I on page 98).

The B.C. health care community has developed considerable expertise in the safe moving and handling of patients. This expertise will continue to develop through the application of safe patient handling principles and the use of new and improved equipment.

¹ Fully Reserved Claims Costs (FRCC) include health care, rehabilitation, time loss, and pension costs paid by WorkSafeBC. Costs do not include overtime, retraining, and other indirect costs that result from injuries.

Who should use this guide

This guide is for employers, managers, and workers in British Columbia's health care sector.

Employers and senior managers are responsible for developing strategic policies and allocating resources for occupational health and safety. The information in this guide will help them ensure that their workplaces comply with legal requirements and that the duties imposed on them by statute are discharged.

Operational managers such as departmental or ward managers and supervisors are responsible for implementing health and safety policies and procedures. They will find information to help them provide healthy, safe workplaces for their workers and patients.

Workers, particularly worker health and safety representatives or joint health and safety committee members, will find information to help them assess patient handling tasks.

Occupational health and safety advisors, occupational therapists, physiotherapists, and nurses may have an influence on policy development and implementation, depending on their role within

an organization. They will find information to help them advise senior and operational managers and workers on practical methods of policy implementation and risk control.

Other professionals, such as risk managers and patient-care quality managers, will also find useful information for reviewing their care management systems. Patient care systems are designed to ensure the safety of patients while they are in the care of the facility. Such formalized systems of safety and quality management significantly assist care facilities and regional health authorities in managing the risk associated with improper handling practices that could lead to civil litigation.

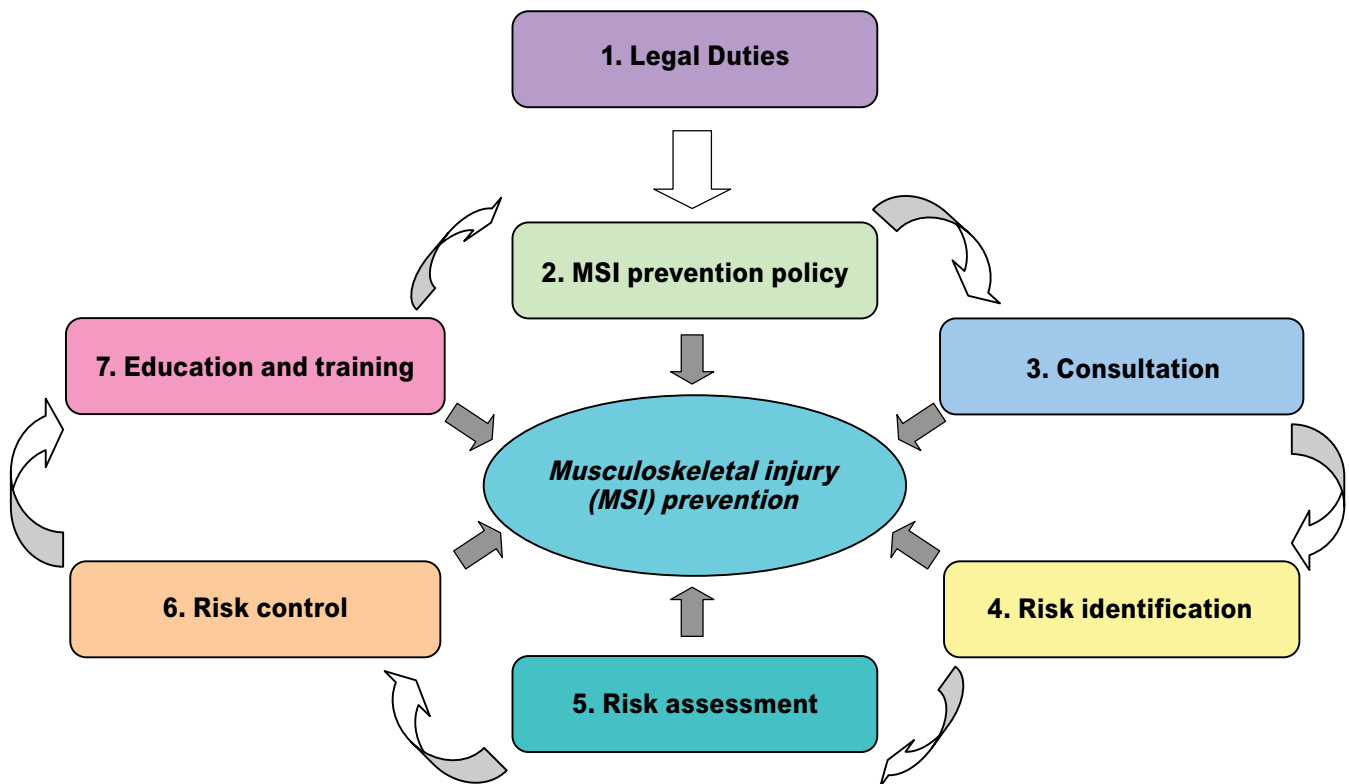
Although this guide focuses on patient handling in long-term care and acute care settings, much of the content also applies to other workplaces in which caregivers manually handle patients, such as community care and special education establishments. Many of the concepts described in this guide may also be adapted to address the risk of MSI in non-patient handling tasks.

How to use this guide

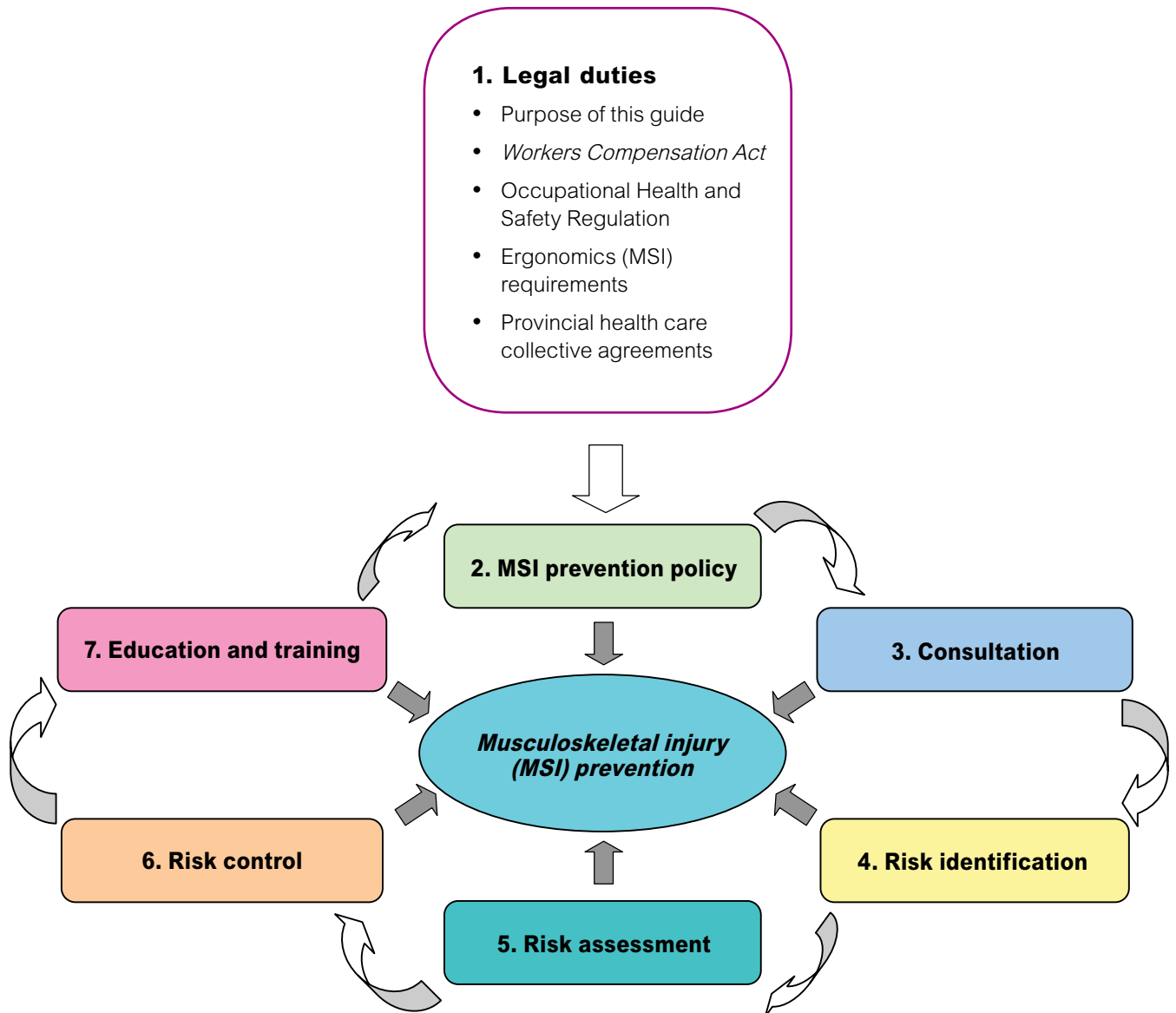
This guide includes health and safety information that will help employers and workers in the health care sector prevent musculoskeletal injury (MSI) associated with patient handling activities. The guide is divided into seven parts (illustrated below). Each part builds on the material presented in earlier parts. “Part 5: Risk Assessment” (page 25) includes four sections that describe factors to consider when performing a patient handling risk assessment.

“Forms” (page 63) contains both blank forms and completed samples of forms for risk identification and risk assessment.

This guide also contains appendices, including an excerpt of WorkSafeBC ergonomics (MSI) requirements, information on occupational health and safety programs, an example of a safe patient handling policy, a list of terms and acronyms, and a bibliography.



Part 1: Legal duties



Purpose of this guide

This guide is intended to provide advice on complying with the ergonomics (MSI) requirements contained in the *Workers Compensation Act* (the *Act*) and the Occupational Health and Safety Regulation (the Regulation). This guide is not a legal document or an instrument of WorkSafeBC policy. It does not in any way replace, limit, or alter requirements of the *Act* or the Regulation, nor does it limit in any way the ability of WorkSafeBC or its officers to apply, interpret, and enforce the *Act* and the Regulation as appropriate in the circumstances.

The information in this guide is not intended to be prescriptive—employers are free to use alternative methods, provided such methods comply with the requirements in the *Act* and the Regulation, to manage the risk of MSI within their facilities.

Workers Compensation Act

The *Act* prescribes the jurisdiction of WorkSafeBC and its authority to make regulations, inspect workplaces, issue orders, and impose penalties. The *Act* also sets out the general rights and responsibilities of employers, workers, suppliers, and others with respect to health and safety in the workplace. For example, employers have a general duty to establish occupational health and safety policies and programs in accordance with the Regulation, to have a joint health and safety committee or worker health and safety representative, and to record, investigate, and report incidents in the workplace.

Occupational Health and Safety Regulation

The Regulation expands on the general requirements of the *Act*, specifying further legal requirements that must be met by all workplaces under the inspectional jurisdiction of WorkSafeBC.

These requirements represent the minimum standards that must be achieved by employers. They include:

- Policies and procedures
- Risk identification, assessment, and control
- Education and training
- Inspections
- First aid

Some of these requirements are addressed in this guide and are included as elements of a health and safety program in Appendix II (see page 100).

The requirements are not an end in themselves but are a foundation upon which to build an effective health and safety program. (For information on health and safety programs, see the WorkSafeBC booklet *How to Implement an Effective Occupational Health and Safety Program*.)

Employers must also take steps to control risks. The greater the risk, the greater the need for specific policies, safe work practices, and other measures to control them.

Ergonomics (MSI) requirements

The Regulation specifies ergonomics (MSI) requirements in Sections 4.46 to 4.53, Ergonomics (MSI) Requirements. For example, employers are required to “eliminate or, where that is not practicable, minimize the risks of MSI to workers” (sub-section 4.50(1)). For a detailed explanation of the term *practicable*, see page 55.

Employers and workers should familiarize themselves with the ergonomics requirements because they form the basis of an effective MSI prevention policy. Appendix I (page 98) includes a complete excerpt of the requirements at the time of publication. Employers and workers should bear in mind that the Regulation is amended and updated regularly; they are advised to refer to WorkSafeBC’s Web site for an up-to-date (though unofficial) version of the Regulation. The following parts of this guide explain in more detail how to interpret and apply these requirements in a health care setting.

Employer requirements

Employer requirements include the following:

- Consult with the joint health and safety committee (or worker health and safety representative) regarding MSI risk identification, assessment, and control and evaluation as well as worker education and training (Section 4.53(1)).
- When performing a risk assessment, consult with workers with signs or symptoms of MSI and a representative sample of workers (Section 4.53(2)).
- Identify risks of MSI (Section 4.47).

- Assess the degree of risk posed to workers (Section 4.48).
- Implement control measures to reduce the risks of MSI (Section 4.50).
- Evaluate control measures to determine their effectiveness and ensure that deficiencies are corrected (Section 4.52).
- Educate workers in the early signs and symptoms of MSI and its potential health effects, and in risk control measures for preventing MSI (Section 4.51 (1)).
- Train workers in the MSI control measures that have been implemented (Section 4.51(2)).

Worker responsibilities

Worker responsibilities include the following:

- Know the MSI risk factors related to your work, as well as MSI signs and symptoms and potential health effects.
- Participate in education and training on established safe work procedures and the use of risk controls such as mechanical lifts.
- Follow MSI prevention policies and safe work procedures.
- Cooperate with your employer, joint health and safety committee (or worker health and safety representative), and WorkSafeBC officers.
- Report signs and symptoms of MSI to your supervisor and first aid attendant (if your worksite has one). You must also report unsafe acts or conditions to your supervisor. This includes a sudden change in a patient’s ability to assist with their own transfers and the failure of mechanical lifting equipment.

Provincial health care collective agreements

Collective agreements between the Health Employers Association of British Columbia (HEABC) and B.C. health care unions include provisions for occupational health and safety. In general, these agreements specify that employers and health care unions will cooperate in the promotion of safe working conditions, safe work practices, and the prevention of workplace injuries and diseases.

Specific to the prevention of MSI, the HEABC and the Association of Unions² have entered into a memorandum of understanding to work toward “eliminating all unsafe manual lifts of patients/residents” (see page 9). The memorandum substantially parallels the ergonomics (MSI) requirements in the Regulation, which are intended to “eliminate or, if that is not practicable, minimize the risk of musculoskeletal injury to workers.” The memorandum supports the development and implementation of specific policies and procedures such as those outlined in “Part 2: Developing an MSI Prevention Policy for Patient Handling” (see page 11).

Accompanying resources

Appendix I: WorkSafeBC ergonomics (MSI) requirements, page 98

Appendix II: Occupational health and safety programs, page 100

² Including the HEU, BCGEU, BCNU, CSWU, IBEW, IUPAT, IUOE, UAJAP&P, UBCJA, and USWA.

Memorandum of understanding between Association of Unions and Health Employers Association of British Columbia (Excerpt)*

Manual Lifting

The parties agree to establish a goal of eliminating all unsafe manual lifts of patients/residents through the use of mechanical equipment except where the use of mechanical lifting equipment would be a risk to the well-being of the patients/residents.

The Employer shall make every reasonable effort to ensure the provision of sufficient trained staff and appropriate equipment to handle patients/residents safely at all times, and specifically to avoid the need to manually lift patients/residents when unsafe to do so. If the use of mechanical equipment would be a risk to the well-being of the patients/residents, sufficient staff must be made available to lift patients/residents safely.

The parties agree to take the following immediate steps through the Occupational Health and Safety Agency for Healthcare to achieve this goal throughout the sub-sector.

- (a) Work in partnership with the Workers' Compensation Board, the Ministry of Health and others to establish a financing framework to make funds available to purchase the necessary mechanical equipment;
- (b) Finalize and distribute clear industry guidelines for safe patients/residents handling;
- (c) Encourage the full participation of the local Joint Occupational Health and Safety Committee in the development, implementation and on-going monitoring of this goal;

Recommend to the Ministry of Health that all new health care facilities be equipped with appropriate lifting equipment;

Produce an annual report card on the progress to date including specific recommendations for the coming year.

Signed on behalf of HEABC: Tony Collins

Date: March 17, 2001

Signed on behalf of the Association: Chris Allnutt

Date: March 18, 2001

* *This excerpt is provided here courtesy of the Association of Unions and the Health Employers Association of British Columbia.*

Part 2: Developing an MSI prevention policy for patient handling

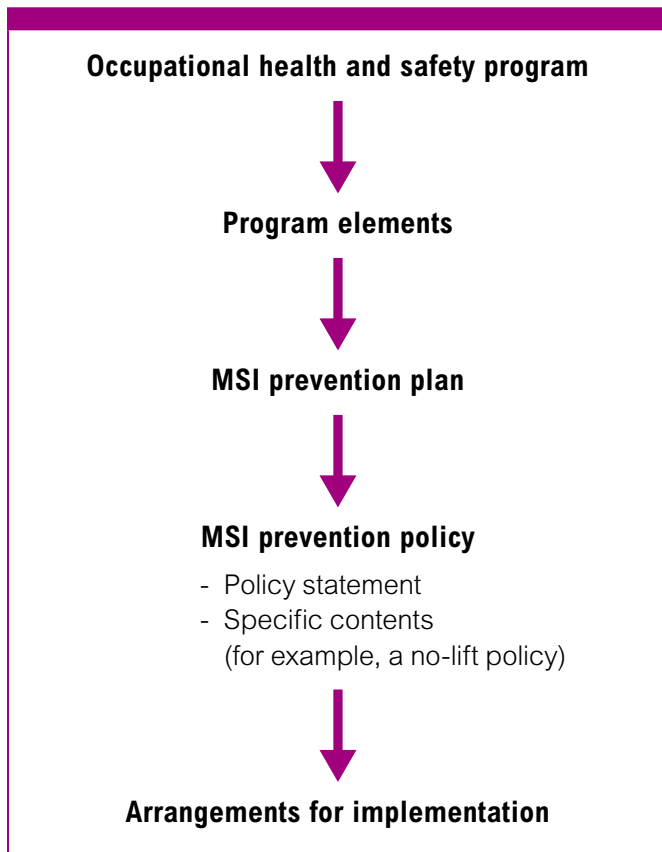


Why have an MSI prevention policy?

An MSI prevention policy is one way an organization can demonstrate its commitment to managing the risk of MSI within a facility. MSI prevention documentation can establish:

- A general MSI prevention policy for employers and workers and specific additional policies, as necessary, that focus on high-risk activities such as patient handling
- A structure that allows for allocation of responsibilities and for policy implementation

The policy is simply a tool that provides guiding principles, objectives, and goals and that allocates duties. It allows for the streamlining and enhancement of the decision-making process.



Form a team

Some facilities have found that policy development is best achieved by forming an MSI prevention policy development and implementation team. A typical team is composed of workers who are familiar with the various hazards associated with patient handling and other professionals who can provide additional guidance. The size of the team and the level of professional guidance may vary depending on the type of facility and the patient population. For typical team models, see "Consultation Models," page 19.

Develop policy contents

Once a team has been formed, a policy outlining the main terms of reference from which the team will operate will need to be developed. For a sample policy, see Appendix III on page 105.

Policy statement

When developing patient moving and handling procedures, many facilities have found it useful to write a policy statement outlining the general goals/objectives of the policy, including principles of safe moving and handling.

Other contents

In addition to the policy statement, other possible policy contents include:

- Introduction of a no manual-lifting policy (a "no-lift policy") for patient handling
- MSI reduction goals for the organization
- Resources required to meet reduction goals
- Roles and responsibilities of the administrator, supervisors, and workers involved in the strategy
- People and skills needed for the core assessment team

-
- Types of lifting, transferring, and repositioning activity permitted and not permitted within the facility (normally included in the written work procedures)
 - Expectation that workers will use the safest techniques
 - Means of communication for patient needs and handling requirements
 - Provision of resource materials
 - Safe work procedures for the evacuation of dependent patients in emergencies
 - Supervision of workers
 - Education and training of workers and supervisors
 - Maintenance procedures
 - Special handling situations (for example, for very heavy patients)

No-lift policy

In the health care sector, one of the most effective ways to eliminate or minimize many of the risks associated with patient handling is to make a no-lift policy an integral part of the overall patient handling strategy.

The Royal College of Nursing (U.K.) defines the aim of a no-lift policy as the elimination of hazardous lifting in all but exceptional or life-threatening situations.

Some proactive care facilities have already developed their own no-lift policies. These policies may have different names such as “safe lift” or

“minimal lift” but most have the same intent: eliminating manual lifting of patients by workers where it is practicable to do so and implementing suitable control measures where it is not.

Emergency planning

Certain emergency situations may require the manual lifting of some patients. Most emergencies such as fire can and should be planned for. The law states that written evacuation procedures are required in workplaces where there are persons who require physical assistance to move. It is important to consider the handling risks associated with patient evacuation. Injured workers are of little use during such emergencies and may pose a risk to themselves and others if they are not trained and instructed in what to do.

Implement the policy

After developing the contents, implement the policy. Implementation can occur in stages.

What is a *lift*?

In this guide a *lift* refers to lifting the whole or a large part of the weight of a patient. Based on this definition, some transfer and repositioning techniques may involve lifting the patient. The worker carrying out the task may not be aware that the technique involves a lift, which results in an increased risk of injury to the worker. For examples of these types of lift, see pages 35-42 of “Risk Factor Group A: Physical Demands of the Task.”

Case study: Implementing a no-lift policy

(from *Hesta Better Health and Safety Case Studies*, 1997, pp. 10–11)

Cyril Jewell House is an aged care facility which introduced a “no lifting approach” as a result of staff, management and resident consultation. The key to the success of the program is that all residents are assessed on admittance by the physiotherapist and carers and a plan established for minimizing manual handling. The emphasis is on the use of appropriate equipment for each resident taking into account risk factors, resident condition and resident/family wishes. Daily care requirements are detailed in the care plans. There is also a written handover that highlights any changes in care plans.

As a result of the program, overhead lifting systems are installed in the bathrooms and toilets while lifting and standing machines and pivot boards are also available. All beds are of the adjustable height hydraulic type.

Induction and ongoing training in safe manual handling techniques and use of equipment is provided for all staff.

The OHS objectives relating to the no lifting approach have been incorporated into the centre’s Quality Improvement Plan objectives.

Provide practicable alternatives to lifting

Employers must provide practicable alternatives to manual lifting (for example, mechanical lifts, slide sheets, slide boards with sliding discs, and other handling aids). Without alternative means of lifting, transferring, and repositioning patients, risks will remain and injuries will continue to occur.

Employers must ensure that transferring and repositioning techniques that pose the lowest risk of injury to the worker are used where practicable. The lowest-risk techniques are those that pose the fewest risk factors for the handling activity.

Inform and educate others about the policy

Inform and educate everyone who works in the facility about the contents and intent of the policy and how it affects them. Do not forget to include temporary workers such as casual nursing staff.

Managers and workers in the facility need to be clear on the intent of the policy and the implications for day-to-day management of care.

Other care professionals such as occupational therapists and physiotherapists need to know that their choices of lifting, transferring, and repositioning options follow the intent of the law (in other words, eliminating or minimizing the risk as much as practicable). Choices may vary depending on the situation, education and training of staff, and type of patient or patient population.

Some care professionals who carry out patient mobility assessments have education and training that allow them to undertake more technically demanding manual transfers successfully. However, that may not be the case for workers such as resident care aids. Therefore, any specific patient handling technique must take into account the skill and training of the workers undertaking the task.

Employers should ensure that workers are educated about their legal duties involving the manual handling of patients. For example, safer modes of lifting, transferring, or repositioning must be chosen whenever practicable.

Communication with a patient’s family may also be important. The patient and their family may need to know why manual lifting is no longer considered acceptable, particularly if the patient is accustomed to being manually lifted.

Effects of no-lift policies on patient care activities

When change is introduced into a workplace, concerns may be raised about the effects on the standard of care received by patients. No-lift principles are meant to enhance standards of care and safety for both workers and patients. They are not meant to stop contact with patients or inhibit the daily handling activities necessary for patient care. A balance has to be established to ensure respect for the clinical and personal needs of patients and safety for health care workers.

Maintain your commitment to the policy

For an MSI prevention policy to be effective, employers and workers must be committed to achieving and maintaining excellence in workplace health and safety.

Management can demonstrate their commitment to health and safety by following these guidelines:

- Commit resources to health and safety and endorse positive behaviour.
- Ensure that risk assessments are conducted where risks of injury or disease have been identified.
- Implement control measures.
- Ensure that all incidents are investigated and corrective action is implemented without delay.
- Plan health and safety activities and respond to incident trends at management meetings.
- Make regular health and safety meetings with workers a priority.
- Regularly solicit MSI prevention concerns and ideas from workers on ways to reduce risks.

Health and safety requires commitment

Although legislation helps improve safety, compliance alone does not result in an outstanding safety record. A National Research Council report³ states:

The initiative to achieve and maintain excellent safety performance must come from management . . . [since] they alone have the authority . . . to establish the policies and priorities and to communicate them throughout their organizations.

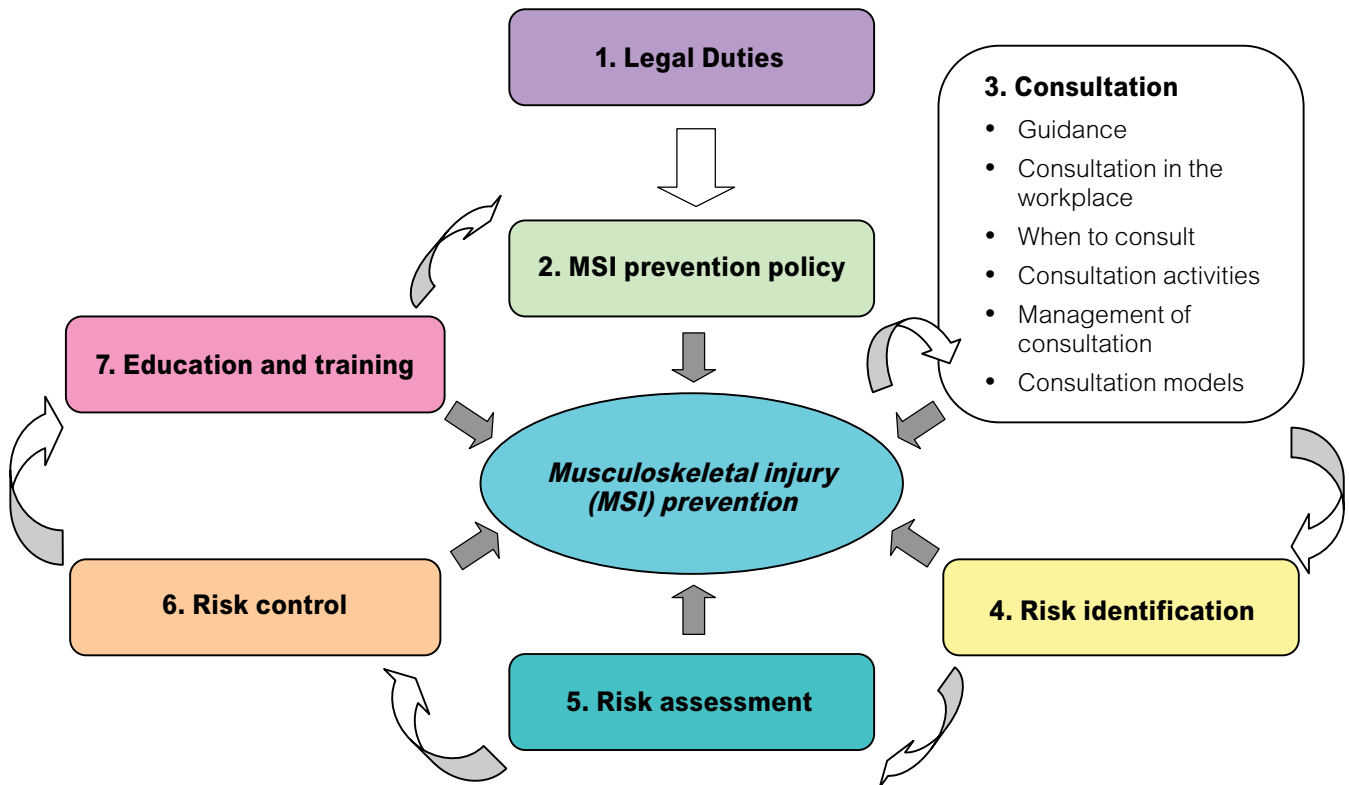
The report also emphasizes that “the best safety program in the world, developed by the most committed management, will work only if it has the wholehearted support and active cooperation of [its workers].”

Accompanying resources

Appendix III: Safe patient handling policy (example), page 105

3 National Research Council. Committee on Underground Coal Mine Safety. *Toward Safer Underground Coal Mines*. Washington, D.C.: National Academy Press, 1982.

Part 3: Consultation



Regulation excerpt

Section 4.53 of the Regulation states:

- (1) The employer must consult with the joint committee or the worker health and safety representative, as applicable, with respect to the following when they are required by the Ergonomics (MSI) Requirements:
 - (a) risk identification, assessment and control;
 - (b) the content and provision of worker education and training;
 - (c) the evaluation of the compliance measures taken.
- (2) The employer must, when performing a risk assessment, consult with:
 - (a) workers with signs or symptoms of MSI, and
 - (b) a representative sample of the workers who are required to carry out the work being assessed.

Guidance

In Section 4.53 *consult* means to seek participation from the workers and the joint health and safety committee and to solicit their input into decisions and evaluations under Sections 4.47–4.52 of the Regulation.

Subsection (1) requires the employer to consult with the joint health and safety committee (or worker health and safety representative) regarding implementation of ergonomics requirements.

Subsection (2) requires the employer to consult with the affected workers when a risk assessment is conducted regarding tasks or functions that those workers carry out. In subsection (2)(b) a *representative sample* means, in addition to workers with early signs and symptoms, a cross-section of workers, with regard for age, shift schedule, size (height and weight), gender, and work location. For example, climatic conditions can vary considerably when working with clients in their homes where icy surfaces may appear.

Consultation in the workplace

Experience shows that it is often the workers who perform a job who are the best source of information for identifying, assessing, and controlling the risks of MSI. When workers are involved in the health and safety process and asked appropriate questions, they usually provide insights into the risks associated with their work. Workers often have good ideas for effective risk controls and may provide valuable information on which controls are likely to succeed and which are not.

Consultation also provides a forum for workers to be included in the type of decision making that affects their daily work duties. This encourages worker “buy-in,” making the MSI strategy more likely to succeed.

When to consult

Consultation is a core component of an MSI prevention implementation strategy, so setting up the consultation process should be the first step in MSI prevention and an ongoing part of the strategy.

Initial consultation means forming a team or user group of people who will carry out the MSI prevention implementation strategy. Ideally, this group should include members who are experienced in patient handling activities and aware of the specific MSI risk factors associated with some patient handling techniques. The size and composition of the team will vary, depending on the type of care facility, and can be determined at the beginning of the development of the MSI prevention strategy.

Ongoing consultation means continually getting ideas and opinions from workers as well as regular feedback after changes have taken place.

Consultation activities

Consultation may include the following activities:

- Discussing safety initiatives with the joint health and safety committee and getting their feedback
- Conducting worker trials for the selection and use of new equipment and getting worker feedback
- Speaking to workers directly while they perform their jobs
- Requesting input from workers during staff meetings
- Distributing body discomfort surveys
- Forming local MSI prevention workplace core groups
- Including workers on MSI prevention implementation teams
- Conducting management interviews with workers
- Conducting an organization-wide MSI survey

Management of consultation

The purpose of consultation is to establish worker feedback on MSI risk management within the facility. The most effective processes focus on developing a facility-wide framework for MSI risk management while encouraging effective local decision making to resolve MSI issues as they arise.

The consultation process may become unwieldy, impractical, and ineffective if local, day-to-day decision making is curtailed in favour of a rigid central committee-style structure. Such a structure can stifle effective MSI risk management and risk reduction measures. This may allow unsafe acts and conditions to remain uncontrolled for prolonged periods, posing risks to workers and patients.

Consultation models

Consultation may be formal or informal, depending on the facility size and the locations of workers who will be affected. The model adapted by a facility will depend on that facility's specific needs and available resources. There are various models for setting up a consultation process, including the following examples. Any type of model requires the support and involvement of management and workers.

Joint health and safety committee model

In facilities such as some long-term care facilities the members of the joint health and safety committee may be responsible for implementing the MSI prevention strategy. Hence, these facilities may not need to form an MSI prevention subcommittee. The advantage of this model is that the same people are involved in all aspects of the health and safety program.

However, even though the joint health and safety committee may be a suitable forum for consultation, committee members may not have the necessary skills and experience to make meaningful MSI risk-management decisions.

Expert model

In some facilities, one person may oversee the entire MSI prevention strategy. In this model the joint health and safety committee develops a policy framework for the facility but relies on a professional specialist who takes responsibility for management and implementation of the MSI prevention strategy.

MSI team model

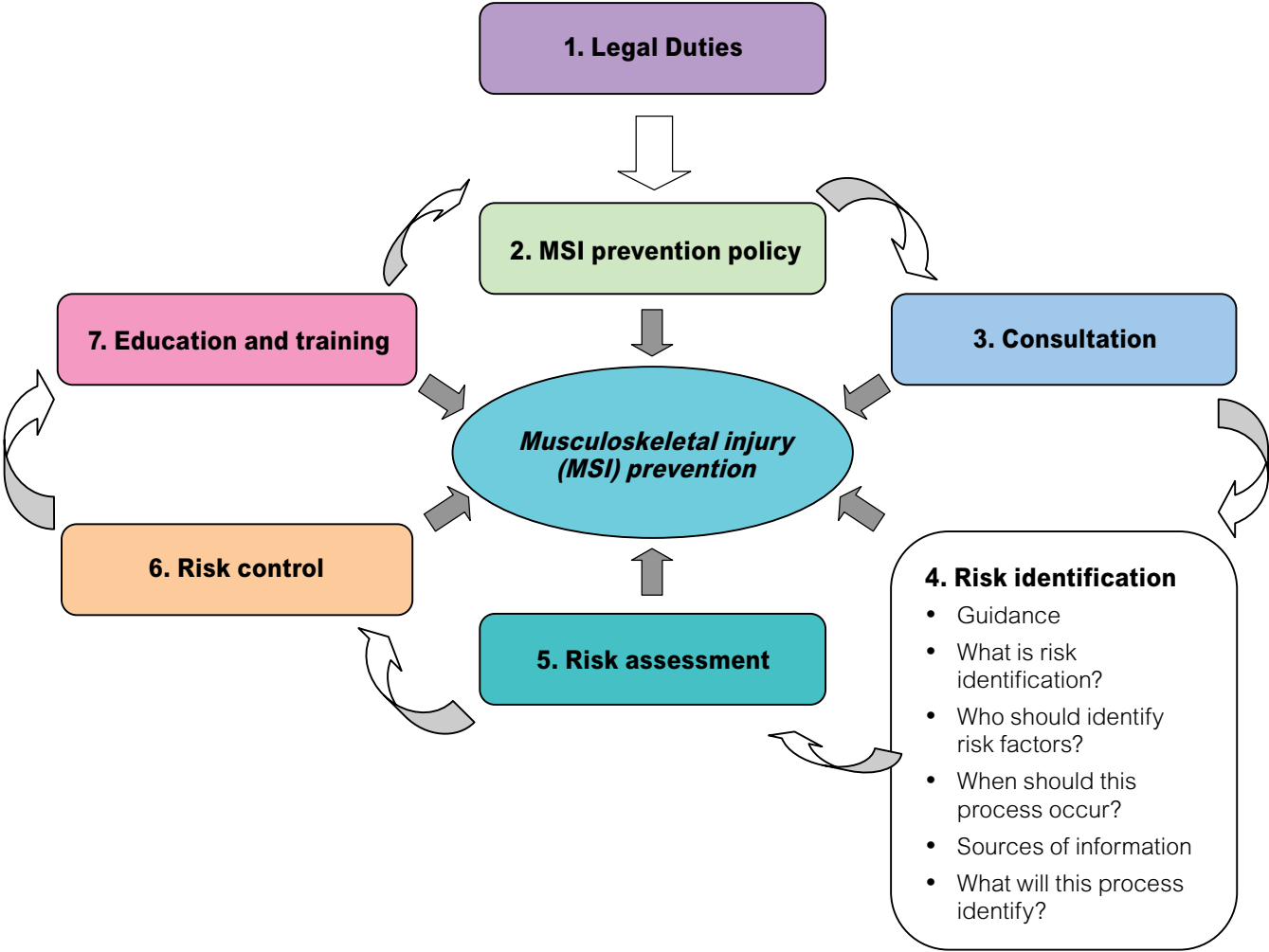
An MSI team generally includes a number and variety of specially trained care professionals with specific clinical and ergonomics skills. The team acts in a mentoring or advisory role, providing expert advice on possible risk control

options for unit-based core teams or specially trained MSI prevention champions. MSI teams can provide a forum for effective consultation and active worker involvement.

Core team or MSI prevention champion model

Core teams are similar to MSI teams but are formed primarily of frontline workers who have received specific patient handling training and who act as mentors or “champions” for their co-workers. An MSI prevention expert who is internal or external to a facility may provide specific training. This is an employee-driven model. As well as acting as training resources and mentors, members of the core team can facilitate consultation between the joint health and safety committee and workers, providing accurate feedback on the success of the MSI prevention strategy. Core teams should have a management representative to act in a coordination and leadership role.

Part 4: Risk identification



Regulation excerpt

Section 4.47 of the Regulation states:

The employer must identify factors in the workplace that may expose workers to a risk of musculoskeletal injury (MSI).

Guidance

The intent of risk identification is to establish a history of injury for all jobs or tasks that have been shown to pose a significant risk of injury or are known by observation to have significant MSI risk factors present. Risk identification enables a process of prioritization to occur that will lead to further risk management activities.

Section 4.49 of the Regulation lists the risk factors that must be considered but there may also be other factors to consider such as illumination or psychosocial factors. Psychosocial factors are the workers' perceptions of the job or work environment, including the organizational culture, social environment, and interfering noise.

What is risk identification?

Most patient handling activities may pose at least some risk of MSI to workers. Risk identification is the process of identifying the tasks and locations (for example, units, wards, or residences) within a facility that pose the greatest risks of MSI to workers based on the information available.

Risk identification can be achieved by reviewing and analyzing information such as injury statistics, incident investigation reports, and first aid reports. The desired outcome is a risk profile that prioritizes the patient handling and care tasks that will be assessed for risk control.

This prioritization first focuses risk assessment on the areas likely to contain the highest risks of MSI to workers before moving on to lower-risk areas. Without prioritization, time and effort may be wasted on risk assessments for tasks that have a relatively low risk of injury. Risk identification is important because it ensures that adequate information is gathered so informed decisions can be made and the most effective results can be achieved.

Who should identify risk factors?

Risk factors should be identified by persons who are knowledgeable of the work process and who have been trained in the recognition and interpretation of MSI risk factors. Section 4.53 of the Regulation requires that employers consult with the joint health and safety committee or worker health and safety representative during the risk identification process.

Depending on the facility's consultation model (see "Consultation Models," page 19), those persons involved in the no-lift policy development and implementation process are likely candidates for carrying out risk identification. Such persons may have a variety of professional backgrounds and are generally familiar with the work activities carried out at the facility.

When should this process occur?

Ideally, risk identification should occur proactively (before incidents occur). The process may occur whenever new patients, equipment, or activities are introduced into the workplace. Incorporate risk identification when making plans for new facilities, wards, or work practices and when planning renovations to existing facilities. Risk identification may also be included as part of regular workplace inspections. (For more information on workplace inspections, see Sections 3.5–3.8 of the Regulation.)

Risk identification may also occur reactively (after incidents occur) to establish the extent to which MSI risk factors may have contributed to an incident and to prevent similar incidents from recurring.

Sources of information

Tracking injuries enables a facility to establish a baseline, identify trends, and set goals and targets for injury reduction. The following sources may provide useful information for MSI risk identification.

Injury statistics

- Type of incident, area of body injured, days lost, and claims costs
- Task or activity performed and the location (for example, the specific ward) at the time of injury
- Greatest time loss

Note: In order for injury statistics to be useful as a source of information, MSIs should be identifiable in the injury statistics. Form 1 on page 64 uses

injury statistics to identify the areas within a facility that are experiencing the highest numbers and rates of MSIs.

Incident investigation reports

- Location where the injury occurred
- Area of the body injured
- Type of activity that caused the injury

First aid records

- Records of aggravating activities as reported by workers during first aid visits

Other sources of information may include the following:

- Consultation with workers and supervisors. Identify the tasks that they find physically demanding and request their input on how to reduce MSI.
- Staff meetings or informal discussions. Identify problematic tasks. Note that this may be difficult if the staff is unaware of the risks or believe ongoing discomfort and pain is part of the job.

What will this process identify?

The risk identification process will vary at different facilities, depending on a number of factors, including patient abilities and the types of care services provided.

Some examples of patient handling tasks that may be identified as high-risk include:

- Transferring from toilet to chair
- Transferring from chair to bed
- Transferring from bathtub to chair
- Repositioning in bed

Some examples of areas of a facility that may be identified as high-risk include:

- Bathing rooms
- Extended care wings

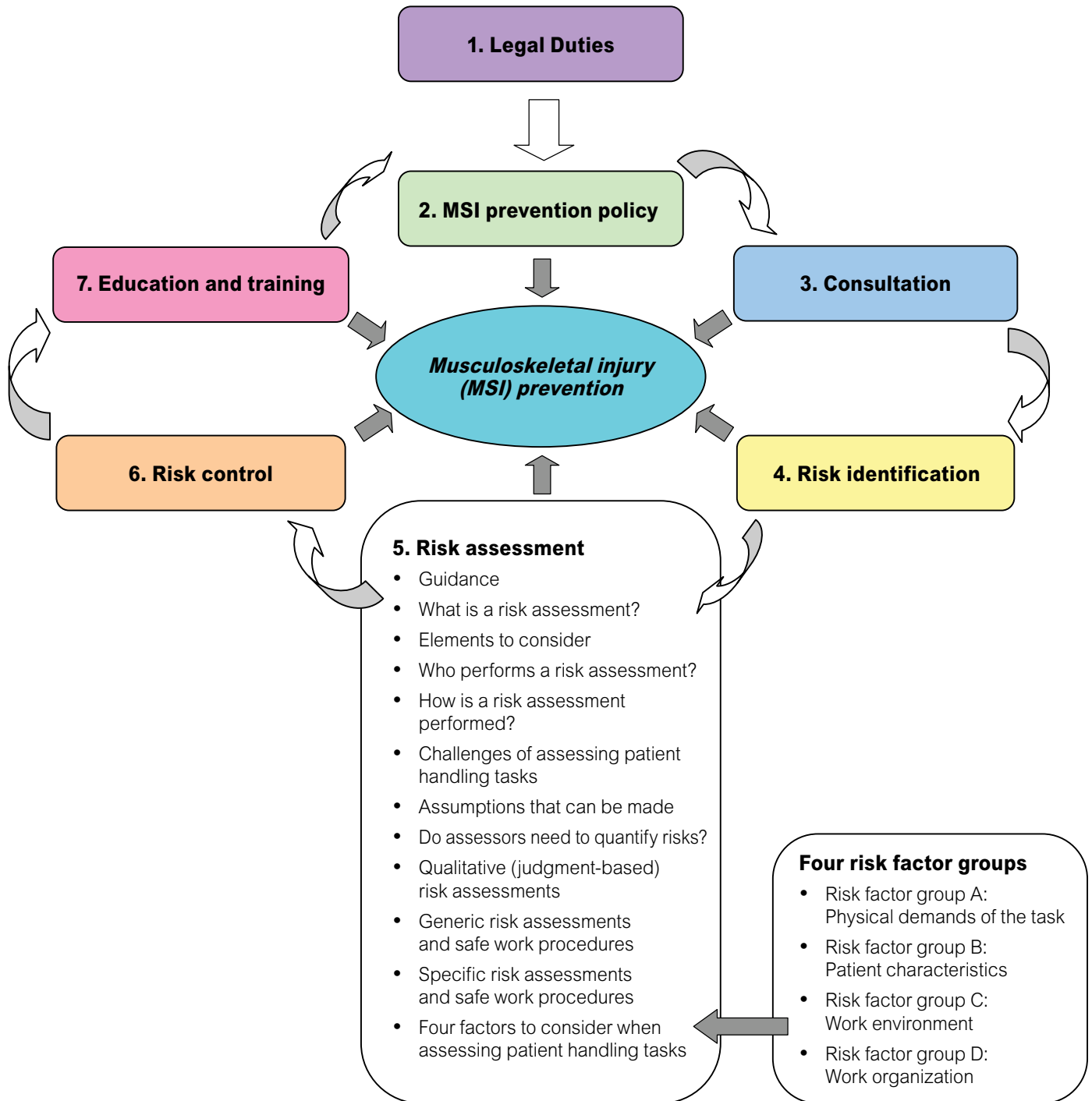
- Diagnostic units such as radiology
- Emergency departments
- Spinal units
- Orthotics departments

Accompanying resources

Form 1: (a) Patient handling: Risk identification tool using MSI statistics (completed example), page 65

Form 1: (b) Patient handling: Risk identification tool using MSI statistics (blank), page 66

Part 5: Risk assessment



Regulation excerpt

Section 4.48 of the Regulation states:

When factors that may expose workers to a risk of MSI have been identified, the employer must ensure that the risk to workers is assessed.

Section 4.49 of the Regulation states (abbreviated):

The following factors must be considered, where applicable, in the identification and assessment of the risk of MSI:

- (a) The physical demands of work activities . . .
- (b) aspects of the layout and condition of the workplace or workstation . . .
- (c) the characteristics of objects handled . . .
- (d) the environmental conditions . . .
- (e) . . . the organization of work . . .

Guidance

Significant risks identified using the risk identification process must be assessed.

When conducting an assessment, consider the applicable risk factors listed in Section 4.49 of the Regulation.

If a risk is significant, it must be controlled by providing and using a combination of work equipment and safe work procedures. Risk assessment findings will help generate new or improved work procedures to manage MSI risks.

Section 4.53 requires the employer to consult the joint health and safety committee or worker health and safety representative in the risk assessment process, as well as workers with signs or symptoms of MSI and a representative sample of workers who perform the job.

Assumptions that can be made

It is safe to assume that most patient handling tasks pose a moderate or high risk of injury. Lifting patients, even with mechanical equipment, presents a moderate risk of injury to workers. The various methods of manually lifting patients present a high risk of injury. Alternative handling measures must be provided to reduce high risks.

What is a risk assessment?

A risk assessment is an examination of the aspects of a task that could cause injury to workers. The purpose of an assessment is to help employers determine the degree of risk and establish whether they have taken sufficient precautions or need to do more to prevent injuries. Most patient handling activities present one or more MSI risk factors and, therefore, require assessment.

Elements to consider

A risk assessment should answer the following questions:

- How many workers may be exposed to the risk?
- Could the risk result in an injury and, if so, how significant is it likely to be?
- Does a task contribute to cumulative strain every time it is carried out?
- Are workers adequately protected from the risk or could more be done?
- How can the risk be reduced?

In addition to asking these basic questions when looking at the various risk factors that workers will be exposed to when handling patients, assessors should consider magnitude, frequency, and duration.

What are *hazards* and *risks*?

According to the Regulation, a *hazard* “means a thing or condition that may expose a person to a risk of injury or occupational disease.” In an MSI risk assessment, the hazards that must be assessed are known as MSI risk factors (see Section 4.49 of the Regulation).

A *risk* “means a chance of injury or occupational disease.” Risks take into account the likelihood of a hazard causing injury, who might be affected, and how serious the consequences may be.

Magnitude (how much?)

How many risk factors are present and how significant is each risk factor? For example:

- Posture—How awkward is the posture? Is the back bent forward slightly or 90°?

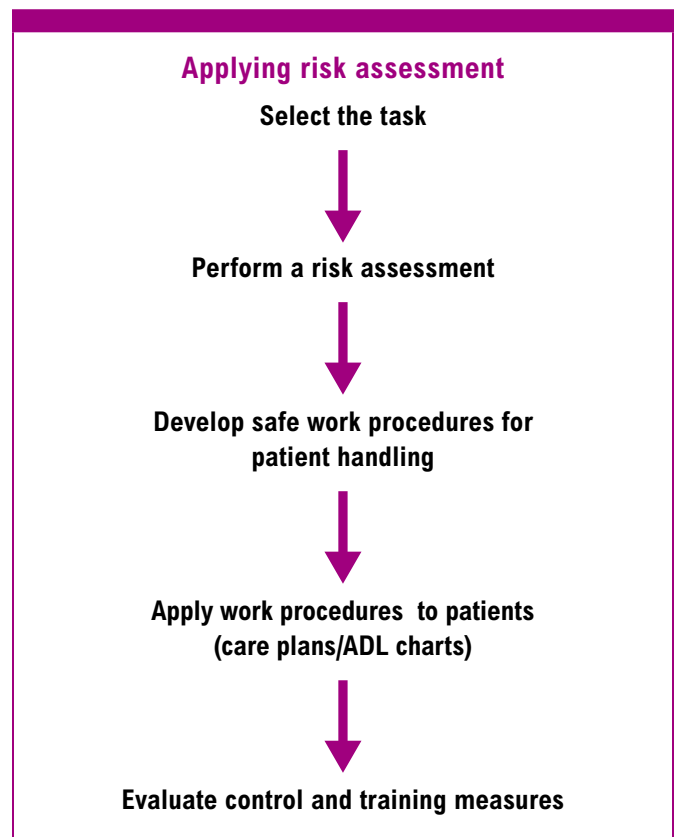
- Force—How great is the effort or level of force that the worker is applying?

Frequency (how often?)

How often are workers exposed to the risk factor? The cumulative effects of some risk factors contribute to wear and tear that may lead to injury over time. Health care workers often need to use awkward work postures and apply strong lifting, pushing, pulling, or gripping forces during patient handling and care tasks.

Duration (how long?)

How long does the risk factor last? In general, applying risk assessment the longer a posture is held or a force is applied, the greater the risk of injury to the worker.



Who performs a risk assessment?

The person(s) assigned to carry out an MSI risk assessment will depend on the facility's consultation model (see page 19). Assessors should have the following:

- **A good understanding of the physical demands of the task and the factors that influence physical demands.** Assessors should know about the primary physical demands that a specific patient handling task presents, including force, awkward postures, static postures, and repetition. Assessors must also take into account the other factors that may influence physical demands: patient characteristics, work organization, and work environment.
- **A knowledge of the work process.** Assessors should understand the work environment, work organization, and how the provision and use of various types of equipment affects the primary risk factors.
- **Education and training in risk assessment methods.** Assessors should understand where MSI risk factors arise *or could arise* within a specific task, how risk factors affect a worker's risk of injury, and what the degree of risk is. Assessors should also be aware of the options available for eliminating or minimizing the risk.
- **Sufficient time and resources.** Assessors need sufficient time and resources for risk assessment.

How is a risk assessment performed?

There are four steps in a typical risk assessment.

Step 1: Look for the hazard

What activities need assessing?

Health care employers must ensure that risk assessments are conducted for patient handling tasks that workers do or *may* do, and that are likely to pose a risk of injury. Risk assessments should be conducted for:

- Activities in which risk factors have been identified during the risk identification process
- Activities that injury statistics indicate pose a high risk of MSI to workers

Section 4.49 of the Regulation specifies the risk factors to consider.

When are risk assessments performed?

Some risk factors will need to be assessed more often than others. For example, the functional abilities of patients should be assessed as soon as practicable after they are admitted to the facility and formally reviewed whenever there is a significant change in patient status. On the other hand, the work environment may only need to be formally assessed once and then reviewed periodically to ensure that it remains accurate.

Step 2: Decide who might be harmed

In a care environment, patient care aides and nurses are probably most at risk of MSI from handling injuries, but there may be others at risk. For example, in some facilities, non-care workers such as custodial workers may be asked to assist patients who have fallen or need mobility assistance.

Step 3: Assess the risk

Once an activity has been identified, it should be divided into component tasks that will each be assessed. Evaluate the MSI risk factors that each task presents, and decide whether existing controls are sufficient or if further controls are required to eliminate or minimize the risk.

An example of a typical activity is getting a patient up in the morning. This activity consists of several tasks, including (but not limited to):

- Sitting the patient up in bed
- Moving the patient to the side of the bed
- Moving the patient out of bed and into a chair
- Transferring the patient to the toilet
- Performing patient hygiene and care such as hair brushing and dressing
- Pushing the patient's wheelchair or assisting the patient to the dining room
- Feeding the patient

Employers should also consider the overall design of the work activity. Many facilities have improved injury rates and discomfort by correcting broader issues such as work overload, staffing shortages, inappropriate patients for the care setting, feeding and care schedules, shift rotations, and assignment of workers to patients. Employers may use various tools to assist with such an assessment of the work environment. One well-known tool is the Royal College of Nursing (U.K.) Risk Assessment. Form 4, a work environment risk assessment form, is based on the RCN Risk Assessment (see page 77).

Risk assessment outcomes may include:

- Identification of excessive physical demands (the risk factors) associated with each task (for example, forceful effort or awkward postures)
- Determination of the contributing elements leading to those risk factors
- Ideas on how to control those risks

Step 4: Record your findings

Does the assessment need to be written down?

Not all assessments need to be recorded. Where the risk of injury is low or the control measure is simple to replicate, assessment findings will not need to be written down. More complex assessments should be recorded, such as those involving decisions about which handling techniques to use when mobilizing a patient. These assessments could be recorded on patient care plans or activities of daily living (ADL) charts. Written records are useful if a WorkSafeBC officer asks to review risk assessments.

How detailed does the assessment need to be?

The amount of detail in an assessment depends on the complexity of the task and the number and types of risks that workers are exposed to. Simple tasks or clearly identifiable risk factors with known and easy-to-implement risk controls may not require much detail.

Challenges of assessing patient handling tasks

Unlike other risk assessments, patient handling risk assessments must take into account interdependent hazards that will affect the overall risk of the handling task. Patient handling risk assessments present the following challenges:

- Most handling procedures present multiple MSI risk factors that act synergistically, increasing the risk of injury.
- Without the use of specialized equipment, it is difficult to quantify the force and effort required to assist and move a person.
- The force or effort required by a worker changes from patient to patient, depending on the level of patient mobility.
- The functional ability of patients can change

rapidly, which may significantly increase the MSI risk factors involved with the task.

- Assessing the physical demands of a task only addresses one group of risk factors involved with patient handling. Patient characteristics, work environment, and work organization are also important. The emphasis on these other three groups of risk factors will depend on the specific handling situation.

Do assessors need to quantify risks?

No. It is difficult to quantify the varying forces and changing postures that occur during patient handling. In addition, using numbers to assess patient handling tasks only tells us what we already know: that manual lifting poses a high risk of injury to workers. Subjective measures such as signs of manual lifting should be the main focus of any patient handling assessment, because manual lifting is the primary risk factor for injury in patient handling.

Qualitative (judgment-based) risk assessments

Qualitative risk assessments based on an assessor's training or education can result in an accurate judgment of the hazard and risk. Qualitative assessments are often easier and more practical to carry out than assigning numerical values to identified risk factors. Qualitative assessments are already widely used in the health care sector and are acceptable as long as assessors consider all the relevant MSI risk factors.

A basic principle to keep in mind when assessing risks is that even if some degree of manual handling is required, forces should be kept as low

as possible. This idea is summarized by P. Lloyd et al. in *The Guide to the Handling of Patients: Introducing a Safer Handling Policy*:

“In requiring that no patient be lifted manually” refers to lifting the whole or a large part of the weight of the patient. This does not prevent the worker from assisting the patient or exerting push, pull or upward/downward force. Such activity is acceptable as long as the forces applied are kept as low as practicable.

The risk assessment process in this guide focuses on qualitative, judgment-based risk assessment principles.

Generic risk assessments and safe work procedures

Not all tasks require unique risk assessments and safe work procedures. Generic risk assessments and safe work procedures can be applied to similar tasks.

Generic risk assessments

Generic risk assessments are general assessments that can be applied to a similar task in a variety of activities. For example, assisting a patient to a sitting position in bed is a common task. In this case, it is not practical to conduct a thorough risk assessment every time this task occurs. Instead, a generic risk assessment can be applied. The generic risk assessment will identify MSI risk factors that can be used in the development of generic safe work procedures for that task.

Some tasks that generic risk assessments may be applied to include:

- Transferring from beds to chairs
- Transferring from chairs to commodes or toilets

-
- Lateral transfers from stretchers to operating room tables
 - Getting someone who has fallen up from the floor
 - Bed mobility
 - Bathing
 - Safe use of mechanical and non-mechanical patient handling equipment
 - Emergency evacuation of patients
 - General emergency evacuation procedures

Generic safe work procedures

The significant findings of generic risk assessments can be used to develop risk controls. Generic safe work procedures are an important part of risk control measures.

It is acceptable to use generic safe work procedures derived from a risk assessment, as described above, as long as the assessment included all of the risk factors in Section 4.49 of the Regulation (see Appendix I on page 98). A written safe work procedure for patient handling should state the set of conditions under which it can be used and be prohibited from use in situations where it is not deemed suitable.

Health care facilities have been known to use handling procedures that have not been derived from any form of risk assessment. Such procedures may pose a high risk of injury to workers and patients. It is essential to assess all procedures and the techniques taught in support of them to ensure that MSI risks are minimized.

Some published or commercially available procedures include manual lifting techniques and handling procedures that do not minimize the risks of MSI to workers. Although they have been recognized as unsafe for many years, high-risk techniques such as the “chicken lift” and “cradle lift” persist and are taught and used in some facilities. If a facility uses handling procedures and protocols that advocate high-risk manual lifting, transferring, or repositioning techniques, a satisfactory risk assessment has not been carried out.

Generic handling procedures may have to be adapted to meet the patient’s individual needs and functional abilities. These individual patient assessments should be incorporated into the patient care plan and ADL chart. For more information, see “Risks posed by patients with special handling needs,” page 45.

Specific risk assessments and safe work procedures

For more challenging or less-frequent tasks, a specific risk assessment may be more appropriate than a generic risk assessment, although the generic assessment may still be used as a reference point. The generic assessment and procedure may not be suitable for the location, such as a small washroom, or for certain patients. For example, very heavy patients, aggressive patients, or patients whose medical conditions make them unsuitable for generic patient handling techniques may require specific risk assessments and safe work procedures to ensure the safety of workers and the patient.

Regulation excerpt

Section 4.49 of the Regulation states:

The following factors must be considered, where applicable, in the identification and assessment of the risk of MSI:

- (a) the physical demands of work activities, including
 - (i) force required,
 - (ii) repetition,
 - (iii) duration,
 - (iv) work postures, and
 - (v) local contact stresses;
- (b) aspects of the layout and condition of the workplace or workstation, including
 - (i) working reaches,
 - (ii) working heights,
 - (iii) seating, and
 - (iv) floor surfaces;
- (c) the characteristics of objects handled, including
 - (i) size and shape,
 - (ii) load condition and weight distribution, and
 - (iii) container, tool and equipment handles;
- (d) the environmental conditions, including cold temperature;
- (e) the following characteristics of the organization of work:
 - (i) work-recovery cycles;
 - (ii) task variability;
 - (iii) work rate.

Four factors to consider when assessing patient handling tasks

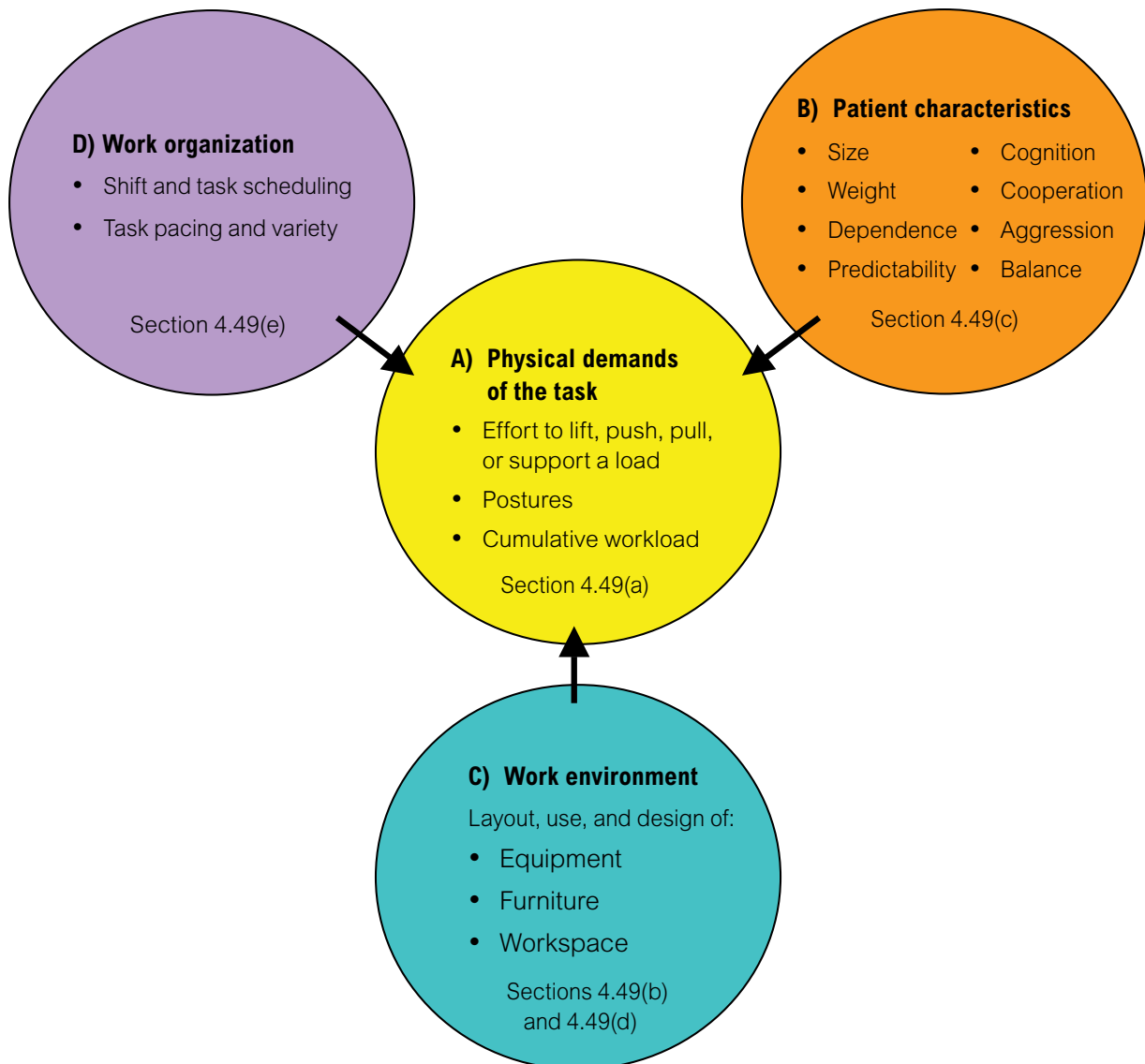
The Regulation specifies a number of factors that must be considered when performing a risk assessment for any task (see Section 4.49). These specific factors, when applied to patient handling, fall into four general risk factor groups:

- A) Physical demands of the task
- B) Patient characteristics
- C) Work environment
- D) Work organization

The first group, physical demands of the task, includes the primary risk factors that workers may be exposed to, such as excessive forces,

awkward postures, and repetition. The other three groups are also important because they can affect the level of risk posed by the physical demands of the task. All four groups should be considered in the assessment process in order to comply with the Regulation.

Although the terminology used to describe the four risk factor groups for patient handling differs from Section 4.49, the intent of the Regulation is still met. The chart below shows the four risk factor groups and references the sections of the Regulation to which they correspond.



Additional risk factors you may need to consider

In addition to considering the elements in the four risk factor groups, you may need to consider additional factors related to health care, including clothing and personal risk factors.

Clothing

Some facilities encourage workers to wear street clothing at work. Such clothing may not be appropriate for the handling activities being performed. For example, some clothing may inhibit free worker movement or prevent the worker from getting close enough to the patient during handling activities.

Adaptive patient clothing may make some patient care tasks easier (for example, dressing and toileting).

Personal risk factors for workers

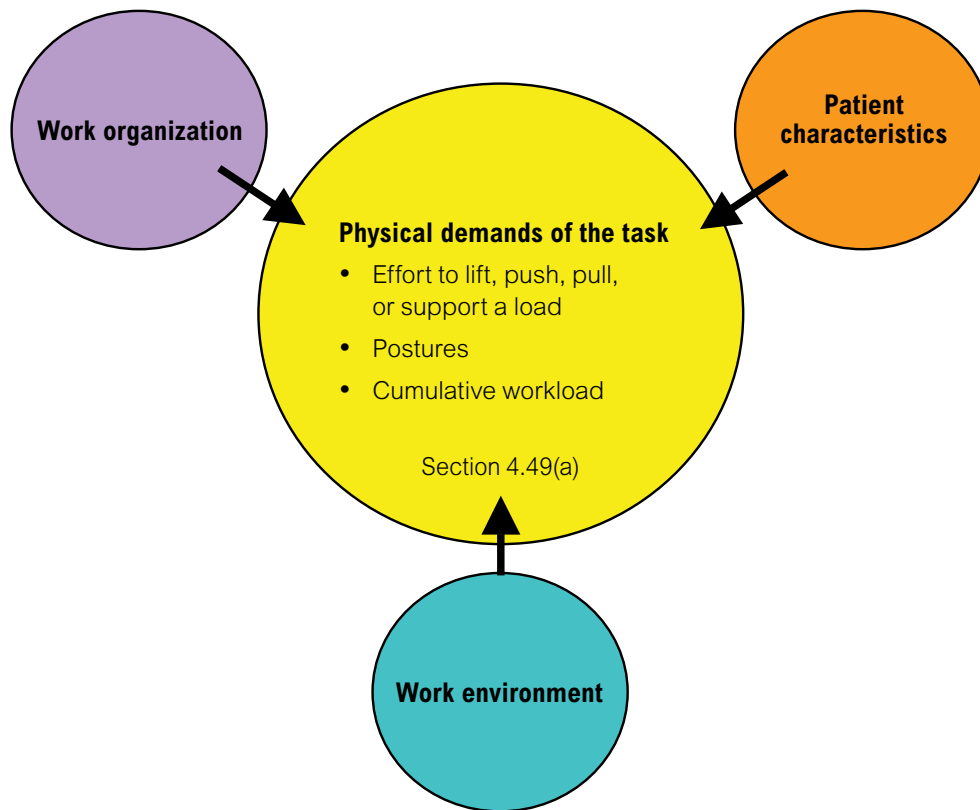
Some workers may have personal risk factors such as pregnancy that place them at greater risk of MSI.

Workers returning to work after an injury are at risk of re-injury. Disability prevention and return-to-work strategies should be employed, allowing for modified work duties to help the worker manage the injury while remaining productively employed.

Poor physical fitness can increase a worker's risk of injury. Workers are encouraged to maintain a good level of physical fitness. However, even the fittest workers can sustain injuries when the physical demands of tasks or jobs exceed the strength and abilities of the worker.

The following four sections in this part explain in more detail each of the four risk factor groups.

Risk factor group A: Physical demands of the task



Regulation excerpt

Section 4.49(a) of the Regulation states that the following factors must be considered:

(a) the physical demands of work activities, including

- (i) force required,
- (ii) repetition,
- (iii) duration,
- (iv) work postures, and
- (v) local contact stresses;

Guidance

Force refers to the effort a worker exerts to overcome the inertia of a load or to grip an object. The greater the force exerted, the greater the risk of an MSI. The types of activity that require force include lifting, lowering, carrying, gripping, pushing, and pulling.

Repetition refers to the repeated use of the same muscles with little time for rest or recovery. When considering repetition, ask these questions:

- How often do workers use the same motion or muscular effort?
- How much time does the affected body part have to recover during a given cycle or between cycles?

Duration refers to the length of time a worker is exposed to a particular risk. Duration is not an isolated risk factor; it should be considered along with the other primary risk factors.

Work posture refers to the position of different parts of the body. Awkward postures increase the stress on the muscles, tendons, and other soft tissues and decrease their strength and efficiency. Awkward postures occur when any body joint bends or twists excessively, outside a comfortable range of motion. Static postures are postures held for a long time without movement.

Local contact stresses occur when hard or sharp objects come in contact with the skin. The resulting pressure can injure the nerves and tissues beneath the skin.

What are employers required to do?

Employers must ensure that the physical demands of patient handling tasks are assessed

to establish whether or not the work poses a significant risk of injury to workers.

The following sections describe some of the risk factors associated with the physical demands of a task—force, repetition, duration, and work postures—in relation to health care activities.

Eliminating or minimizing these risk factors will reduce the risk of injury. Form 2 on page 67 outlines the physical demands of patient handling activities. Filling out this chart may be helpful during the assessment process.

What should employers do with assessment findings?

The assessment findings will form the basis of the decision-making process for the types of transferring and repositioning techniques used in your facility. You may need to eliminate some techniques and restrict others. The risk factors that the remaining techniques present will require some form of risk control. Risk control measures should be outlined in your facility's written safe work procedures for patient handling.

Note: The photographic examples in the following sections were posed by occupational therapists and physiotherapists in a controlled work environment under the supervision of professional care staff. The intent of the photos is to illustrate a few of the many MSI risk factors during handling procedures. Each of these photos is marked with a large "X" to indicate that the activity is an unsafe work practice and should be avoided. The circle shows the body part at risk. The arrows indicate direction of movement.

Force

There are three basic types of force:

- Lifting, lowering, and carrying force
- Gripping force
- Pushing and pulling force

Note: the Regulation does not include specific weight or force limits.

Lifting, lowering, and carrying force

Lifting even the lightest of objects using an awkward lifting posture can result in injury to the spinal discs and the soft connective tissues of the lower back.

In general, the greater the level and longer the duration of a force, the higher the risk of injury. The objective is not to stop patient care activities, but to minimize the forces involved as much as practicable.



Three-person manual lifts pose a high risk of injury to both workers and patients.

In addition to obvious lifting tasks such as the three-person manual lift illustrated above, transferring and repositioning tasks may also employ lifting. Often workers do not identify transferring and repositioning tasks as lifts, when in reality they are. Some of these tasks are described and illustrated below.



Transferring and repositioning tasks such as those illustrated here may require significant lifting force.

Team handling

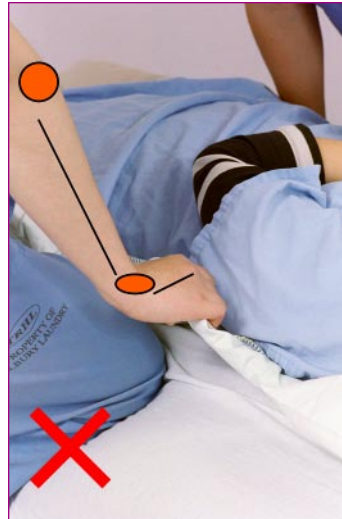
Workers in team handling situations (working in teams of two or more) often overestimate their personal lifting capacities, wrongly assuming that two people can lift twice the weight. In general, two workers can lift approximately one-and-a-half times the load of one worker. It may take at least three workers to reduce by half the force required to handle a load. Differences in worker heights may also increase the risk of injury.

Handling situations that may require manual lifting

Mechanical lifting equipment may not be practicable in situations such as emergency evacuations or where mechanical lifting is contraindicated. In cases of contraindication, carefully assess the patient and make practicable alternative arrangements to reduce the risk. Alternative arrangements could involve slide equipment or manual team lifting. If manual lifting is required, the assessment should indicate the number of workers required, the lift technique, and the increased levels of planning and supervision required to ensure a safe procedure.

Gripping force

Handling tasks that require high levels of grip force or excessive bending or sideways twisting of the wrists can cause excessive stress on the tendons and pinching of the nerves in the wrists. Lifting bulky or unwieldy loads often requires awkward positioning of the wrists.



Gripping with the palms down uses weaker muscles in the arms and results in elevation of the shoulder girdle. This puts the shoulder, elbow, and wrist joints in awkward postures under load, which increases the risk of injury.

Pushing and pulling force

Pushing and pulling may also cause worker injuries, particularly in the shoulder and upper back regions. When assessing risks, remember to consider smaller muscles that have to exert force, such as the muscles of the hands when pulling. In general, it is better to push rather than pull a load, although pushing loads may present other hazards such as restricted vision.

Floor surfaces

Carpets or rough floor surfaces increase the level of friction, which increases the force required to push a patient on a bed or in a wheelchair. Care facilities with carpeting in corridors and common areas should use low-profile carpets to make pushing and pulling easier. Uneven floors make it harder to push loads. Equipment with poorly maintained casters will also be more difficult to push or pull.



When pushing or pulling, extending the arms in awkward postures, particularly outside the range between shoulder and elbow heights, increases the risk of shoulder injuries.

Where workers have to pull loads, they should adopt a safe method of pulling or, if practicable, use mechanical equipment. In general, pushing and pulling are safest when done between shoulder and elbow heights. Working outside this range increases the risk of injury.

Repetition and duration

Frequency of repetition (how often) and duration (how long) are important risk factors in patient handling activities. The risk of MSI increases with the frequency and length of time that workers are exposed to MSI risk factors. Although the effort required to handle a single patient may be low, the cumulative effect of handling many patients during a shift may result in a greater risk than that associated with an occasional lift of a much heavier load.

Small muscles such as hand muscles often bear a considerable level of force and tire faster than larger muscles. Many care workers experience pain and discomfort in their wrists and shoulders because they lift or pull patients instead of transferring their own weight to achieve the transfer or reposition.

Frequent activity fatigues the muscles, causing discomfort and increasing the risk of injury. This is more likely to happen with holding and supporting tasks (static work) than with tasks that involve a greater level of movement (dynamic work). Decreasing handling frequency allows the muscles and associated soft tissues to recover and increases endurance time for workers.

Some patient care activities that do not fall under the standard definition of repetition may in fact be repetitive. Examples include hand cranking, remaking beds, and crushing patient medications. Repetitive activities such as these can be minimized by implementing engineering or administrative controls.

Work postures

Work postures that require any part of the body to be positioned outside its neutral position (the position of optimal strength) are considered awkward postures. In general, the more awkward the posture the greater the risk to the worker.

The presence of an awkward posture, however, does not necessarily pose a risk of MSI by itself. The risk of MSI increases significantly when awkward postures combine with other risk factors, most notably force and repetition over prolonged periods. When planning a patient move or transfer, think about what needs to be done to accomplish the task by breaking the task down into its basic elements. The following examples describe awkward postures that should be avoided.

Holding loads away from the trunk of the body

The distance of a load from the trunk of the body is an important factor when lifting, lowering, holding, and carrying. In general, holding a load further away from the trunk increases the level

of stress placed on the spinal discs of the lower back, regardless of the handling technique used.

Handling loads at awkward angles from the trunk increases stress on the spinal discs and the muscles of the lower back, shoulders, and wrists. Various patient handling activities may involve these risk factors.

Example: Moving a patient up the bed



The illustrated example presents the following risk factors:

- The centre of gravity of the load (the patient) is approximately 1 m from the base of the worker's spine. The worker's knee on the bed brings the patient closer to the worker but does not reduce the weight of the patient.
- The worker's knee roots her to the bed, so she cannot use her leg muscles to shift her weight. This means that instead of sliding the patient she will end up lifting the patient.
- The lifting force comes from the worker's elevated shoulders. In this position, the

shoulder is in an awkward posture away from the midline of the body, increasing the risk of injury.

- The lift will result in the worker twisting her lower back while supporting a load, posing a high risk of injury.

When handling loads it is best to have the load directly in front of you. Handling loads that are located to one side creates an awkward lateral (sideways) bend at the waist.

Handling loads in awkward stooped postures

Stooping or bending over, particularly for prolonged periods, puts a lot of stress on the lower back. Over time, this can pose a risk of injury, regardless of the load being carried.

You can help prevent awkward stooped postures by identifying and assessing risk factors and implementing appropriate control measures.

Example: Raising a patient from a supine to a sitting position



In the illustration the worker is grasping the patient under the axilla in an attempt to sit him up. The worker's back is in a forward bent and twisted position and she is exerting a forceful effort over the weight of the patient. This scenario presents a risk of injury to shoulders and back of both the worker and the patient.

Risk factors for the worker include:

- Forward or sideways bending of the lower back
- Lifting or pulling force

Twisting when lifting

The effects of twisting are exacerbated when combined with stooping or reaching and lifting. This causes a high level of stress and poses a high risk of injury to the lower back.

Example: Using a cradle lift to lift, transfer, or reposition patients in various settings



The illustrated example (below left) presents the following risk factors:

- The workers are manually lifting the patient.
- The workers cannot use the stronger muscles of their legs to transfer their weight. They are forced to use the weaker muscles of their shoulders.
- The lift will result in the worker twisting her lower back, posing a risk of injury.

Static or fixed postures

Some patient handling activities require prolonged physical exertion. Using awkward static postures for prolonged periods may increase the risk of cumulative injury. Static postures may pose risks to the lower back, shoulders, elbows, and wrists. Avoid work activities that require prolonged static postures or redesign them to reduce the level of exposure to the risk factor.



Exerting a prolonged force while using an awkward static posture to support a patient may strain the worker's shoulders.

Generally, the physical demands part of the risk assessment will only have to be done once either to aid in the development of safe work procedures or to assess current procedures to establish whether they pose a significant risk to workers.

A more in-depth assessment may be required if:

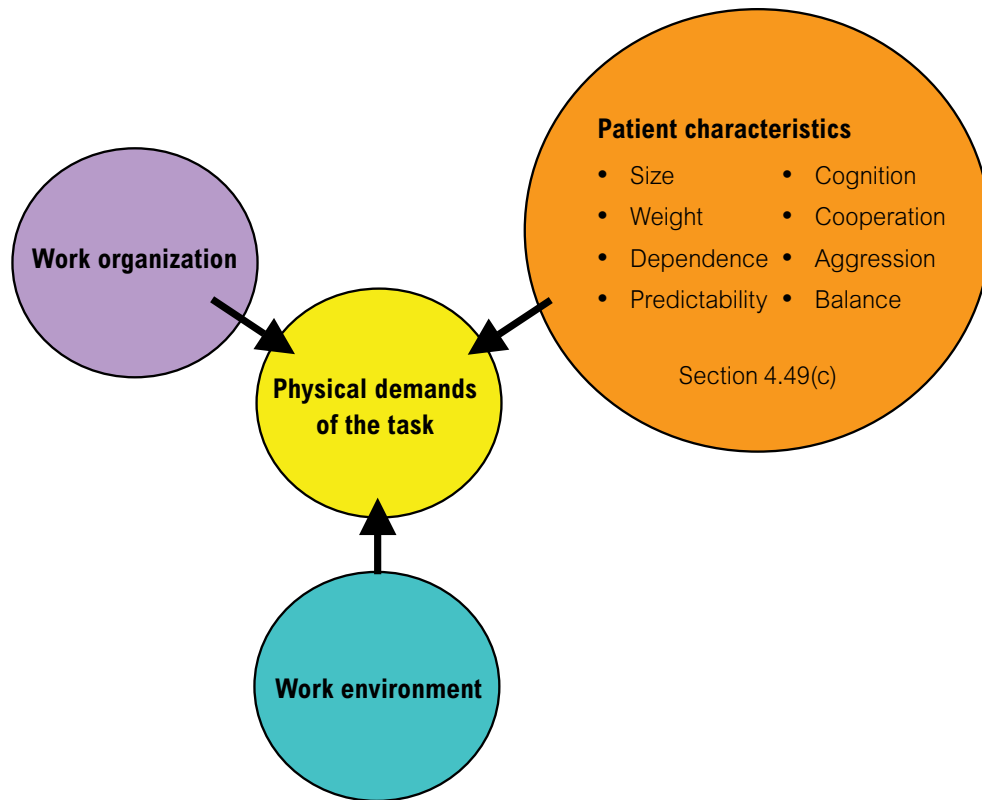
- Workers find the task(s) difficult or hazardous
- There is a change in the condition of the patient, work environment, or organization

Accompanying resources

Form 2: (a) Physical demands risk assessment (completed example), page 68

Form 2: (b) Physical demands risk assessment (blank), page 71

Risk factor group B: Patient characteristics



Regulation excerpt

Section 4.49(c) of the Regulation states that the following factors must be considered:

- (c) the characteristics of objects handled, including
- (i) size and shape,
 - (ii) load condition and weight distribution, and
 - (iii) container, tool and equipment handles;

Guidance

In health care, the “objects handled” are patients. WorkSafeBC recognizes that patients require and deserve a sense of dignity. Handling patients presents considerably greater risk than handling inanimate objects. People feel pain, vary in size and shape, and may have various clinical needs. All of these factors will influence the way that a person is handled.

Size and shape

Care workers may underestimate the risks associated with the size and shape of patients. Large or obese patients require more force to move, so mechanical equipment may be necessary. Large patients may also restrict vision and call for more awkward postures so that workers can handle or see around them.

However, relatively light patients may pose just as much, if not more, risk to workers. When a patient is heavy, workers usually know they should use mechanical lifts or other transfer assist devices. Workers may not have the same appreciation of risk with lighter patients and may attempt to manually transfer them without appropriate handling equipment or without confirming the patient’s weight-bearing status. If the patient fails to weight-bear, it may result in injury to the worker.

Load condition and weight distribution

In health care, the load is the patient. The patient’s physical condition and weight influences the risk of MSI to workers and should be considered when selecting the most appropriate handling method. It is important to establish whether the patient can assist with the transfer or whether they are totally dependent.

Aspects to consider include cognition, functional ability, predictability, aggression, and frailty.

When do patients need to be assessed?

Carry out patient handling assessments wherever patients need help moving. Assessments should be recorded as well as referenced and updated as patient status changes.

Patient care plans and activities of daily living (ADL) charts

The functional capabilities of patients may vary depending on the time of day or type of activity. Patients should be assessed so workers have enough information about their functional abilities to safely assist them to the extent required. Patient assessments can be incorporated into patient care plans or activities of daily living (ADL) charts. Form 3 provides a sample chart for assessing an individual patient’s handling needs (page 74).

Workers should have easy access to the patient handling information in the patient care plan or ADL chart, without violating patient privacy and confidentiality. Significant changes to the handling aspects of a care plan should be clearly documented and communicated to workers. In some cases (for example, with some elderly patients), this may mean having a separate ADL chart for day and night because the patient’s mobility may change. The facility should have an established procedure to ensure that patient handling information is documented and available to workers.

The handling plan should accurately reflect the functional abilities of the patient and avoid

ambiguous symbols or statements such as “heavy two-person transfer.” Conduct periodic reassessments or care conferences as often as necessary to ensure that the handling plan remains accurate.

Who completes patient care plans and ADL charts?

The person who assesses patient handling needs is typically a competent care professional such as an occupational therapist, physiotherapist, or another trained person such as a nurse. In most cases, specialist care professionals such as occupational therapists and physiotherapists are not responsible for the health and safety of other workers; their focus traditionally has been on the clinical care of patients. Therefore, it is important to ensure that those workers responsible for assessing patient handling needs have sufficient knowledge and skills to include the safety of the worker in the assessment.

If a worker is injured during a handling operation, the patient may also be injured. For this reason, assessors should know about the intent of the law and the expectations of the facility’s handling policies.

Risks posed by patients with special handling needs

Generic handling procedures may not meet the individual needs of some patients because of their clinical condition. In such cases, special handling arrangements are necessary. Advice from specialist care professionals such as occupational therapists or physiotherapists may be required. *In these special situations, risks must still be eliminated or minimized as much as practicable.*

What handling criteria should be included in the patient care plan or ADL chart?

Workers need to know what patients are capable of doing by themselves and should have as much information regarding recommended handling procedures for the patient before handling activities occur. Simply saying that a patient requires a “twoperson moderate assist” does not convey the handling needs of the patient and may lead to misinterpretation by the worker. A physiotherapist’s interpretation of a “moderate assist” may differ from a care worker’s. The criteria for patient assessment and the communication of assessment information needs to be presented so workers are able to understand the assessment and conduct handling activities safely.

Brief assessments by workers before patient handling activities

A patient’s functional ability may change depending on the time of day, the amount of activity performed, and their current medical condition. Where a patient needs assistance with mobility, workers should conduct a rudimentary assessment before each handling activity, particularly patient transfers.

The extent of this “assessment,” or observation, is not the same as that expected of specially trained care staff. However, the worker should be able to make a basic evaluation of the functional abilities of the patient that confirms whether or not the handling recommendations on the patient care plan or ADL chart are still safe. Workers should not proceed with a transfer if there is doubt about the patient’s ability to perform that specific

method of transfer safely. In such cases a safer, alternative method of handling such as the use of a mechanical lift is required.

This concept is best summarized in *Reference Guidelines for Safe Patient Handling*, by the Occupational Health and Safety Agency for Healthcare in British Columbia (OHSAH):

Because the conditions that indicate risk are always changing, even between one care giver and one patient/resident throughout that care giver's shift, the best risk assessment will be the risk assessment that is specific to that care giver and to that patient/resident, and is undertaken just before the handling is to be performed.

A detailed description of a pre-handling assessment is beyond the scope of this publication. However, the following general points are examples of patient characteristics the worker may observe:

- Weight-bearing ability
- Lower body strength (bridging ability of the patient)

- Upper body strength (ability to support upper body and head)
- Cognition and comprehension
- Predictable behaviour
- Ability and willingness to follow instructions

The instructions provided on a patient care plan or ADL chart constitute written work procedures derived from the significant findings of a specific handling assessment. Therefore, workers should follow such instructions unless their observations of the patient's condition suggest it is unsafe to do so. In such circumstances workers should inform their supervisors and appropriate action should be taken to eliminate or minimize the risks. This may include reassessing the patient's handling needs and updating the patient care plan or ADL chart.

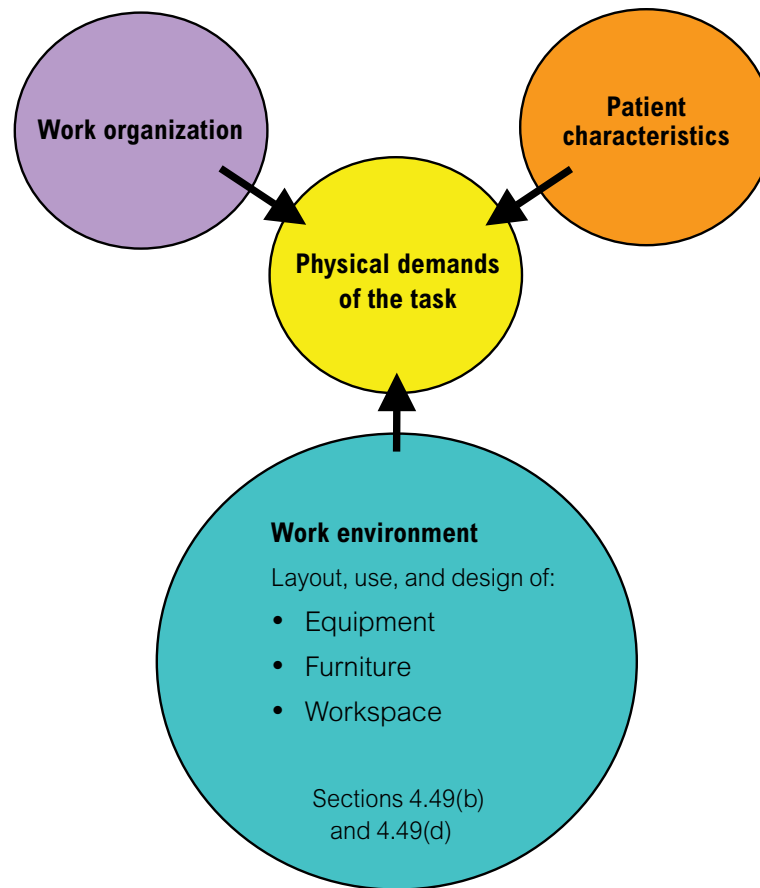
The worker's brief assessments that do not indicate a change in the patient's functional capacity do not normally need to be recorded.

Accompanying resources

Form 3: (a) Assessing the patient's handling needs: Mobility chart (completed example), page 75

Form 3: (b) Assessing the patient's handling needs: Mobility chart (blank), page 76

Risk factor group C: Work environment



Regulation excerpt

Sections 4.49(b) and 4.49(d) of the Regulation state that the following factors must be considered:

(b) aspects of the layout and condition of the workplace or workstation, including

- (i) working reaches,
- (ii) working heights,
- (iii) seating, and
- (iv) floor surfaces;

...

(d) the environmental conditions, including cold temperature;

Guidance

Risk assessments must include characteristics of the work environment. This requires an assessment of the physical work environment, including aspects of the design of the workplace and equipment that could contribute to the risks of MSI.

Why do work environments need to be assessed?

The objective of a work environment assessment is to ensure that the generic handling procedures developed by a facility can be applied safely in the workplace.

Here are some examples of how the layout and condition of a work environment can affect the physical demands of patient handling:

- Rooms, bathrooms, hallways, and other spaces may be small or crowded, or may contain obstructions that prevent workers from using optimal postures.
- Heights of patient transferring points such as beds, chairs, or toilets may result in awkward postures.
- There may not be enough mechanical lifts, slide equipment, or other transfer assist devices to ensure that all workers have ready access to them.
- Manual cranks or hard-to-reach controls on beds, chairs, or handling equipment may discourage workers from making the necessary adjustments, resulting in awkward postures or forceful exertions.
- Poorly maintained wheels may make moving and positioning beds and wheelchairs difficult.
- Missing or faulty brakes may cause beds or chairs to shift during transfers.
- Some equipment and furniture may not allow for the use of safe work procedures.
- Uneven or slippery floors (for example, in tub rooms) may increase the risks of MSI.
- Poor lighting may disorient patients and result in patients or workers losing their footing.
- The position of beds and other furniture or equipment may not reflect the needs of the facility's written handling procedures.
- Doorways may not be wide enough for equipment such as mechanical lifts.

Case study: Two-person transfer in a washroom

A care worker was injured while she and another worker were helping transfer a patient from a wheelchair to an ensuite toilet. During the transfer the patient lost her balance and started to fall. The care worker attempted to catch the patient and in the process injured her lower back.

The incident investigation found that the patient had not been assessed before the transfer and failed to weight-bear during the transfer. This incident was made worse by the restricted work environment, which forced the workers to use awkward postures while attempting to steady and support the patient as she fell.

This incident could have been prevented. A risk assessment could have helped identify the hazard, and appropriate risk control measures could have been developed, implemented, and recorded on the patient care plan and ADL chart.

Who completes work environment assessments?

The joint health and safety committee could complete this component of the risk assessment process using a work environment risk assessment form (see Form 4 on page 77). Significant findings can then be included in patient care plans and ADL charts.

Work equipment

Work environment risk assessments should include work equipment. Workers need to use mechanical handling aids, slide technology, and other assistive devices to assist patients who are unable to move themselves. Such equipment should be readily available so workers will use it.

How can I conduct a work environment risk assessment?

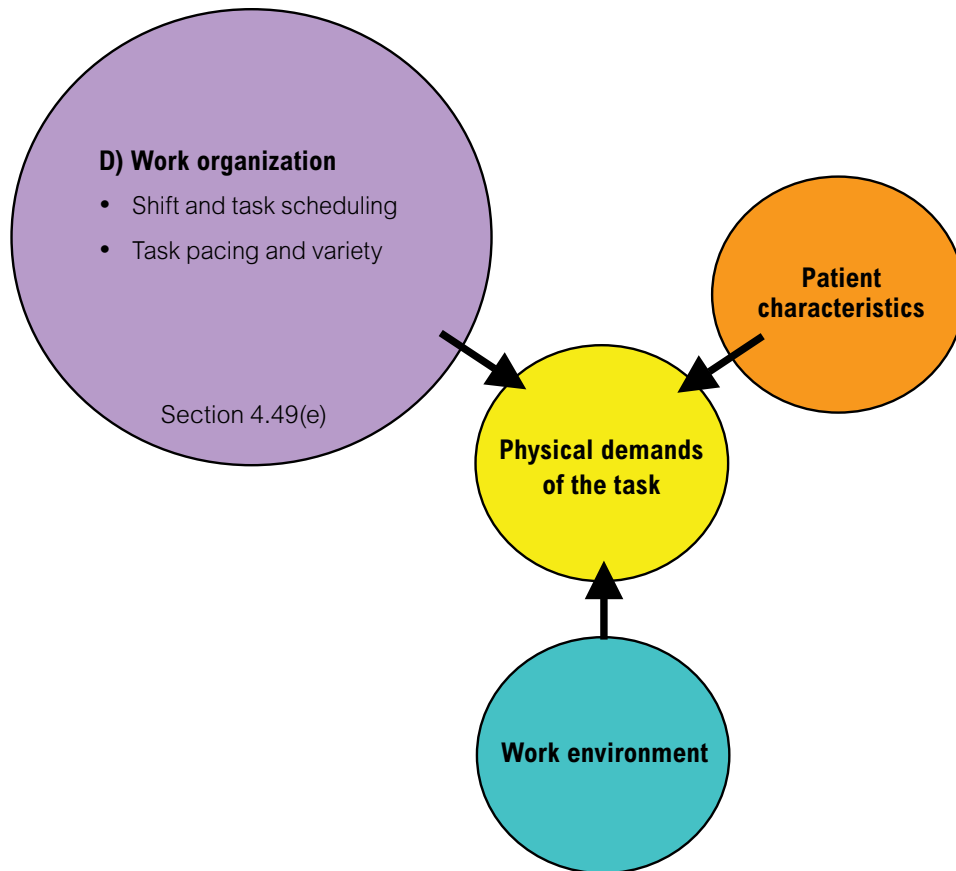
A work environment risk assessment form can help guide an assessment by focusing on the effects of environment and equipment on work activities that are carried out in specific areas of wards or residences. The form also assists in the inventory of equipment, including equipment location and condition. Employers and joint health and safety committees can use this information to assist in the development and use of generic work procedures. Assessments may also be used to develop immediate, medium, and long-term plans to address the risks identified.

Accompanying resources

Form 4: (a) Work environment risk assessment (completed example), page 78

Form 4: (b) Work environment risk assessment (blank), page 87

Risk factor group D: Work organization



Regulation excerpt

Section 4.49(e) of the Regulation states that the following factors must be considered:

(e) the following characteristics of the organization of work:

- (i) work-recovery cycles;
- (ii) task variability;
- (iii) work rate.

Guidance

Work recovery cycles

Work recovery cycles are opportunities to periodically rest body parts that perform physical activities. Insufficient recovery time increases the risk of injury.

Task variability

Tasks that are performed repeatedly over a prolonged period can result in overuse or stress of muscles or other soft tissues. The longer workers perform tasks, the greater the risk of injury.

Work rate

Work rate refers to the speed with which a task is carried out. Excessive work rates lead to fatigue, poor technique, and increased risk of injury. The effect of high work rates on soft tissues can be mitigated by rotating jobs or using different body parts to perform tasks.

Why is work organization important?

The way in which work is organized can affect the risk of MSI. For example, jobs that involve frequent handling activities with little variation or many separate tasks with similar postures, such as washing and dressing a patient, may lead to chronic overuse of specific muscles and associated soft tissues, increasing the risk of injury. Care activities such as bathing and getting people up are often concentrated in the morning.

Current research indicates that the cumulative effects of heavy lifting in care environments pose a significant risk of chronic overuse and damage to the soft tissues of the lower back and other areas of the body. Managers should

take such risks into account and design jobs to mitigate the risks associated with patient handling activities. Workers should use whatever flexibility and autonomy they have in their jobs to plan their days so that body parts have time to rest between tasks.

How can work be reorganized?

Facilities can reduce risks by reorganizing work tasks. Consider the following examples:

- Whenever possible, bring care to the patient rather than moving the patient.
- Improve planning and assessment to eliminate unnecessary patient handling (for example, by reducing the number of transfers required in a given activity).
- Spread handling tasks as evenly as practicable over the work shift and among staff.
- Expand jobs by increasing the variety of tasks each worker performs.
- Ensure that workers take adequate rest breaks. It is generally better to take frequent, shorter breaks or pauses in a work cycle than infrequent, longer breaks.

Note: A “break” in this context does not necessarily refer to stopping work; it may include periods of light duties or alternative tasks that enable stressed body parts to recover.

Case study: Improving work organization—Reducing risks without compromising care

Mount Saint Joseph Hospital's Long-term Care Unit is a 122-bed facility, in Vancouver, B.C., comprising part of the Providence Health Care Group of acute and long-term care facilities. The unit cares for long-term care residents.

Donna McBride took over management of the long-term care unit in 1997. The unit had a history of high absenteeism because of injury and sickness combined with low morale. Amalgamation of departments had resulted in a mix of staff heavily weighted toward registered nurses (RNs). Donna realized that the demands of the work had to be better managed. In short, the unit had enough staff but the wrong classification for the jobs at hand.

First the staff mix was reorganized to improve the ratio of resident care workers to residents. Staff shift rotations were examined and modified to ensure that sufficient workers were available at times of greatest need, such as mornings. There were part-time and casual workers who wanted to be full-time.

A system of modular care was also introduced. This involved consistent assignment of RNs and resident care aids (RCAs) to specific residents. This provided consistency of care and allowed for a certain degree of predictability for workers when mobilizing their clients. Workers were assigned to work in teams and not just pairs to encourage change in the safety culture of the facility and to use peer pressure to do the job safely and properly.

New client handling equipment was tested and introduced to the unit. No-lift principles were also adopted and made an expectation by management and workers alike.

Next, client mobility programs were examined to provide a "needs model" that would answer the question: What does the therapy need to achieve? In addition, outcomes were now to be measured.

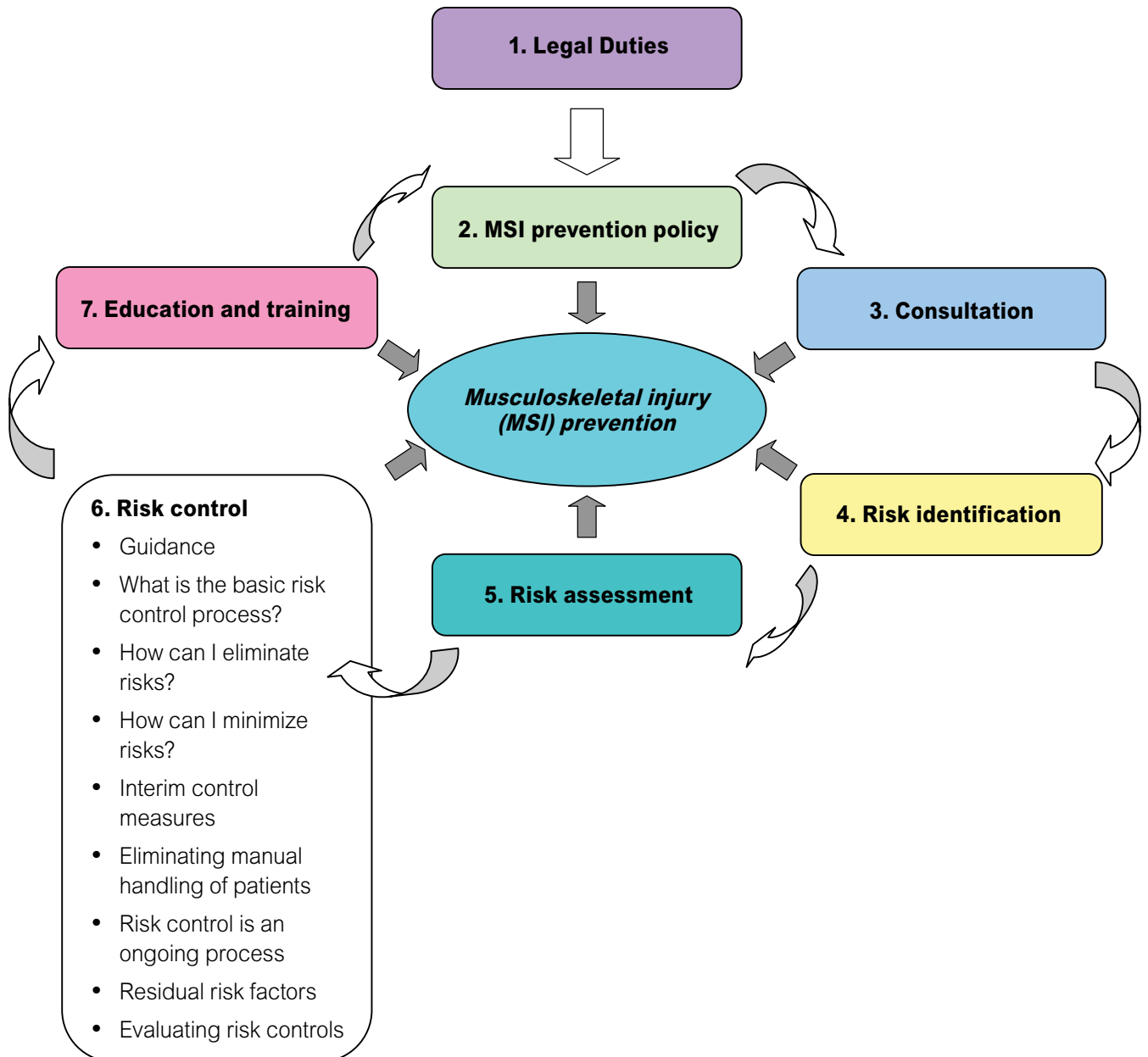
A high percentage of rehabilitation workers were being injured while mobilizing some of the clients. All rehab programs were suspended, unless they were considered absolutely necessary for the client. The standing and walking program was re-evaluated to ensure that it was providing the necessary therapy for the clients that were likely to benefit from such a program. Other client rehab programs were further intensified.

The RCA job description was changed to allow them to walk the more ambulatory (lower-risk) clients. Rehab assistants were assigned more dependent clients. This resulted in an enhanced ambulatory program with greater numbers of clients receiving attention.

Client activities such as bathing were altered, allowing some residents to be bathed in the evening as opposed to the morning.

Workers at the facility now have improved morale and better equipment and support to do their jobs safely. These changes have led to significantly lower injuries and an improved level of client care.

Part 6: Risk control



Regulation excerpt

Section 4.50 of the Regulation states:

- (1) The employer must eliminate or, if that is not practicable, minimize the risk of MSI to workers.
- (2) Personal protective equipment may only be used as a substitute for engineering or administrative controls if it is used in circumstances in which those controls are not practicable.
- (3) The employer must, without delay, implement interim control measures when the introduction of permanent control measures will be delayed.

Guidance

Engineering controls include the arrangement, design, or alteration of the physical work environment, equipment, or materials. Modifying the work environment is an example of an engineering control. Mechanical lifts, ceiling lifts, and beds are also engineering controls.

Administrative controls include the use and scheduling of resources and staffing to improve work organization and performance. Examples include developing safe work procedures, training workers, and matching staffing levels to workload.

Personal protective equipment (PPE) generally does not apply to the prevention of MSI in patient handling. The use of back belts to reduce the risk of injury remains unproven, so WorkSafeBC does not consider back belts to be PPE.

Section 4.53 of the Regulation requires the employer to consult the joint occupational health and safety committee or worker health and safety representative in the risk control process. Section 4.52 requires the employer to evaluate the effectiveness of the controls.

Section 3.4 lists the contents of an incident investigation report. Employers are required to identify factors that contributed to an incident and to document the controls to be implemented.

What is the risk control process?

Effective risk control requires an effective risk assessment. Risk assessments provide the information needed to determine risk control measures. For more information on risk assessments, see “Part 5: Risk Assessment,” page 25.

After identifying and assessing risks, decide which risks should be addressed first and what control measures they will require. Next, determine the range of available risk control measures. During this process, it is important to involve all persons who may be affected by the decisions or who may be able to provide insight based on previous experience.

Employers must eliminate or minimize risks, whenever practicable. In general, decisions will result in these three actions:

1. Clearly identify and communicate to workers high-risk procedures that should not occur.
2. Select the lowest-risk procedures possible for workers to use. This means selecting procedures that duration, and frequency of identified risk factors.
3. Where necessary, change the equipment, the work organization, or, if necessary, the work environment.

What does practicable mean?

Requirements for risk control are stated in terms of what is practicable. *Practicable* is defined in the Regulation as “that which is reasonably capable of being done.” When determining what is practicable, consider:

- The level of risks that workers are exposed to
- How often workers perform the tasks that pose significant risks
- The availability of suitable control measures
- The cost-effectiveness of controlling risks

Although risk control measures may be minimize the magnitude, expensive, they may still be practicable for the employer to implement. For example, mechanical lifting equipment may be expensive initially but the risk reduction benefits, compared to manually lifting patients, may significantly outweigh these costs.

What is practicable may also change over time. Certain devices or equipment may become practicable as they become more widely available or less costly.

How can I eliminate risks?

The following patient handling guidelines may help eliminate risks of MSI to workers:

- Eliminate unnecessary patient handling.
- Encourage patients to assist in their own transfers as much as they are safely able.
- Install appropriate patient assistive devices such as grab bars or rails to help the patient be more independent.
- Use mechanical equipment such as ceiling lifts or electric beds to eliminate the need for strong manual forces.
- Use electric beds to eliminate handling procedures such as sitting up in bed.
- Design new facilities with patient handling needs in mind.
- Do not perform the task if a safe solution is unavailable. Use an alternative work method until a safe solution is provided. If necessary, you may have to care for the patient in bed until appropriate equipment is available.

How can I minimize risks?

The following patient handling guidelines may help minimize risks of MSI to workers:

- Use height-adjustable beds and specialized feeding tables to avoid awkward postures.
- Use slide boards, transfer boards, or slide sheets to reduce forces and awkward postures.
- Develop safe work procedures that reduce the risks of MSI to workers to the lowest possible levels and ensure that workers follow these procedures.
- Train workers to improve their technique.
- Ensure that patient assessments are kept up to date.
- Observe the patient’s condition before each transfer to ensure that the designated transfer can be performed safely.
- Change the workplace layout or the organization of tasks to reduce distances for pushing and carrying tasks.
- Store heavy items at more convenient heights.

-
- Modify tasks to reduce the amount of time workers spend stooped over.
 - Modify or reorganize tasks to increase variety.
 - Share or rotate tasks among workers.
Note: This only applies to reducing the repetition of tasks that are otherwise safe. Sharing or rotating will not turn an unsafe lift into a safe one.
 - Install ramps so that stretchers, carts, and wheelchairs can be moved easily.
 - Use improved handles, wheels, or castors to help reduce the amount of force needed to move a load.
 - Implement a preventive maintenance program for the moving parts of equipment.

Interim control measures

Sometimes the necessary health and safety actions or equipment cannot be implemented immediately. If this is the case, interim control measures must be implemented to establish a safe system of work.

For example, a risk assessment may determine that a patient requires a height-adjustable bed. During the time it takes to free up or purchase a height-adjustable bed, the following interim control measures could be implemented:

- A hoist or slide board for transfers to and from bed
- A fabric slide aid or mechanical lift for moves up and down the bed
- A fabric slide aid for turning in bed
- A one-way slide aid to prevent the patient from sliding down in bed
- Care for the patient in bed until equipment is available
- Extra staff
- Low stools for workers

Eliminating manual handling of patients

It is practicable for employers to eliminate manual handling of most patients in care settings by providing mechanical lifting equipment. It is also practicable for workers to use these devices and avoid manual handling.

Where elimination of manual handling is not practicable, the risk factors identified in the risk assessment must be reduced to the lowest practicable level. This means that the duration, magnitude, and frequency of each risk factor must be reduced to the minimum levels required to perform the job safely.

Risk control is an ongoing process

Controlling one risk factor may introduce another, lesser risk. For example, a ceiling lift may be used to eliminate the need to lift manually. However, remaining risk factors such as awkward postures will need to be minimized using safe work procedures and effective training. Effectively controlling the risk of MSI is an ongoing process that often involves more than one risk control. Evaluating risk controls and fine-tuning where necessary are key elements of success.

Residual risk factors

Residual risk factors are risk factors that remain within a task after all practicable risk control measures have been implemented. Even with the introduction of patient lifting equipment, the risk identification process should include consideration of residual

MSI risks to workers. For example, there are potential risks of MSI involved with pushing or pulling mobile floor lifts, placing slings for ceiling lifts, or positioning patients in chairs after using patient lifts.

Even the safest patient handling activities generally have some MSI risk factors that remain and need to be minimized. Employers can control risk factors by providing workers with information, education, training, and active supervision. The risk assessment process should identify such residual risk factors present in the generic handling procedures. Employers must ensure that workers receive training in the residual MSI risk factors associated with their work activities.

Example: Side-by-side reposition with residual risk factors



In this example the workers have attempted to reduce the risk by inclining the foot of the bed,

but there are residual risk factors that they need to be aware of, including the following:

- The load's centre of gravity is a considerable distance away from the base of the workers' spines.
- Although the workers are supposed to slide the patient by transferring their weight from one side to the other, it is often tempting to lift the patient.
- Lifting in this posture stresses the soft tissues of the shoulders and lower back, increasing the risk of injury.
- Certain body parts (indicated by three circles and an oval) are specifically at risk.

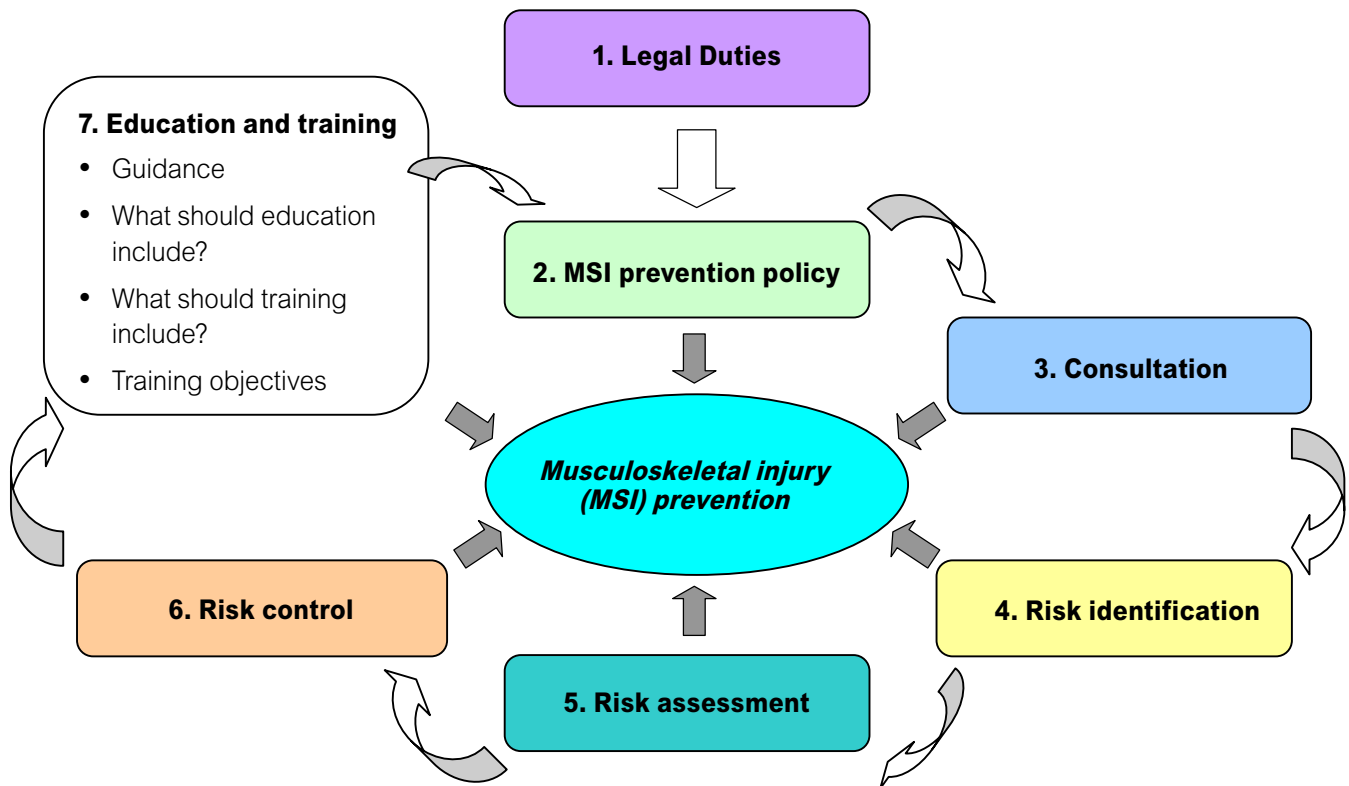
Evaluating risk controls

Employers must evaluate control measures to determine how effective they are in eliminating or minimizing the risk of MSI. The following are examples of evaluation methods:

- Interview the workers.
- Look for decreases in the number and severity of signs and symptoms of MSI.
- Look for a reduction in the number or severity of risk factors.
- Use a checklist or other tool to compare exposures to risk factors before and after controls are implemented.

If a risk has not been effectively controlled or new risks have been created, reexamine the task and consider what additional controls may be needed. Employers must also evaluate the overall MSI prevention program at least once a year to ensure that it continues to meet the objective of eliminating or minimizing risks to workers. Care area supervisors should review generic handling procedures on an ongoing basis to ensure that workers are following them.

Part 7: Education and training



Regulation excerpt

Section 4.51 of the Regulation states:

- (1) The employer must ensure that a worker who may be exposed to a risk of MSI is educated in risk identification related to the work, including the recognition of early signs and symptoms of MSIs and their potential health effects.
- (2) The employer must ensure that a worker to be assigned to work which requires specific measures to control the risk of MSI is trained in the use of those measures, including, where applicable, work procedures, mechanical aids and personal protective equipment.

Guidance

Education is the communication of generic information on a subject. An example is educating workers on the hazards or risks that they may encounter while performing tasks. A good education session will test the worker's comprehension of the material, either informally or formally.

Training is the communication of task-specific skills and knowledge, with a hands-on or practical component and a specific behavioural objective. An example is training workers on how to dress patients. A good training session will test the worker's comprehension of what was taught, either through practice or demonstration. Without this demonstration of learned skills, training cannot be considered successful.

What should education include?

Employers must ensure that workers are educated about the MSI risk factors associated with their jobs. In the health care setting this means that workers must be made aware of the high-risk nature of manual patient handling and the residual risks (see "Part 6: Risk Control" on page 53) associated with nearly all transferring or repositioning techniques.

By far the most common type of education that health care workers receive is back care education. Back care education alone is not sufficient for conveying information about the types of risk factors related to patient handling work. In addition to back injuries, health care workers sustain shoulder, arm, and leg injuries. Education should include risk factors related to all body parts.

Education should also illustrate the types of lifting, transferring, and repositioning techniques that are considered very high risk and prohibited within the facility (for example, chicken lifts, cradle lifts, and drag lifts). It is also important to inform workers, particularly new or temporary workers, about the facility's health and safety policy and patient handling standards (for example, the presence of a no-lift policy). This lets workers know what is expected of them when handling patients.

Early signs and symptoms of MSI

Employers must also ensure that workers know the early signs and symptoms and potential health effects of MSI. This education allows workers to report problems promptly, which leads to early intervention by first aid attendants and keeps the injury from developing further.

What should training include?

Employers must ensure that workers receive training that allows them to carry out their patient care and handling tasks safely. Because patient handling is a high-risk activity, workers who have not received suitable training should not attempt any procedures.

Training is most effective when it is hands-on, is practical, and incorporates competency testing. Testing should cover patient handling techniques, equipment, and the critical thinking skills needed to make appropriate choices and manage the risk posed by mobilizing the patient. Evaluation of training and subsequent skills development could be initially undertaken immediately following the training session and periodically reviewed by the supervisor. Routine workplace inspections may reveal a need for reinforcement of safe work procedures.

Training competency required in the health care work environment includes:

- How to conduct specific patient handling techniques such as bathing, dressing, and toileting
- How to operate mechanical equipment supplied for use with patients
- How to place and remove slings and other non-mechanical transfer assist devices

Employers should ensure that records are kept of all worker education and training sessions. Training records should include information on the subject covered and evidence that the worker has demonstrated competence.

Training objectives

The basic objective of training can be summed up in one question: Do you know how to safely move the patient? Workers should be able to demonstrate the techniques taught to them. This helps ensure that they understand what the employer expects of them. They should also be able to apply the principles of patient handling to other situations (for example, to address the risks posed by a very heavy patient).

Training should also include the necessary administrative components such as:

- Worker awareness of patient care plans and ADL charts and the handling practices recommended in them
- Procedures for reporting changes in the functional capacities of patients
- Pre-handling assessments that workers should make before they attempt patient handling activities

Training follow-up and coaching

Training follow-up and coaching are often neglected aspects of the training process in care facilities. Some care facilities have adopted peer mentoring programs in which workers volunteer to be patient handling leaders within specific wards or residences. They coach co-workers and assist in handling patients who have more complex handling needs. Leaders also act as a link to the facility safety division or patient handling coordinator.

Forms

Forms include the following:

- Form 1: Patient handling: Risk identification tool using MSI statistics
 - (a) Completed example
 - (b) Blank form
- Form 2: Physical demands risk assessment
 - (a) Completed example
 - (b) Blank form
- Form 3: Assessing the patient's handling needs: Mobility chart
 - (a) Completed example
 - (b) Blank form
- Form 4: Work environment risk assessment
 - (a) Completed example
 - (b) Blank form

Form 1:

Patient handling: Risk identification tool using MSI statistics

The risk identification tool uses MSI incident statistics to identify the areas within a facility that are experiencing the highest numbers and rates of MSIs. You will need to enter data in six columns for each department or unit:

Column (a) Enter the number of employees or FTEs (full-time equivalents).

Column (b) Enter the total number of all incidents.

Column (c) Enter the number of MSI incidents. This includes patient handling incidents. If your facility identifies patient handling incidents separately, use those statistics.

Column (d) Rank the number of MSI incidents from highest to lowest.

Column (e) Calculate the rate of MSI incidents. Divide column (c) by column (a) and multiply by 100.

Column (f) Rank the rate of MSI incidents from highest to lowest.

For a completed example, see page 65. For a blank form, see page 66.

Patient handing: Risk identification tool using MSI statistics

Facility: Happy Valley Care Home

Date: January 20, 2006

Completed by: A.N. Other

Department or unit	(a) Number of employees or FTEs	(b) Number of incidents	(c) Number of MSI incidents	(d) Rank (col. c)	(e) Rate of MSI incidents ($c \div a \times 100$)	(f) Rank (col. e)	Intervention date
Special Care Unit	36	9	4	2	11.1	3	April 2005
Extended Care Residence 1	37	8	2	4	5.4	6	April 2005
Extended Care Residence 2	38	13	4	2	10.5	5	May 2005
Extended Care Residence 3	30	9	4	2	13.3	2	February 2005
Intermediate Care Residence 4	26	1	1	5	3.8	7	June 2005
Intermediate Care Residence 5	28	3	3	3	10.7	4	March 2005
Intermediate Care Residence 6	23	6	6	1	26.1	1	January 2005

This ranking enables a simple comparison of the number of MSIs between departments.

This ranking establishes the MSI rate, taking into account the number of workers in each department.

Patient handling: Risk identification tool using MSI statistics

Facility:

Date:

Completed by:

Department or unit	(a) Number of employees or FTEs	(b) Number of incidents	(c) Number of MSI incidents	(d) Rank (col. c)	(e) Rate of MSI incidents ($c \div a \times 100$)	(f) Rank (col. e)	Intervention date

Form 2: Physical demands risk assessment

This risk assessment form is a tool for examining the physical demands of patient handling procedures in health care facilities. This form should be used in conjunction with Form 4: Work environment risk assessment (see page 77).

Instructions

Follow these guidelines when conducting a risk assessment of physical demands:

- Determine which patient handling procedure you will be assessing.
- Observe the procedure in several different locations where it typically occurs.
- Observe a representative sample of workers who typically perform the procedure.
- Summarize your observations in the Observations column.
- Refer to the illustrations on page 73 to get a better idea of awkward postures you should be looking for. Circle any awkward postures you identify.

Note: The Risk Factor column provides examples that you can use as a starting point when you are observing a patient handling procedure. However, make sure you consider factors beyond those suggested in the form when conducting a risk assessment.

For a completed example, see page 68. For a blank form, see page 71.

Physical demands risk assessment

Procedure assessed: Side by side up the bed

Date: July 17, 2006

Assessment completed by: A.N. Other (Nurse)

Risk factor	Observations
Workers lift all or a significant portion of the patient's or resident's weight, or apply force vertically.	Tendency for workers to lift the patient with the soaker pad
Workers mainly use their arms or backs to apply force.	Elbows sticking out/shoulders raised (abducted)—taking force on upper limb
Workers use forceful grips with wrists in an awkward posture.	Wrists in awkward position under lift force
Workers exert force while in awkward postures (for example, stooped, twisted, reaching forward, or reaching overhead).	Workers placing knee on bed—rooting them to the spot—resulting in twisting of the back
Workers perform tasks with their backs in awkward postures (stooped, twisted, bent to the side, bent backward, or bent forward).	Twist more apparent when boosting of patient occurs
Workers lift or pull patients or residents at a distance from them (for example, with bed rails up, arms on wheelchairs, furniture near the bed, or IV bag stands in the way).	Workers try to minimize this by placing knee on bed!—posing other problems (see above)
Workers conduct transfers or assists while in postures that may put them off balance.	Worked with one leg on the floor
Workers pull with their arms in awkward postures (for example, behind the body).	Not seen
Workers support a body part or hold a position for a sustained period (for example, holding patients or residents away from them while cleaning them in bed).	Not seen
Workers support patients or residents while performing care tasks (for example, cleaning after toileting or removing clothing in preparation for toileting).	Not applicable
Workers perform quick or jerky movements.	Count in—then movement resulted in rapid/jerky boost of patient
Workers do not use draw sheets or low friction slide sheets during transfers or repositioning.	Soaker pad used—slide sheet or lift would be better
Workers reposition patients with only one foot on the floor.	See above
Workers do not move their feet while twisting their torsos or turning their upper bodies to move patients or residents.	Knee on bed causes this
Workers contact sharp or hard surfaces with parts of their bodies (for example, wrists or knees).	N/A
Workers repeat the same motion throughout the work day (for example, repeatedly cranking manual adjustments for beds).	N/A

Recommendations to reduce the risks observed:

-Examine the feasibility of using alternative boost technique,
e.g., sit down boost from head of the bed–this eliminates lift force.

May have issues with built-in furniture at head of bed.

-Examine what further training/supervision is required for care staff
in this type of transfer.

-Budget for slide sheet provision to reduce force application.

-Establish conditions where this type of transfer should be used–not
suitable for very heavy patients.

-Educate workers on residual risk factors:

-Twisting of back during boosting

-Tendency to lift without keeping their elbows in toward their body

-Tendency to lift rather than transfer their weight

Awkward postures

Use these illustrations to help you identify awkward postures when completing the physical demands risk assessment form. Circle any awkward postures you identify.

Back



Side bend



Forward bend



Twist



Extension

Shoulder



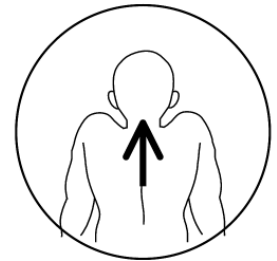
*Forward reach
higher than 45°*



Shoulder abduction



Extension



*Shoulder girdle
elevation*

Neck



Extension

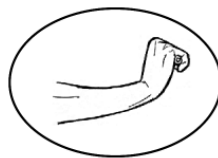


Side bend

Wrist



Flexion



Extension



Deviation

Physical demands risk assessment

Procedure assessed: _____ Date: _____

Assessment completed by: _____

Risk factor	Observations
Workers lift all or a significant portion of the patient's or resident's weight, or apply force vertically.	
Workers mainly use their arms or backs to apply force.	
Workers use forceful grips with wrists in an awkward posture.	
Workers exert force while in awkward postures (for example, stooped, twisted, reaching forward, or reaching overhead).	
Workers perform tasks with their backs in awkward postures (stooped, twisted, bent to the side, bent backward, or bent forward).	
Workers lift or pull patients or residents at a distance from them (for example, with bed rails up, arms on wheelchairs, furniture near the bed, or IV bag stands in the way).	
Workers conduct transfers or assists while in postures that may put them off balance.	
Workers pull with their arms in awkward postures (for example, behind the body).	
Workers support a body part or hold a position for a sustained period (for example, holding patients or residents away from them while cleaning them in bed).	
Workers support patients or residents while performing care tasks (for example, cleaning after toileting or removing clothing in preparation for toileting).	
Workers perform quick or jerky movements.	
Workers do not use draw sheets or low friction slide sheets during transfers or repositioning.	
Workers reposition patients with only one foot on the floor.	
Workers do not move their feet while twisting their torsos or turning their upper bodies to move patients or residents.	
Workers contact sharp or hard surfaces with parts of their bodies (for example, wrists or knees).	
Workers repeat the same motion throughout the work day (for example, repeatedly cranking manual adjustments for beds).	

Awkward postures

Use these illustrations to help you identify awkward postures when completing the physical demands risk assessment form. Circle any awkward postures you identify.

Back



Side bend



Forward bend



Twist



Extension

Shoulder



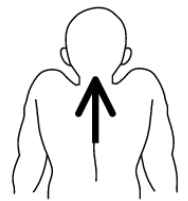
*Forward reach
higher than 45°*



Shoulder abduction



Extension



*Shoulder girdle
elevation*

Neck



Extension



Side bend

Wrist



Flexion



Extension



Deviation

Form 3:

Assessing the patient's handling needs: Mobility chart

If a patient requires assistance in mobility, an assessment of the patient's handling needs must be carried out.

This assessment should include the risks arising from the functional limitations of the patient in performing daily living activities. The significant findings of this assessment and subsequent risk control recommendations must be communicated to the workers caring for the patient. Specifically, workers must know how the patient is to be transferred and lifted.

This is typically achieved by having the prescribed handling procedures, meant to minimize the risk of injury to the workers and the patient, readily available for workers. The prescribed procedures typically form part of the care plan and are summarized on the patient's ADL chart. The Mobility Chart provided on the following pages is one example of how this can be done. Employers are free to use different forms to record their findings.

The assessment of the patient's handling needs should be done as soon as possible after admission. The patient's needs should be reassessed regularly thereafter or when the functional needs of the patient change.

It is beyond the scope of this document to discuss the patient mobility assessment methodology. This assessment must be done by a person who is trained in functional ability evaluation, such as an occupational or physical therapist or other suitably trained person.

For a completed example, see page 75. For a blank form, see page 76.

Assessing the patient's handling needs: Mobility chart

Patient No. 12345 Weight: 68 kg Named nurse: A. McLeod

Name: A.N. Other Ward: 60

Actual or potential problems:	Date: <u>10/08/06</u>
<u>Parkinson's disease + UTI</u>	

Date	Task	Desired outcomes	Equipment and techniques used
	Mobility		Not to be mobilized
	Move up bed		Slide sheet + assistance of 2 in supine
	Bed mobility Rolling/pressure care		Multimover + assistance of 2
	Sit ↔ stand		Not to be mobilized
	Toileting		Maxi hoist + assistance of 2 + commode
	Bathing and showering		Ambulift + assistance of 2
	Laying ↔ sitting over edge of bed		Not to be mobilized
	Transfer ↔ bed trolley		Patslide + assistance of 3 + slide sheet

Patient classification / equipment required			
Ind	Independent	Handling sling	Easi-mover
Sup	Supervised	Slide sheet	Hand block
1/2/3	Requires assistance	Multimover	Monkey pole
		Mechanical lift (specify)	Patslide
			Other (specify)

Mobility
Bed rest
Not to be mobilized
NWB Non-weight-bearing
PWB Partial-weight-bearing
FWB Full-weight-bearing

Mobility aids
Sticks
Crutches
(Wheeled) Zimmer
Wheelchair
Other (specify)

Assessing the patient's handling needs: Mobility chart

Patient No. _____ Weight: _____ Named nurse: _____

Name: _____ Ward: _____

Actual or potential problems:	Date: _____

Date	Task	Desired outcomes	Equipment and techniques used

Patient classification / equipment required			
Ind	Independent	Handling sling	Easi-mover
Sup	Supervised	Slide sheet	Hand block
1/2/3	Requires assistance	Multimover	Monkey pole
		Mechanical lift (specify)	Patslide
			Other (specify)

Mobility
Bed rest
Not to be mobilized
NWB Non-weight-bearing
PWB Partial-weight-bearing
FWB Full-weight-bearing

Mobility aids
Sticks
Crutches
(Wheeled) Zimmer
Wheelchair
Other (specify)

Form 4:

Work environment risk assessment

This risk assessment form is based on the Royal College of Nursing Risk Assessment and is used with permission of the Royal College of Nursing (U.K.). Modify the form to suit the needs of your facility.

What is this form for?

This form is targeted at wards. It is intended to help ward managers conduct general manual handling assessments and decide on risk reduction measures while keeping a record of their decision-making process. This form also serves as a safe system of work, guiding managers in documenting general rules for patient handling.

Note: This form deals only with general handling issues on wards. Detailed assessments of handling procedures for each patient should be recorded in the patient care plan.

Tips

- If you cannot easily answer a question “Yes” or “No,” write down your comments. Add to the form any extra aspects that you are concerned about. If necessary, include a separate page.
- Use this form to record all measures that could further reduce risks, including measures that go beyond your budget or authority, to inform decision-making at the senior management level.
- During your assessment, you may decide that you need to change some work practices. To be successful, changes may require a step-by-step approach, trials, and consultation. To allow time for this, make a note of your plan of action and update the form when practices change.
- Use the sample questions and suggestions with the blank form to help you complete some of the columns.

For a completed example, see page 78. For a blank form, see page 87.

Work environment risk assessment

Administration details

Ward (or other area, such as clinic or health centre): <u>East 8</u>
Facility: <u>Hospital 7</u>
Assessment team:
Ward manager: <u>A.N. Other</u> (name) <u>A.N. Other</u> (signature)
Others (worker health and safety representatives, workers from area, supervisors): _____ _____
Date: <u>February 2006</u>
Date(s) reviewed: <u>August 2006</u>

Ward details

Specialty: <u>Long-term care IC3/IC 4/special care</u>	Gender of patients (check one) : Male <input type="checkbox"/>
Typical age range of patients: <u>65-95</u>	Female <input type="checkbox"/>
Number of patients on a typical shift: <u>65</u>	Mixed <input checked="" type="checkbox"/>

Bed mobility and transfers

System of work List methods used and precautions taken to assist patients of various degrees of dependency. Which methods are used most frequently? Which are used only occasionally? (Includes moving up or down beds, moving on or off bedpans, transferring to bed seats, and transferring to bed trolleys.)	Are there any patient handling problems? (Includes moving up or down beds, moving on or off bedpans, transferring to bed seats, transferring to bed trolleys, bed bathing, and attending to patients on beds, trolleys, or examination couches.)	Additional control measures to consider for the future
<p>Moving up or down bed: about three-quarters of patients can move themselves (some using handblocks or monkey poles). Others require slide sheet with two nurses. Dextra or Ambulift is used for patients who are too heavy or awkward.</p> <p>Three or four patients on every shift require bedpans.</p> <p>Moving on or off bedpans:</p> <ul style="list-style-type: none"> • Get patient to bridge or use the monkey pole. • Use leg roll. • Use Dextra hoist or Ambulift. <p>Use Patslide for bed-to-trolley transfers.</p> <p>If a patient needs more than a few kilos of assisting force, use appropriate equipment. Do not attempt to assist if there is not enough space to be alongside the patient.</p>	<p>Three beds are fixed-height. These are only to be used for fully ambulatory patients who do not need direct nursing care. Do not use these beds for short patients.</p> <p>Do not use the Patslide for heavy patients.</p>	<p>Requisition height-adjustable beds to replace three fixed-height beds.</p> <p>Plan an ongoing program to upgrade to profiling beds.</p>

Write any needs or comments resulting from this page in the “Summary of Needs and Action Plan” at the end of the form.

Handling aids

List the handling aids used or available in your ward and whether you own them or borrow them regularly. If possible, refer to brand names.

Examples of handling aids

- Monkey poles
- Slide aids (small/long sheet, or cushion)
- Rope ladders
- Patient hand blocks
- Standing and raising aids
- Mechanical lifts
- Ceiling lifts
- Transfer boards
- Turning discs

Name of handling aid	How many?	Is it based on your ward?	If not, where is it borrowed from?	Is it in good working condition? Does it include attachments?	Is it suitable? If not, why?	Are slings and other attachments available?	Are changes, repairs, or additional attachments needed?	Has it been serviced in the last six months?
Dextra hoist	1	Yes		Yes, need more slings	Yes	1 extra large sling 1 large fabric sling 1 large toilet sling 1 large mesh sling for bathing	Need more slings - at least 1 each of 4 in previous column	Yes
Patslide	1	Yes		Yes	Yes	Canvas with extension loops	Additional canvas X2	No
Sara hoist	1	No	South Ward	Yes	Yes		Obtain own Sara hoist for full-time use on ward	Yes
Patient hand blocks	1 pair	No	South Ward	Yes	Yes		Order a set of hand blocks	Yes
Ambulift Model D	1	Yes		Yes, but chair chassis missing	Yes	1 chair attachment 1 set band slings 1 medium patient sling	Remove band slings Find or order chair chassis, 1 small patient sling, and 1 large patient sling	Yes
Small slide sheet	6	Yes		Minor repairs	Yes		Stitching repairs required on 2 sheets	Yes

Write any comments or needs resulting from this page in the "Summary of Needs and Action Plan" at the end of the form.

Toileting and bathing

System of work	Are there any patient handling problems?	Additional control measures to consider for the future
<p>List methods used to assist patients of various degrees of dependency. Which methods are used most frequently? Which are used only occasionally?</p> <p>The smaller washroom is used for patients who do not require manual handling (about one-quarter of the patients).</p> <p>The two larger washrooms are used for more dependent patients with assistance from one or two nurses.</p> <p>Ambulift or Dextra hoist used with toileting/bathing slings for those who cannot weight-bear.</p> <p>The Sara hoist is often borrowed for patients who can follow instructions and weight-bear.</p> <p>If a patient needs more than a few kilos of assisting force, use appropriate equipment. Do not attempt to assist if there is not enough space to be alongside the patient.</p>	<p>Not enough grab rails beside the toilets.</p> <p>Toilet roll holder in the smaller washroom is in the way.</p> <p>It is difficult to assist patients because there is not enough room at the sides of the toilets. Also, wheelchairs cannot be brought into the toilet.</p> <p>Need more toileting/bathing slings to take full advantage of the hoists. Note: Remove band slings from mechanical lift.</p> <p>Delays in obtaining the Sara hoist mean it is not always fetched for patients who may benefit from its use.</p>	<p>Fit grab rails beside all toilets. Use foldaway grab rails in larger toilets and move toilet paper holders.</p> <p>Turn three current toilets into two of adequate size.</p> <p>Submit requisition for Sara hoist for the ward (this will also be valuable in bed-to-chair transfers).</p>

Write any comments or needs resulting from this page in the “Summary of Needs and Action Plan” at the end of the form.

Seats, wheelchairs, and commodes

System of work	Are there any patient handling problems?	Additional control measures to consider for the future
<p>List methods used to assist patients of various degrees of dependency. Which methods are used most frequently? Which are used only occasionally? (Includes sit-to-stand, stand-to-sit, and repositioning in seat.)</p> <p>At least one-quarter of the patients are nonweight-bearing. The Dextra hoist, Ambulift, or Sara hoist are used to transfer these patients.</p> <p>Patients who have only slightly less mobility are transferred using transfer belts and the side transfer.</p> <p>Repositioning patients to the back of the chair:</p> <ul style="list-style-type: none"> • Use side-to-side rocking. • Use one-way slides for patients who slide down the chair frequently. • Use hoists for heavy or awkward patients. <p>If a patient needs more than a few kilos of assisting force, use appropriate equipment. Do not attempt to assist if there is not enough space to be alongside the patient.</p>	<p>One-quarter of the seats are too low. This reduces independent mobility and causes nurses to stoop.</p>	<p>Plan to replace low seats on a rolling basis.</p> <p>Submit requisition for Sara hoist, which will help with these transfers.</p> <p>Order slide boards. These can be used for transferring patients who cannot stand.</p>

Write any comments or needs resulting from this page in the “Summary of Needs and Action Plan” at the end of the form.

Transfers from floor level

Are falls to the floor frequent? Are patients frequently at floor level? List methods used and precautions taken to reduce risks associated with falling and fallen patients.	Are there any patient handling problems?	Additional control measures to consider for the future
<p>There are three or four falls within the unit per week.</p> <p>Non-dependent patients are taught to get up by themselves.</p> <p>Dependent patients are lifted with a mechanical lift.</p> <p>All workers have been trained in assisting a patient to the floor in the event of a collapse.</p>	<p>Patients needing rehabilitation require support. Because there is no equipment, nurses are walking patients who are at risk of falling. Nurses follow with wheelchairs whenever possible, but there are an increased number of occasions when patients need to be lowered to the floor.</p>	<p>Decide on a strategy for rehabilitation and obtain a walking hoist.</p>

Write any comments or needs resulting from this page in the “Summary of Needs and Action Plan” at the end of the form.

Manual handling concerns (other than patient handling)

Describe the handling and movement issue	Are there any manual handling problems?	Additional control measures to consider for the future
<p>Handling of laundry bags (clean linen).</p> <p>Removal of soiled laundry.</p> <p>Dirty laundry is placed in bags supported in a wheeled wire frame.</p>	<p>Bags are too heavy to lift and there is restricted space in the laundry cupboard.</p> <p>Workers are instructed to take sheets out of bags rather than lift the whole bag (Team Brief 20/11/97).</p> <p>Nurses overfill bags and then have difficulty pulling them out of the frame.</p>	<p>Raise the problem with managers to get the contract for laundry altered to specify that laundry will be packed in safe parcels.</p> <p>Reduce the size of the laundry bags.</p> <p>Warn nurses to avoid overfilling bags.</p>

Write any comments or needs resulting from this page in the “Summary of Needs and Action Plan” at the end of the form.

Summary of needs and action plan

Write down the changes that need to be introduced into the facility's safe work practices or equipment that needs to be purchased. Include target dates for completion. Use additional pages, if necessary.

In deciding which needs are priorities, target the highest risk and make changes that will have the greatest benefit. Here are some examples of questions to consider when justifying needs:

- Why is the change needed?
- How would it improve the present situation?
- How many workers and patients would it help?
- How frequently would it be used?
- Would it bring other benefits (for example, patient independence or improved quality of care)?
- Has anyone been consulted about technical feasibility? Has there been a trial?

Need or action	Target date
Reschedule bathing to spread out workload.	December/ January
Write more details in the patient care plan.	December/ January
Dextra hoist – Need at least two more slings (large and extra large). Currently, larger patients can only be lifted when a sling is borrowed from South Ward. If the extra-large sling is already in use, the patient cannot be moved until it is available.	January/ February
One large toileting sling and one mesh bathing sling are needed for the Dextra hoist to increase its usefulness.	January/ February
Lower priority: get two medium and two large slings to allow more patients to have their own slings (for hygiene purposes).	April
Order patient hand blocks so there is no need to borrow them from another ward.	December
Order two extra canvasses for the Patslide so there are enough to allow for laundry and sewing.	April
Order one-way slides, one wheelchair, and two armchairs.	February
Order one straight transfer board and one curved transfer board.	December
Organize stitching repairs to two small sliding sheets.	Now
Requisition a Sara hoist. A Sara hoist is being borrowed from South Ward. It is useful for handling several patients. The ward needs its own Sara hoist. It would be used at least 100 times a week and would also free up the Dextra hoist for other tasks.	April
Order sling for Ambulift hoist and find or order chair chassis.	February

Need or action	Target date
Move toilet roll holders to ease access in toilets.	December
Provide grab rails in all washrooms. (In larger washrooms, these must fold back for access with hoists.)	December
Plan to rebuild three washrooms as two larger washrooms.	One year
Replace some low chairs with higher chairs.	One year
Replace three fixed-height beds with height-adjustable beds.	June
Plan a program of replacing all beds with electric profiling beds.	Three years
Negotiate with laundry contractor to reduce size of linen packages.	December
Reduce the size of laundry bags.	December
Establish strategy for rehabilitation, including equipment needed.	March

Work environment risk assessment

Administration details

Ward (or other area, such as clinic or health centre): _____
Facility: _____
Assessment team:
Ward manager: _____ (name) _____ (signature)
Others (worker health and safety representatives, workers from area, supervisors): _____ _____
Date: _____
Date(s) reviewed: _____

Ward details

Specialty: _____	Gender of patients (check one) : Male _____
Typical age range of patients: _____	Female _____
Number of patients on a typical shift: _____	Mixed _____

Bed mobility and transfers

System of work List methods used and precautions taken to assist patients of various degrees of dependency. Which methods are used most frequently? Which are used only occasionally? (Includes moving up or down beds, moving on or off bedpans, transferring to bed seats, and transferring to bed trolleys.)	Are there any patient handling problems? (Includes moving up or down beds, moving on or off bedpans, transferring to bed seats, transferring to bed trolleys, bed bathing, and attending to patients on beds, trolleys, or examination couches.)	Additional control measures to consider for the future
	<i>See Note 1</i>	<i>See Note 2</i>

Write any needs or comments resulting from this page in the “Summary of Needs and Action Plan” at the end of the form.

Note 1

Here are examples of questions to ask:

- Is there enough room to move freely with good posture?
- Is there enough room to use a hoist?
- Is the furniture around the bed easy to move?
- Are workers stooping or twisting?
- Are workers lifting?
- Are there straight-lifting hip-injury or spinal-injury patients?
- Are brakes and wheels in good working order?

Note 2

Here are examples of possible control measures:

- Get height-adjustable beds or couches.
- Get profiling beds.
- Put only the most independent patients in fixed-height beds.
- Sit patients on one-way slide aids.
- Use specialist mattresses.
- Label defective items for maintenance.
- Use handling aids (hoists, slide or transfer aids, monkey poles, or rope ladders).
- Use patient hand blocks.

Handling aids

List the handling aids used or available in your ward and whether you own them or borrow them regularly. If possible, refer to brand names.

Examples of handling aids

- Monkey poles
- Slide aids (small/long sheet, or cushion)
- Rope ladders
- Patient hand blocks
- Standing and raising aids
- Mechanical lifts
- Ceiling lifts
- Transfer boards
- Turning discs

Name of handling aid	How many?	Is it based on your ward?	If not, where is it borrowed from?	Is it in good working condition? Does it include attachments?	Is it suitable? If not, why?	Are slings and other attachments available?	Are changes, repairs, or additional attachments needed?	Has it been serviced in the last six months?

Write any comments or needs resulting from this page in the “Summary of Needs and Action Plan” at the end of the form.

Toileting and bathing

System of work List methods used to assist patients of various degrees of dependency. Which methods are used most frequently? Which are used only occasionally?	Are there any patient handling problems?	Additional control measures to consider for the future
	See <i>Note 1</i>	See <i>Note 2</i>

Write any comments or needs resulting from this page in the “Summary of Needs and Action Plan” at the end of the form.

Note 1

Here are examples of questions to ask:

- Is there enough room to move freely with good posture?
- Is there enough room to use a hoist?
- Are workers stooping or twisting?
- Are workers lifting?
- Are there convenient assistive devices such as grab rails?
- Are commodes adequate?
- Is the floor slippery?

Note 2

Here are examples of possible control measures:

- Use a hoist (standing hoist sling lifter).
- Wheel the commode over the toilet.
- Use a raised toilet seat.
- Move the toilet or move the partition wall for more space.
- Widen the doorway.
- Install or move grab rails.
- Modify the door to open outward.
- Change the floor covering.

Seats, wheelchairs, and commodes

System of work List methods used to assist patients of various degrees of dependency. Which methods are used most frequently? Which are used only occasionally? (Includes sit-to-stand, stand-to-sit, and repositioning in seat.)	Are there any patient handling problems?	Additional control measures to consider for the future
	See Note 1	See Note 2

Write any comments or needs resulting from this page in the “Summary of Needs and Action Plan” at the end of the form.

Note 1

Here are examples of questions to ask:

- Are seats too low or too deep?
- Do arms get in the way?
- Can you get close with the hoist?
- Are brakes or wheels defective?
- Are there enough wheelchairs?
- Is the floor slippery?

Note 2

Here are examples of possible control measures:

- Use a hoist (standing hoist sling lifter).
- Use a slide board.
- Use a turning disc.
- Sit the patient on a one-way slide aid.
- Sit or kneel by the patient rather than stooping.
- Change the type of seats used.
- Modify the door to open outward.
- Label defective items for maintenance.

Transfers from floor level

Are falls to the floor frequent? Are patients frequently at floor level? List methods used and precautions taken to reduce risks associated with falling and fallen patients.	Are there any patient handling problems?	Additional control measures to consider for the future
	See Note 1	

Write any comments or needs resulting from this page in the “Summary of Needs and Action Plan” at the end of the form.

Note 1

Here are examples of questions to ask:

- Are uniforms and footwear adequate?
- How many workers are there and what are their fitness and skill levels?
- Can a mechanical lift be used to lift the patient?
- If a manual lift is medically contraindicated, what other control measures or techniques are available?

Manual handling concerns (other than patient handling)

Describe the handling and movement issue	Are there any manual handling problems?	Additional control measures to consider for the future
	See Note 1	

Write any comments or needs resulting from this page in the “Summary of Needs and Action Plan” at the end of the form.

Note 1

Here are examples of questions to ask:

- Do workers handle laundry?
- Do workers handle food containers?
- Are heavy or awkward objects placed too high, too low, or too far from workers?
- Do workers carry equipment?
- Are there difficulties with other departments or services?

Summary of needs and action plan

Write down the changes that need to be introduced into the facility's safe work practices or equipment that needs to be purchased. Include target dates for completion. Use additional pages, if necessary.

In deciding which needs are priorities, target the highest risk and make changes that will have the greatest benefit. Here are some examples of questions to consider when justifying needs:

- Why is the change needed?
- How would it improve the present situation?
- How many workers and patients would it help?
- How frequently would it be used?
- Would it bring other benefits (for example, patient independence or improved quality of care)?
- Has anyone been consulted about technical feasibility? Has there been a trial?

Need or action	Target date

Need or action	Target date

Appendices

Appendices include the following:

- Appendix I: WorkSafeBC ergonomics (MSI) requirements
- Appendix II: Occupational health and safety programs
- Appendix III: Safe patient handling policy (example)
- Appendix IV: Terms and acronyms
- Appendix V: Bibliography

Appendix I: WorkSafeBC ergonomics (MSI) requirements

This appendix reprints the ergonomics requirements detailed in Sections 4.46 to 4.53 of the Occupational Health and Safety Regulation. These requirements represent the minimum standards that must be complied with at workplaces that fall under WorkSafeBC jurisdiction and within the scope of the *Workers Compensation Act*.

Ergonomics (MSI) Requirements

The purpose of sections 4.46 to 4.53 is to eliminate or, if that is not practicable, minimize the risk of musculoskeletal injury to workers.

Note: WorkSafeBC provides publications to assist with implementing the Ergonomics (MSI) Requirements. *Preventing Musculoskeletal Injury (MSI): A Guide for Employers and Joint Committees* provides a seven-step process to assist with the application of the ergonomics requirements along with procedures to investigate incidents of MSI and a table of common control measures. *Understanding the Risks of Musculoskeletal Injury (MSI)* is intended to help employers with the requirements of Section 4.51(1) to educate workers in risk identification, signs and symptoms of MSI, and their potential health effects.

4.46 Definition

In sections 4.47 to 4.53 (the Ergonomics (MSI) Requirements)

“musculoskeletal injury” or “MSI” means an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue including a sprain, strain and inflammation, that may be caused or aggravated by work.

4.47 Risk identification

The employer must identify factors in the

workplace that may expose workers to a risk of musculoskeletal injury (MSI).

4.48 Risk assessment

When factors that may expose workers to a risk of MSI have been identified, the employer must ensure that the risk to workers is assessed.

4.49 Risk factors

The following factors must be considered, where applicable, in the identification and assessment of the risk of MSI:

- (a) the physical demands of work activities, including
 - (i) force required,
 - (ii) repetition,
 - (iii) duration,
 - (iv) work postures, and
 - (v) local contact stresses;
- (b) aspects of the layout and condition of the workplace or workstation, including
 - (i) working reaches,
 - (ii) working heights,
 - (iii) seating, and
 - (iv) floor surfaces;
- (c) the characteristics of objects handled, including
 - (i) size and shape,
 - (ii) load condition and weight distribution, and
 - (iii) container, tool and equipment handles;
- (d) the environmental conditions, including cold temperature;
- (e) the following characteristics of the organization of work:
 - (i) work-recovery cycles;
 - (ii) task variability;
 - (iii) work rate.

4.50 Risk control

- (1) The employer must eliminate or, if that is not practicable, minimize the risk of MSI to workers.
- (2) Personal protective equipment may only be used as a substitute for engineering or administrative controls if it is used in circumstances in which those controls are not practicable.
- (3) The employer must, without delay, implement interim control measures when the introduction of permanent control measures will be delayed.

4.51 Education and training

- (1) The employer must ensure that a worker who may be exposed to a risk of MSI is educated in risk identification related to the work, including the recognition of early signs and symptoms of MSIs and their potential health effects.
- (2) The employer must ensure that a worker to be assigned to work which requires specific measures to control the risk of MSI is trained in the use of those measures, including, where applicable, work procedures, mechanical aids and personal protective equipment.

4.52 Evaluation

- (1) The employer must monitor the effectiveness of the measures taken to comply with the Ergonomics (MSI) Requirements and ensure they are reviewed at least annually.
- (2) When the monitoring required by subsection (1) identifies deficiencies, they must be corrected without undue delay.

4.53 Consultation

- (1) The employer must consult with the joint committee or the worker health and safety representative, as applicable, with respect to the following when they are required by the Ergonomics (MSI) Requirements:
 - (a) risk identification, assessment and control;
 - (b) the content and provision of worker education and training;
 - (c) the evaluation of the compliance measures taken.
- (2) The employer must, when performing a risk assessment, consult with
 - (a) workers with signs or symptoms of MSI, and
 - (b) a representative sample of the workers who are required to carry out the work being assessed.

Appendix II: Occupational health and safety programs

Why is an occupational health and safety program needed?

Part 3 of the Occupational Health and Safety Regulation describes the requirements of an occupational health and safety program for the prevention of workplace injury and disease. Effective occupational health and safety programs help prevent:

- Incidents that result in work-related injuries or diseases
- Near misses (incidents that cause no visible injury or damage but that could result in a serious injury, death, or property damage)
- Human impacts of incidents (for example, pain, suffering, and disability)
- Financial impacts of incidents (for example, the costs of hiring replacement workers or paying overtime)
- Damage to property, equipment, and the environment

An effective occupational health and safety program will also:

- Clarify the responsibilities and roles of management, supervisors, and workers for ensuring a healthy and safe workplace
- Provide direction to those responsible for specific sections of the program
- Clarify health and safety policies and procedures
- Encourage workers to freely express their concerns about health and safety
- Help ensure compliance with the Regulation

Depending on the hazard classification of a facility and the number of workers employed, an employer may be permitted to have a less formal health and safety program than the one described in this Appendix. This generally applies to facilities that are a “C” hazard and have fewer than 50 workers.

Elements of an occupational health and safety program

Each health and safety program must include the following seven elements:

1. A written occupational health and safety policy that:
 - States the employer’s commitment to making health and safety a priority
 - States the program’s objectives
 - Defines the roles and responsibilities of the employer, supervisors, and workers
2. Written safe work procedures and emergency response procedures
3. Education and training for workers
4. Regular workplace inspections
5. Regular (at least monthly) health and safety meetings
6. Incident investigations
7. Records and statistics (for example, reports of inspections and incident investigations)

Other WorkSafeBC publications

For more information on occupational health and safety programs, see the WorkSafeBC publications *How to Implement a Formal Occupational Health and Safety Program* and *Effective Health and Safety Programs: The Key to a Safe Workplace and Due Diligence*.

1. A written occupational health and safety policy

A written occupational health and safety policy is a formal expression of an employer’s commitment to health and safety that states the roles and responsibilities of the employer, supervisors, and workers. Expressing a general commitment to preventing and addressing MSI in the workplace

lends support to the more specific processes of risk identification, assessment, and control. A policy can also help define key words and concepts, specifically the concept of a no-lift environment.

2. Written safe work procedures and emergency response procedures

Written safe work procedures clarify how workers should perform their duties in a safe manner. Written safe work procedures can:

- Identify hazards and explain what must be done to eliminate or minimize these hazards
- Guide and direct workers in the safe performance of their jobs
- Be used as training standards

Written safe work procedures should include patient handling procedures that can be used in the worker training component of the health and safety program. These procedures are useful references during inspections and incident investigations. Written safe work procedures form the basis of an employer's ongoing training program.

It is also important to provide written emergency response procedures that explain what workers should do in situations such as patient evacuation.

3. Education and training for workers

Employers are responsible for providing workers with thorough, site-specific training and continued instruction in the facility's health and safety program and procedures. Employers must also document training and instruction. Employers should ensure that education and training for health care workers include the following:

- Hands-on practical training in patient handling techniques (for example, orientation, crew talks, on-the-job training, and refresher training).

- Competency testing for the techniques taught, preferably in the care setting.
- Information on the potential areas of injury or risk in each patient handling procedure so that workers will be aware of and able to avoid these risks.
- Patient and work environment risk factors that may warn a worker to abort a particular lift or transfer. This instruction supports the worker completing a pre-handling assessment to confirm if the patient is still suitable for the given technique that has been designated.
- On-site direction and instruction by supervisors to ensure that workers perform their jobs safely.

4. Regular workplace inspections

Regular workplace inspections are part of maintaining a healthy and safe work environment. Inspections help:

- Determine if the workplace, machinery, equipment, and safe work practices meet health and safety standards
- Identify unsafe conditions and acts that have the potential to cause injury, so that corrective measures can be taken

Employers must ensure that workplace inspections are conducted at intervals that will prevent the development of unsafe working conditions. Lifts, transfer aids, beds, and other equipment should be inspected regularly to ensure that they are in safe operating condition. Also, safe work practices should be examined to ensure the safe handling of patients. Workplace inspections combined with preventative maintenance programs and hazard reporting systems will help ensure a healthy and safe environment for both workers and patients.

5. Regular health and safety meetings

Regular management meetings must be held to review program activities and incident trends and to determine necessary courses of action.

6. Incident investigations

Employers are required to investigate incidents in which workers required medical treatment or there was only a minor injury but the potential for serious injury was present. Incident investigations help:

- Determine causes of incidents, near misses, injuries, and diseases so that corrective actions can be taken to prevent them from recurring
- Identify unsafe conditions, unsafe acts, and unsafe work procedures and recommend solutions to prevent them from recurring

MSI investigations can be difficult because causative and contributing factors are not always evident. When investigating MSIs or early signs of MSI, consider the risk factors listed in Section 4.49 of the Regulation. Division 10 of the Act specifies requirements for incident reporting and investigations.

7. Records and statistics

Accurate and complete records and statistics are necessary for the prevention of work-related injuries and diseases. Having the right records and statistics helps employers, supervisors, and workers make informed decisions about health and safety matters and determine whether prevention goals are being met. Records and statistics help:

- Document the history of the occupational health and safety program and improvements made to it
- Provide a record of program activities such as orientation, training, inspections, incident investigations, and sampling

- Identify trends, unusual conditions, and problem areas

In general, the most useful injury and disease statistics are those that pinpoint incident and injury types, hazards, tasks, and conditions—specifically by location and occupation, if possible.

Health care records and statistics may include:

- Risk assessment reports
- Hazard investigation reports
- Inspection reports
- First aid records
- Incident investigation reports
- Injury and disease claims forms
- Education and training records
- Hepatitis B vaccination records

Maintaining records and statistics helps employers, managers, and joint health and safety committees (or worker health and safety representatives) answer important questions, including the following:

- How many time-loss injuries have there been this month? This year? How do these counts compare with the counts for the same periods last year?
 - What are the most common injury types? Incident types? Causes? Body parts injured?
 - What is the injury rate (the number of time-loss claims per 100 person-years of employment) for our organization? How does this rate compare with those of other employers who provide similar services?
 - What are our claims costs so far this year?
 - Have incident investigations been completed for all recordable incidents?
 - Have workplace inspections been completed for each month? Have all deficiencies been corrected?
 - Have all new workers received a health and safety orientation?
-

First aid records

Detailed records of first aid treatment provide employers and joint health and safety committees (or worker health and safety representatives) with information they can use to:

- Identify the type and severity of work-related injuries
- Identify work areas and practices that may be causing injuries
- Identify potential problems that require closer examination during workplace inspections
- Determine corrective actions
- Assess the effectiveness of first aid and safety programs and safe work procedures

Employers must ensure that records are kept for 10 years of all work-related injuries and diseases that have been reported or treated, whether or not the injuries lead to further treatment or the filing of a time-loss claim. In workplaces where a first aid attendant is required, the attendant is responsible for keeping records of all first aid treatment.

These records must be clear, concise, and correct. It is essential to keep accurate and factual accounts of an injured or ill worker's condition, from the time of the incident until their arrival at a medical facility. If some of the information is not available at the time of the incident, it must be gathered and recorded as soon as possible. When information on work-related injuries and diseases is unavailable or incorrect, it is more difficult to identify problems and take corrective action.

A joint health and safety committee

Employers must establish and maintain a joint health and safety committee in each workplace that employs 20 or more workers. A joint committee

must have at least four members—two worker representatives and two employer representatives. Workplaces that employ more than 9 but fewer than 20 workers are usually required to have a worker health and safety representative rather than a joint health and safety committee. In some cases, however, a WorkSafeBC officer may require a workplace with fewer than 20 workers to establish and maintain a joint health and safety committee.

A well-functioning joint health and safety committee (or a worker health and safety representative) is critical for all health and safety initiatives. Joint health and safety committees:

- Identify situations that may be unhealthy or unsafe for workers
- Recommend to management ways to eliminate or control potential hazards
- Recommend to management ways to improve the health and safety program and the overall work environment
- Consider and respond to health and safety complaints or recommendations from workers
- Ensure that incident investigations and regular workplace inspections occur

The joint health and safety committee must be consulted throughout the MSI prevention process. Committee members should have a clear understanding of MSI and the factors that contribute to MSI. Without this knowledge, their ability to inspect, consult, and make recommendations will be hindered.

Other important health and safety elements

Other elements that are an important part of an occupational health and safety program include worker supervision, first aid, and disability management.

Worker supervision

Supervisors are responsible for ensuring the health and safety of all workers under their direct supervision. Supervisors must ensure that health care workers performing patient handling activities use the lowest-risk handling procedures wherever practicable. It is also important for supervisors to support the evaluation process for identifying, assessing, and controlling the risks of MSI. Supervisors should observe work practices and provide feedback to ensure that actual work practices are consistent with designated safe work practices.

First aid

First aid in the workplace must address acute single-incident injuries as well as chronic injuries or diseases that develop over time. Workers need to be aware of their responsibility to report injuries and early signs and symptoms of MSI. Supervisors who are aware of workers with early signs or symptoms of MSI can take steps to examine the possible contributing factors and

minimize their effects so the worker will be able to remain at work. In the case of patient handling, this may mean reviewing safe work practices with the worker and examining the work environment and patient characteristics to identify factors that may be contributing to the risk of injury.

Disability management

Disability management (a return-to-work program) is important for maintaining a healthy workforce. If workers experiencing an MSI are able to return to work on a gradual basis, they may be able to build up strength and tolerances for the work activities and have a better chance of successfully returning to their jobs. Utilizing information and risk reduction measures from both MSI risk assessments and incident investigations will help minimize, as much as practicable, risks that may have contributed to an injury or that may lead to a recurrence. It is also helpful to coach and mentor workers on patient handling techniques, to ensure that they will use the lowest-risk handling procedures.

Appendix III: Safe patient handling policy (example)

1. Purpose

This policy promotes safe patient handling in high-risk patient and resident care areas. It describes the responsibilities of the employer, supervisors, and workers in this facility.

2. Definitions

Manual lifting may occur when workers lift, transfer, or reposition patients.

Lift refers to the lifting of the whole or a large part of the weight of a patient.

Transfer refers to the movement of a patient from one surface to another.

Reposition refers to the movement of a patient on the same surface.

Mechanical lifting equipment refers to equipment used to lift, transfer, or reposition patients. Examples include portable base lifts, ceiling lifts, and stand assist lifts.

Patient handling aids refers to equipment used to assist with lifting, transferring, or repositioning tasks. Examples include gait belts with handles, stand assist aids, slide boards, and low-friction slide devices.

3. No-lift policy

[Insert name of facility] will ensure that its patients and residents are cared for safely, while maintaining a safe work environment for workers. To achieve this, [the facility] has adopted a no-lift policy for patient handling. The aim of a no-lift policy is to eliminate manual lifting of patients and residents in all but exceptional or life-threatening situations.

To accomplish this, direct care workers in patient and resident care areas must assess high-risk patient handling tasks in advance to determine the safest way to accomplish them. Approved mechanical lifting equipment and patient handling aids should be made available to workers and be used by them to avoid the manual handling of patients and residents except when absolutely necessary (for example, in a medical emergency).

4. General duties

Compliance

The *Workers Compensation Act* requires all employees (including managers, supervisors, and workers) to take reasonable care of their own health and safety, as well as that of their co-workers and patients, by following this policy during patient handling activities. Non-compliance will indicate a need for retraining and possibly disciplinary action.

Patient handling requirements

Workers will:

- Be aware of the facility's policy for safe handling of patients and residents
- Avoid hazardous patient handling tasks whenever possible
- Use approved mechanical lifting equipment and patient handling aids, where appropriate, for patient handling tasks, except when manual lifting is absolutely necessary (for example, in a medical emergency)
- Use approved mechanical lifting equipment and patient handling aids in accordance with instructions and training
- Follow established handling protocols developed by the joint health and safety committee

Training

Workers will complete training initially, annually, and as required to correct unsafe work practices and ensure that they understand safe patient handling procedures. The employer must maintain training records for all employees.

Mechanical lifting equipment and patient handling aids

Supervisors will ensure that:

- Workers have sufficient access to appropriate mechanical lifting equipment and patient handling aids
- Mechanical lifting equipment and patient handling aids are inspected and maintained regularly so they are kept in good working order

Supervisors and workers will ensure that mechanical lifting equipment and patient handling aids are stored conveniently and safely.

Reporting injuries and other incidents

Workers must report all injuries and other incidents resulting from work activities.

The employer must maintain first aid records, incident reports, and supplemental injury statistics, as required by the facility and WorkSafeBC.

5. Delegation of authority and responsibility

The employer will:

- Support the implementation of this policy
- Supply sufficient mechanical lifting equipment and patient handling aids so workers have access to them when necessary for safe patient handling

- Supply acceptable storage locations for mechanical lifting equipment and patient handling aids
- Provide sufficient staffing levels to comply with this policy

Supervisors will:

- Ensure that patient handling tasks are assessed as soon as a patient arrives at the facility and updated periodically or when there is a change in the functional abilities of a patient or resident
- Ensure that patient handling tasks are assessed before transfers, lifting, and repositioning, and that these tasks are completed safely, using approved mechanical lifting equipment and patient handling aids and appropriate techniques where necessary
- Ensure that mechanical lifting equipment and patient handling aids are available, maintained regularly, in proper working order, and stored conveniently and safely
- Ensure that workers complete initial and ongoing training, as well as any training required if workers demonstrate non-compliance with this safe patient handling policy
- Maintain training records
- Investigate all incidents in which injuries result from patient handling tasks
- Maintain incident reports and supplemental injury statistics, as required by the facility

Workers will:

- Comply with this policy (and supplemental patient handling support material)
- Where necessary, assess patients or residents before conducting patient handling tasks
- Use approved mechanical lifting equipment and patient handling aids during performance of high-risk patient handling tasks

-
- Notify supervisors of injuries sustained while performing patient handling tasks
 - Notify supervisors of a need for retraining in the use of mechanical lifting equipment, patient handling aids, and lifting or moving techniques
 - Notify supervisors of mechanical lifting equipment or patient handling aids in need of repair
 - Supply feedback to supervisors on safe patient handling protocols or equipment

Engineering service workers will ensure that mechanical lifting equipment is installed and maintained in proper working order.

Appendix IV: Terms and acronyms

Act, the

The *Workers Compensation Act*.

ADL

Activities of daily living. An ADL chart is a summary of the functional capacity of a patient in relation to various daily living activities.

ceiling lift

A mechanical lifting device that moves along a track suspended from the ceiling.

ergonomics

The application of scientific information concerning humans to the design of objects, systems, and the environment, with the goal of making them safer, more efficient, and easier to use.

hazard

According to the Regulation, a hazard “means a thing or condition that may expose a person to a risk of injury or occupational disease.”

joint health and safety committee

Joint health and safety committees help create a safe work environment, recommend ways to improve the health and safety program, and promote compliance with the Occupational Health and Safety Regulation and the *Workers Compensation Act*.

All workplaces that regularly employ 20 or more workers must establish and maintain a joint health and safety committee (as detailed in Division 4 of the *Act*). (*Regularly employed* means employed for at least one month, whether full-time or part-time.) The committee must include at least four members – two employer representatives and two worker representatives. Workplaces that regularly employ more than 9 but fewer than 20 workers are required to have at least one worker health and safety representative rather than a joint health and safety committee. See *worker health and safety representative*.

musculoskeletal injury (MSI)

According to the Regulation, a musculoskeletal injury (MSI) “means an injury or disorder of the muscles, tendons, ligaments, joints, nerves, blood vessels or related soft tissue including a sprain, strain and inflammation, that may be caused or aggravated by work.”

no-lift policy

A no-manual-lifting approach to patient handling that aims to eliminate manual lifting of patients in all but exceptional or life-threatening situations. A no-lift policy is typically one component of an overall patient handling policy. A no-lift policy may have a different name such as “safe-lift policy” or “minimal-lift policy.”

OHSAH

The Occupational Health and Safety Agency for Healthcare in British Columbia.

practicable

According to the Regulation, practicable “means that which is reasonably capable of being done.” For a more detailed explanation of the term *practicable*, see page 55.

Regulation, the

The Occupational Health and Safety Regulation of British Columbia.

reposition

To change the position of a patient on the same surface.

risk

According to the Regulation, a risk “means a chance of injury or occupational disease.”

transfer

To help move a patient from one surface to another. An activity in which a patient or resident is able to reliably bear his or her own weight, thereby allowing the caregiver to direct and guide the patient’s or resident’s movements rather than lifting all of their weight.

Note: Based on the definitions for *reposition* and *transfer*, both repositioning and transferring tasks may involve lifting, depending on the patient’s condition and the technique used to carry out a movement.

worker health and safety representative

A worker who represents workers on health and safety matters in a workplace where there is no joint committee (usually a workplace with more than 9 but fewer than 20 workers). See *joint health and safety committee* for duties.

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