

## Health and Safety Programs

# Ergonomic Safe Patient Handling Program

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## Why should an ergonomic safe patient handling program be developed?

The main reason is to reduce musculoskeletal injuries among direct caregivers. The physical stresses and exertion involved in caring for nursing home and hospital patients has caused rising numbers of back injuries and other musculoskeletal problems.

Musculoskeletal injuries include damage to muscles, ligaments, tendons, nerves, bursae, joints, and cartilage, including intervertebral discs. Symptoms of damage can include:

- Pain and/or swelling.
- Numbness, burning, or tingling sensations.

- Loss of mobility around a particular joint or joints.

These injuries generally result from the long-term cumulative physical effort of patient transfers as well as acute effects, which result from incidents during transfers. They may also develop from a "peak load". Peak loads occur when a onetime task or event is performed that requires the body to perform above its capacity.

Registered nurses, registered practical nurses, and health care aides experience injury and disability from musculoskeletal injuries.

An ergonomic approach to patient handling that is part of an overall program to reduce musculoskeletal injuries can benefit caregivers and employers alike.

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## How do you start preparing an ergonomic safe patient handling program?

The health and safety policy is the commitment by the employer to provide and maintain a safe workplace.

When the workplace parties sit down to develop an ergonomic approach to patient handling, they will develop terms of reference that set forth how the workplace will function in approaching this problem and reach its goal of reduced injuries.

In general, a safe patient handling program will involve the following steps:

- Management approval and commitment to develop and implement a patient handling program.
- Development of a joint program by management, workers, union (if present), health and safety committee, etc.
- Perform a needs analysis.
- Create and standardize patient assessment criteria.
- Develop decision trees to standardize actions.
- Determine which controls are needed to implement specific tasks or patient needs.
- Institute a "no-lift" policy, where possible.

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## What should be considered in a needs analysis?

The needs analysis should include to review and document, on an on-going basis, the causes of injuries that occur during patient handling. The impact of caring for aggressive patients and residents also needs to be analyzed. It should document the number of injuries and all the relevant details needed to eliminate hazards and develop work practices that will ensure prevention.

The needs analysis should be facility wide.

The committee performing the needs analysis should be representative of all areas, shifts, and all groups of employees who have experienced musculoskeletal injuries or those who are likely to be handling patients as part of their work.

An important tool in conducting the needs analysis is a survey to obtain the input of the employees. A written questionnaire that can be completed anonymously can ask for details regarding hazards and proposed solutions. Questions can include workload, jobs, tasks and work environments that the employees perceive as high risk. Many times, these surveys will highlight problems not normally found through other sources.

The committee should analyze the data from the questionnaire combined with their own investigation and experience.

This information is needed to determine high risk activities, and to establish baseline injury data to which future injury data can be compared to (e.g., compare injury frequency after a mechanical lift is installed versus before).

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## How can the work environment be assessed?

Conduct a site visit to observe each work environment or area. The goal is to evaluate injury data and to match it to equipment and space issues, physical layout, storage availability, maintenance or repair issues, and staffing.

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## Is the workload another factor that the committee should consider?

The committee will need to carefully analyze the number of patients or residents assigned to staff members, the number and duration of tasks required for these specific clients, and the time allotted to caregivers in order to fairly gauge workload. Excessive workloads are hazardous to clients as well as to caregivers.

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## What is the difference between patient transfers and patient lifts?

A critical issue in ergonomic patient handling is the distinction between a patient or resident transfer and a lift.

A transfer is a dynamic effort in which the client aids in the transfer and is able to bear weight on at least one leg.

A lift involves moving a client who cannot bear weight on at least one leg. Lifts should always involve mechanical lifting devices.

Injuries to caregivers during patient and resident transfers usually occur when a patient transfer suddenly becomes a patient lift. Assessment of the client's capabilities therefore becomes a critical component of any ergonomic patient-handling program. Clients who suddenly lose their balance must be identified to determine whether two caregivers are necessary to affect a transfer or whether a mechanical device is necessary.

The relative sizes of the caregiver and the client must be considered when one is determining the need for additional staff to aid in a transfer or the need for a mechanical lift. The weight and height differences may dictate the necessity of mechanical assistance.

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## Why is a client assessment an important part of the patient handling policy?

An assessment of the individual client must be performed to determine the proper transfer method and clearly outline the client's degree of mobility and physical impairment.

Patient assessment criteria may include:

- How much assistance does the patient require?
- What is the weight bearing capacity of the patient?
- Does the patient have enough upper body strength to support their weight during the transfer?
- Is the patient co-operative, and can they understand instructions?
- Is the patient able to cooperate with each lift, or does this change each time (e.g., time of day)?
- Are there physical characteristics that should be noted (height, weight, age)?
- Are there special circumstances such as injuries, presence of tubes, history of falls, osteoporosis, fractures, pressure ulcers, splints, history of spasms, etc.?

This information must be clearly communicated to all staff that may care for the client including staff that may be filling in for workers that are ill or on vacation.

Appropriate symbols and codes can communicate whether the client is capable of an unassisted transfer, can bear his or her weight on at least one leg during an assisted transfer, or requires a mechanical lift.

The ability of the client to communicate with the caregiver to either identify physical limitations or to aid in the transfer will also determine the need for a mechanical lift.

**Mechanical lifts** should be available in all situations where the patient or resident cannot bear weight on at least one leg.

The adequate number, variety, and placement of mechanical lifts will need to be determined by the committee undertaking an ergonomic analysis of the workplace.

**Training** needs should also be assessed by the committee. Are new employees receiving proper training and orientation regarding safe transfer techniques, patient or resident assessment, and the proper use of mechanical lifts? Are current staff receiving on-going in-service training and refresher training?

Employees should also be informed about the importance of appropriate footwear and clothing. Proper footwear that is slip resistant and clothing that allows unrestricted movement can significantly reduce the chance of injury in transfers. Jewellery such as necklaces or bracelets can become a hazard if the patient grabs at these objects during a fall.

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## What are some features that make a care facility ergonomically well-designed?

The design and layout of a facility is critical in reducing risk factors for caregivers and clients.

The space and design of the patient or resident's room (including the bathroom) must allow for the free movement of the caregiver, resident, lifting devices, walkers, and wheelchairs.

The layout and space must also enable the caregiver to use proper body mechanics and transfer techniques.

Furniture should be of sufficient height to safely effect transfers. Furniture and equipment, in particular beds, should be **adjustable** to best insure safe client handling.

Arms and legs on wheelchairs should be adjustable and removable. Cushions on wheelchairs should be secured so they cannot slip.

Grab bars should be sufficient in number and placement to aid transfers in the bathroom.

Commode chairs should have removable arms and leg and foot rests. A well-designed chair should be stable with a lap belt for clients.

Geriatric chairs should, as well, have removable arm and foot rests to effect transfers.

Bed rails should be light to allow operation by the caregiver with only one hand to reduce physical exertion.

Lighting should be adequate to accomplish necessary tasks. Lighting that is too bright however can cause optical strain and stress.

Colours and black and white contrast that aid the visual perception of the elderly can reduce the chance of accidents during transfers or if the client is ambulatory.

Wet, highly polished, or otherwise slippery floors can contribute to slip and fall hazards.

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## What is the proper approach to the patient transfer or lift?

In addition to the physical layout of the workplace, equipment, staffing, and workload, the approach to the transfer or lift is a key element to reducing caregiver injuries.

Proper documentation and communication should inform the caregiver of the client's abilities, transfer needs, physical stability, and tendency if any, towards aggressive acts.

The caregiver should anticipate what actions would be necessary if the client loses balance or falls.

The procedure for the transfer should be clearly communicated and understood by any other staff assisting and the patient or resident.

The caregiver should assess the client, even briefly, before every transfer.

The client should be transported the shortest possible distance by the lifting device. The mechanical lifting device should not be used to transport the patient or resident outside the room.

In transfers, tighten your abdominal muscles, keep your back straight, and use your leg muscles to avoid injury.

Do not rotate or twist the spine. Move your entire body in the direction of the transfer.

Never grab the client under his or her armpits as this could injure the client.

Position yourself close to the client and assure footing is stable.

Try to maintain eye contact with the client and communicate while the transfer is in progress.

Never allow the client to grasp you around the neck as this could result in injury.

Agree on the timing of the transfer with the client and other caregiver(s) and count together.

Assure that the path of the transfer or lift is clear from obstructions and that furniture and aids that the client is being transferred to are properly placed and secure.

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## Are there some additional things you should know when transferring aggressive clients?

Injury to the caregiver and client can occur when transferring aggressive clients.

Caregivers have a legal right to know if the client they are caring for has a history of aggressive behaviour.

Caregivers must receive proper training and have the assistance of other properly trained staff when dealing with potentially violent clients.

The reasons for client anger and hostility can be complex. Staff should be trained to identify the signs of potential aggressive behaviour, the triggers that can lead to violent outburst, means of deescalating an aggressive encounter, and emergency procedures to follow if retreat from an aggressive client is not possible or an attack occurs.

Emergency communication and security procedures and systems need to be in place before they are needed.

All aggressive incidents should be documented and reported to the supervisor and/or the health and safety committee.

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## What is a no-lift policy?

A no-lift policy would state that all manual handling tasks are to be avoided where ever possible. No-lift policies successfully reduce the risk **only if** the organization has the infrastructure in place (e.g., technical solutions, lifts, equipment) to support the initiative. Training is also necessary for caregivers to recognize the risk in activities, and how to follow appropriate steps to move or transfer a patient safely.

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## Are there examples or assessment charts that can assist with these decisions?

Yes.\*

[No Unsafe Lift Workbook](#), Alberta Government

[Patient Handling for Healthcare Workers](#), Occupational Health Clinic for Ontario Workers Inc.

[Safe Patient Handling and Mobility](#), National Institute for Occupational Health and Safety

(\*We have mentioned these organizations as a means of providing a potentially useful referral. You should contact the organization(s) directly for more information about their services. Please note that mention of these organizations does not represent a recommendation or endorsement by CCOHS of these organizations over others of which you may be aware.)

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