Exceptional care, inspired by you

Resource Manual

Patient Handling – The Minimal Lift Program

Safe Work Practice Manual

"Together…supporting quality care"
Revised September 2019

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NOTE #1: Departments with patient lifts shall maintain a copy of the Prism Sling Guide - http://www.prismmedical.ca/cmss_files/attachmentlibrary/Sling-Application-Guide---PM.pdf

NOTE #2: Departments with AirPal/Hovermat and Jack shall maintain copies of manual in an appropriate place and communicate it to their staff.

INTRODUCTION

This document is intended for health care team members who are responsible for, or participate in the handling of patients; specifically in lifts, transfers, and repositioning of the patient throughout their stay at Quinte Healthcare Corporation (QHC). The purpose of this manual is to provide instruction and allow for safe and effective patient handling.

The Minimal Lifts Manual is a resource that supports and incorporates the philosophy of the Occupational Health and Safety (OH&S) Policy # 7.10 Patient Handling -Minimal Lift Program and training.

GOALS AND OBJECTIVES

The goals and objectives for this program are as follows:

- To protect both the caregivers and the patients from unnecessary risk & injury through the prevention of manual lifting of patients
- To promote and expect high safety standards of care by using consistent lift, transfer and repositioning techniques
- To promote maximum participation and independence of the patient during transfers, lifts and repositioning
- To teach caregivers the skills to perform safe body mechanics, techniques and strategies for safe and efficient patient transfers, based on the patient's abilities
- To enable caregivers to continually assess risk factors and choose appropriate transfer and mobility techniques

MUSCULOSKELETAL INJURY AMONG CAREGIVERS

- According to the Institute for Work and Health (*At Work, Issue 48, Spring 2007: Institute for Work & Health, Toronto)*, nurses report high rates of back pain:
    - A quarter of (female) nurses (25 %) reported back problems, compared with 19 %of employed women overall
    - In the past 12 months, more than one in three nurses (37%) had experienced pain that prevented them from carrying out normal daily activities. Three-quarters of these nurses report the pain was the result of work-related factors.
    - More than 60% of female and male nurses said their jobs presented high physical demands, compared with 38% and 46% of all working women and men, respectively

ANATOMY and PHYSIOLOGY

This section describes the specific anatomy of the caregiver with respect to preventing the injuries from patient handling. Good biomechanics and the natural patterns of human movement, whether it is of the caregiver or the patient, must always be considered and encouraged by the caregiver.

<u>The Spine</u>

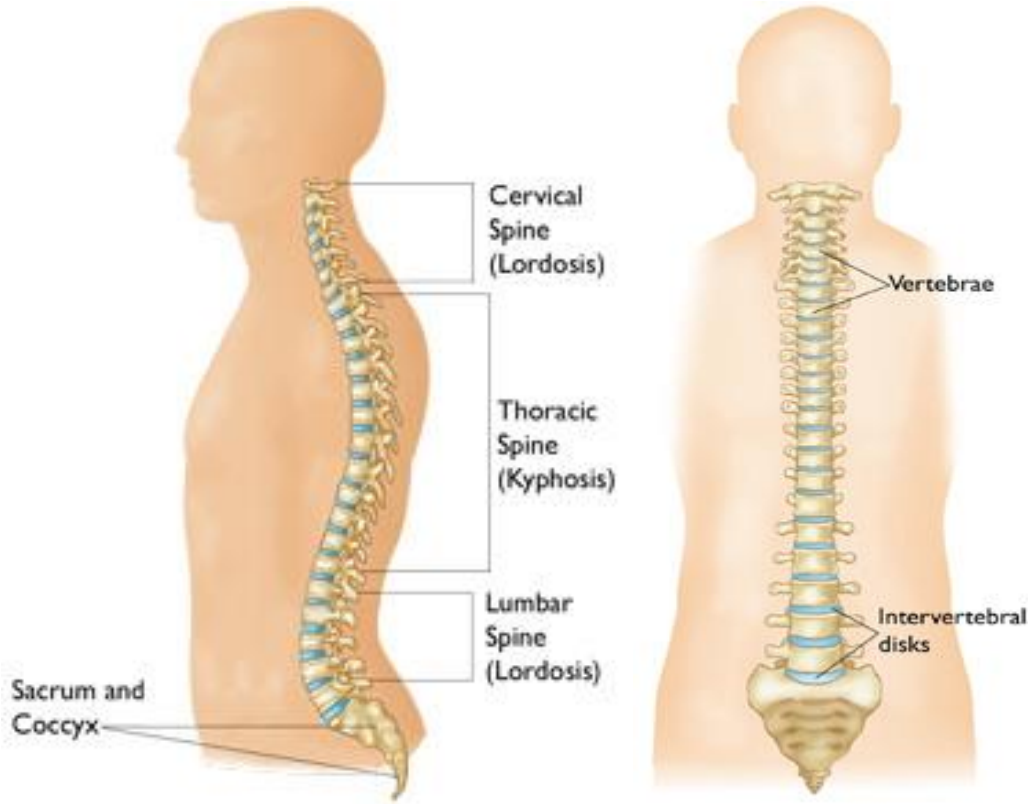
Your spine is made of small bones, called vertebrae. Vertebrae are stacked one on top another to form the spinal column - divided into 3 regions; cervical, thoracic, and lumbar. Each region of the spine has its own curve creating an "S" shape of the spine.

Between the vertebrae are discs. They allow a degree of mobility of the spine but are safest when even pressure from the vertebrae is applied – pressure is even only when the spine is maintained in the upright "S" curve. Otherwise the discs and associated structures are put at risk of injury.

Changes to the "S" curve happens when we stoop or lean forward from the waist and should be avoided whenever possible, especially when carrying or taking on a load in our hands.

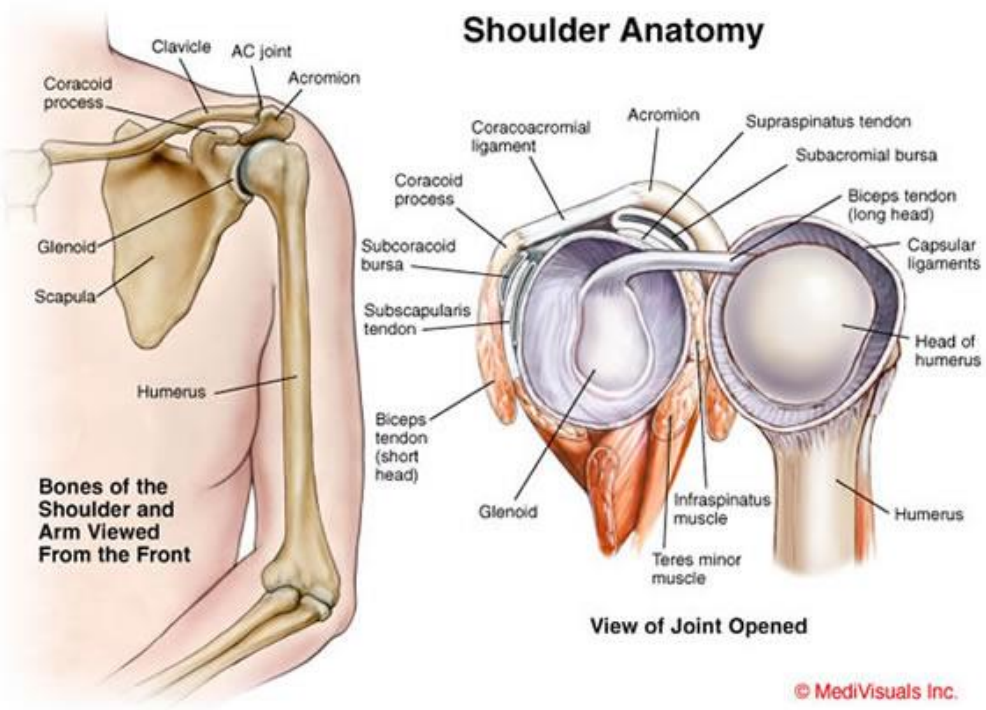
The spine is further supported by ligaments, and also by a substantial group of muscles – primarily present to maintain posture.

The spinal cord extends from the base of the brain and passes down through the spine. Nerves branch out from the cord and extend into our arms and legs coordinating our movements and senses.



Shoulder

The shoulder, comprised of what is commonly referred to as the 'rotator cuff' describes the four supportive muscles of the shoulder girdle. These muscles stabilize the 'ball and socket' joint and allow for significant range of motion that is of benefit for everyday life but also makes the joint vulnerable to injury, especially when positioned with weight in the extreme ranges. Therefore, shoulder injuries among care givers have been common when employing manual methods of moving patients.



WHAT CAUSES MUSCULOSKELETAL INJURY?

The body is poorly balanced when we use unsafe body mechanics such as stooping, or bending over without using our knees, or reaching with outstretched arms. There is further risk if body or limb is then carrying or pulling a load in this poor posture/position. Other examples include;

- A single high load incident (i.e. stopping a patient from falling)
- Awkward postures for sustained periods of time (i.e. stooped across the bed to dress a wound)
- Lifting continuously all day long without significant rest of the tissues
- Imbalance of activities: repetitive and sustained activities in one direction
- Stressful living: smoking, poor nutrition, obesity
- Psychosocial factors: time pressures, monotonous work, heavy responsibilities, too many tasks, low control, not enough breaks from work, low control, little autonomy, poor social support from peers and supervisors
- Age: the "life span" of the vertebral discs has shown;

Age group 14-34	90% of discs were normal
Age group 35-45	74% of discs were degenerating
Age group 47+	100% of the L5 discs were degenerating

COMMON MUCSULOSKELETAL DISORDERS

Strained Ligaments

- High, fast forces such as slipping and falling can tear or strain ligaments. Slower forces can tear ligaments from the bone. Recently it has been shown that prolonged stretch of ligaments (such as from prolonged slouching) can cause muscle spasms. It is important when sitting to have a supportive back support, maintain upright posture when standing, and avoid activities with arms fully outstretched in any direction.

Strained Muscles

- Muscle strains usually occur during activities that require the muscle to tighten forcefully. The muscle is trained either because it is not properly warmed up before the activity; it is too weak; or because the muscle is already injured and not allowed time to recover.

WHAT ARE WORK RELATED MUSCULOSKELETAL DISORDERS? (WMSDs)

- WMSD is a term that defines injuries to muscles, tendons or nerves that are caused or aggravated by work
- These types of injuries are also commonly referred to as Repetitive Strain Disorders, Cumulative Trauma Disorders, Repetitive Stress Disorders and Work-related Upper Limb Disorders
- Some of the risk factors could include workplace organization such as intensified work load, stressful work environments with stressful deadlines, working in awkward postures for extended periods of time and repetitive loading or lifting

PERSONAL PREVENTION

- Ensure that your work area provides easy access to patients, are not crowded
- Plan ahead to ensure that you have considered all of the factors before engaging in a patient-handling procedure
- Adjust the working heights of equipment to avoid bending, stretching or twisting
- Use a mechanical aid wherever possible
- Maintain your body's strength throughout your career
- Stretching should be incorporated into an exercise program to maintain flexibility
- Do not lift anything immediately after sitting for an extended period of time. Walk around and loosen up first

RULES FOR SAFE LIFTING

Use the acronym B.A.C.K. to prompt appropriate "S" Posture
QHC Restricts Patient Lifting/Support by our Caregivers to 35 lbs. or Less

B ack Straight

- Discs can tolerate larger compressive loads when the back is straight
- Maintain the spine's neutral "S" curve and move slowly

A void Twisting

- Discs are weaker when lifting if combined with twisting
- Vertebrae are designed to prevent twisting

C lose to Your Body

- The muscles in the back work harder, the further the load is from the body

K eep Smooth

- Jerky or fast movements increase the risk on the discs and muscles of the back

KEY DEFINITIONS

4+1 Assessment: Pre-standing safety check to ensure patient safe to stand and reduce falls risk. Residual force/weight for staff to support MUST be less than 35lbs (of Force).

Support Preparation: Caregiver preparing self for assisting a weight bearing patient by adopting a physical position of wide stance and upright back posture, and mentally preparing for the patient to fall in order to guide patient to floor NOT stop the fall completely.

Lift: Support of the entire weight of the patient from one surface to another (i.e. mechanical lift).

Transfer: guiding and/or assisting the patient from one surface to another. The patient is able to bear some weight in the legs and/or arms, and/or a part of the weight is borne by an assistive device such as a transfer board, sit/stand lift.

Repositioning: is shifting, adjusting or changing the patient's position in bed, wheelchair, chair, or other supportive surface.

Patient Handling Equipment: Equipment used to assist in the lift, transfer or reposition process. Examples include gait belts with handles, mechanical lifts, stand assist aids, sliding boards, slide sheets, and shower chairs.

Manual Handling: Lifting, transferring, repositioning, and moving patients using a caregiver's body strength without the use of lifting equipment/aids to reduce forces on the caregiver's musculoskeletal structure – does **NOT** meet QHC Minimal Lift Standards.

Risk Assessment: A careful examination of what in your work could cause harm to; caregiver, patient or equipment. It is important to ensure:

- Risk for injury is determined and managed
- Continuity of Care
- Each person is prepared for possible risk

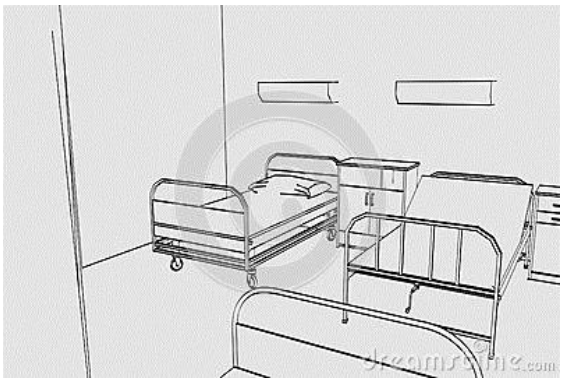
Bariatric/Obesity: terms to be used interchangeably in this manual. Defined as a person with a Body Mass Index (BMI) greater than 30 (Trimble 1996). BMI is calculated by dividing patient weight in kilograms by height in metres squared. However, safe patient handling also focuses on the weight/force necessary; the algorithms in this manual will assist the caregiver is choosing the best equipment for moving the patient on that basis.

RISK ASSESSMENT

Hazards Associated with Patient Handling

Task	Associated Risks – manually handling	Other Complications
Patient falls and subsequent transfers from the floor	Staff : strain to shoulder/back in stopping fall, strain attempting a manual lift from floor, concerns of reporting a fall, anger of patient Patient: bruises, fractured bone, concussion	Ancillary equipment, congested/confined area, bariatric challenges, dignity/embarrassment of both parties
Ambulating/standing transfers	See section on Patient Falls	Program requirements to ambulate patients as soon as reasonably possible, may lead to conflicting priorities, bariatric challenges
Laterally transferring between two horizontal surfaces	Staff: strain in shoulders or low back due to awkward postures and high force Patient: skin shear, limbs grasped/pulled, bumpy movement	Frequency of soiling/loose stool, pain of patient, bariatric challenges
Transporting patients and equipment	Staff: strains due to (higher) push forces and multiple ancillary equipment, poor posture reaching low handles if not adjusted or not adjustable Patient: low risk	Wheelchairs missing footrests, type/availability of patient handling equipment receiving department, bariatric challenges
Manipulating extremities (wound care, repositioning, prepping patient in OR)	Staff: strain of back with heavy prolonged lift/carry, should strain reaching with weight Patient: point pressure to skin with fingers of care giver, tugging on limb, skin shear	Bariatric challenges, complicated medical for positioning patient, congestion of work space, multiple pieces of equipment around bedside

RISK ASSESSMENT - Make it LITE! The objective of the Risk Assessment is to strike the balance between the needs of the patient **and** the needs of the caregiver.

<table>
<tr><td>LOAD</td><td>  </td><td>4+1 Assessment
1. Can patient bridge?
2. Have upper body strength?
3. Have quad strength?
4. Bed edge sit?
+1. Cognition?</td><td>Consider patient’s ability to give and receive communication, Fall Risk, size, weight, skin integrity, pain, compliance, aggression, catheters, drains, clothing/footwear, and fatigue/time of day</td></tr>
<tr><td>INDIVIDUAL</td><td colspan="2">  </td><td>Consider your knowledge, size/weight/height, compliance, health, fatigue, restrictions, and available assistance</td></tr>
<tr><td>TASK</td><td colspan="2" rowspan="2">  </td><td>Consider distance, surface heights, footrests removed, frequency, bending, stooping, twisting, necessity</td></tr>
<tr><td>ENVIRONMENT</td><td>Consider space congestion, obstacles and trip hazards, size of room for equipment, wet flooring, lighting, and pets.</td></tr>
</table>

FURTHER CONSIDERATIONS – PATIENT

Falls/Medical Status:
Various medical symptoms will affect the patient's ability to help with a procedure. For example, typical symptoms of Parkinson's disease include shuffling the feet and tremors. A patient who is suffering from Multiple Sclerosis may experience weakness or spasticity, lack of coordination and poor vision.

Medications will also have an effect on the patient's mobility status and side effects may affect their ability to transfer. For example, drowsiness is a common side effect of many medications. Diagnoses such as arthritis need to be considered as the patient's level of fatigue, stiffness and pain may vary and have an impact on their ability to transfer or tolerate positions imposed by different slings.

Other assessments available to the health care worker, such as "Falls Assessment" may help gather more information, in terms of their abilities and innate risks. The first and foremost question is whether or not the patient can weight bear consistently. If the answer is "no", that patient **must** be moved with a *mechanical lift* – unless the clinical judgment requires alternate means (i.e. physiotherapist performing a specific therapeutic exercise. If uncertain, always use a higher assistance/device level, such as two people rather than a one person transfer to ensure you or the patient are not injured.

Typical Medical Conditions to Accommodate

- Hip/knee replacements
- History of Falls
- Paralysis/paresis
- Unstable spine
- Severe edema
- Very fragile skin
- Respiratory/cardiac conditions
- Wounds/bed sores
- Amputation
- Urinary/fecal stoma
- Contractures, spasms
- Tubes
- Fractures/splints/traction
- Severe osteoporosis
- Severe pain/discomfort
- Postural hypotension

Cueing the Patient for the Greatest Success:
People move in predictable patterns to elicit their own movement. Ensure these are considered when asking the patient to assist you. For instance; in most cases of sit to stand the patient must have their feet slightly behind their knees, perhaps push off of armrests, and be scooted to the front of their chair or bed with their torso leaning forward with their chin up. For a patient to assist in a bed boost, allow the patient to flex their knees and push with their feet as able.

Bariatric Patient Assessment and Care Plan:
Implications include; (see more in Appendix 1)

- Reduced skin integrity
- Poor respiration
- Lack of independence
- Loss of dignity
- Body shape, and its impact on balance and other medical conditions/health

FURTHER CONSIDERATIONS – CAREGIVER

IF CAREGIVERS NEED TO EXERT MORE THAN **35 lbs.** force, THE PATIENT SHALL BE CONSIDERED FULLY DEPENDENT AND A MECHANICAL LIFT SHOULD BE USED

Preparing for the Patient Handling Activity:

1. Wear comfortable clothing and secured, slip resistant footwear
2. Take responsibility for knowing how equipment works and whether it's available
3. Base equipment and assistance needs on the **"4+1" and "LITE" risk assessment**.
4. Select the appropriate Algorithm from this manual
5. Gather the appropriate equipment and other staff members, if needed
6. Organize the physical environment and the equipment to ensure safe completion of the task. This includes locking the wheels of the bed or chair, putting the bed or stretcher at the correct height, removing clutter, and making sure any mobile equipment is charged
7. Make sure the assisting staff members, if any, know their roles; rehearse if necessary
8. Position yourself using the body mechanics principles of this manual
9. Coach the patient
10. Tell the patient what actions to expect and what is expected of them
11. Be prepared for the unexpected: pause frequently to ensure patient and yourself are ready for the next step. Falls may happen, be alert to slow the fall down, NEVER try to stop it.

Patient Weight Bearing:

The caregiver(s) need to ensure that adequate preparation time is taken to position the patient, themselves and the equipment. When performing patient handling, the caregiver should;

1. Set bed height such that the patient can firmly place feet flat on the floor
2. Wherever possible remove footrests/armrests from the wheelchair
3. Use a wide-offset base of support = "power position"
4. Bend knees (softly) to promote natural "S" curve of back
5. Move your feet with the transfer to prevent twisting of back
6. Keep your elbows close to your body
7. Stand/squat beside patient
8. Guide patient movement with an open hand at their low back - the patient should NEVER be grasped under the armpits as this could injure the patient's shoulder
9. Maximize the patient's own natural pattern of movement and capabilities by cueing them in such a way that they can assist in the actions
10. Never allow the patient to grab on to you
11. Communicate with partner and patient so that everyone moves at the same time
12. Postpone the task if the patient is resistive, un-cooperative and/or aggressive

Mechanical Lifting/Repositioning Devices:

When preparing for a task with a *mechanical device*, the caregiver should:

1. Inspect equipment prior to each use
2. Use as directed by User Manuals accompanying the equipment or on the unit
3. Set the bed height at the waist height of the shortest caregiver
4. Follow the recommended procedures and Manufacturers User Manual for the use of the equipment

5. Return the equipment to its appropriate storage area (i.e. parked on its' track, storage room)
6. Whenever possible have two caregivers available for initiating the task
7. Never use a lifting device for transporting the patient any distance (e.g. to another room) unless the equipment has been specifically designed for this purpose (e.g. stretcher tub lift)

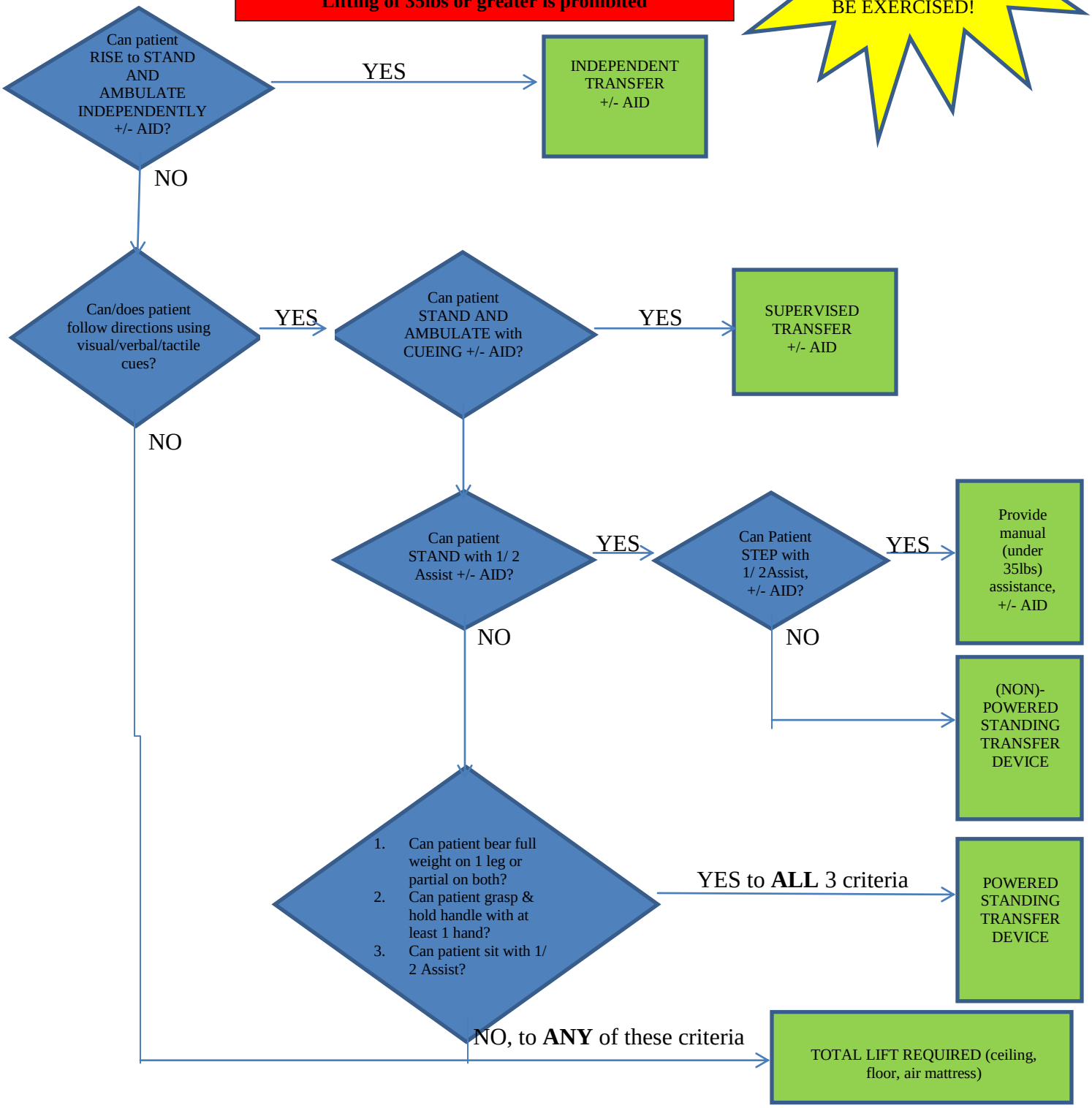
Re-Charging Batteries – The ceiling lifting devices benefit from ongoing charging. Whenever equipment is not in use they should be in their charging station.

SIT TO SIT TRANSFER

(bed to toilet to chair to commode)

Lifting of 35lbs or greater is prohibited

Algorithms are tools to assist in making decisions, CLINICAL JUDGEMENT MUST BE EXERCISED!

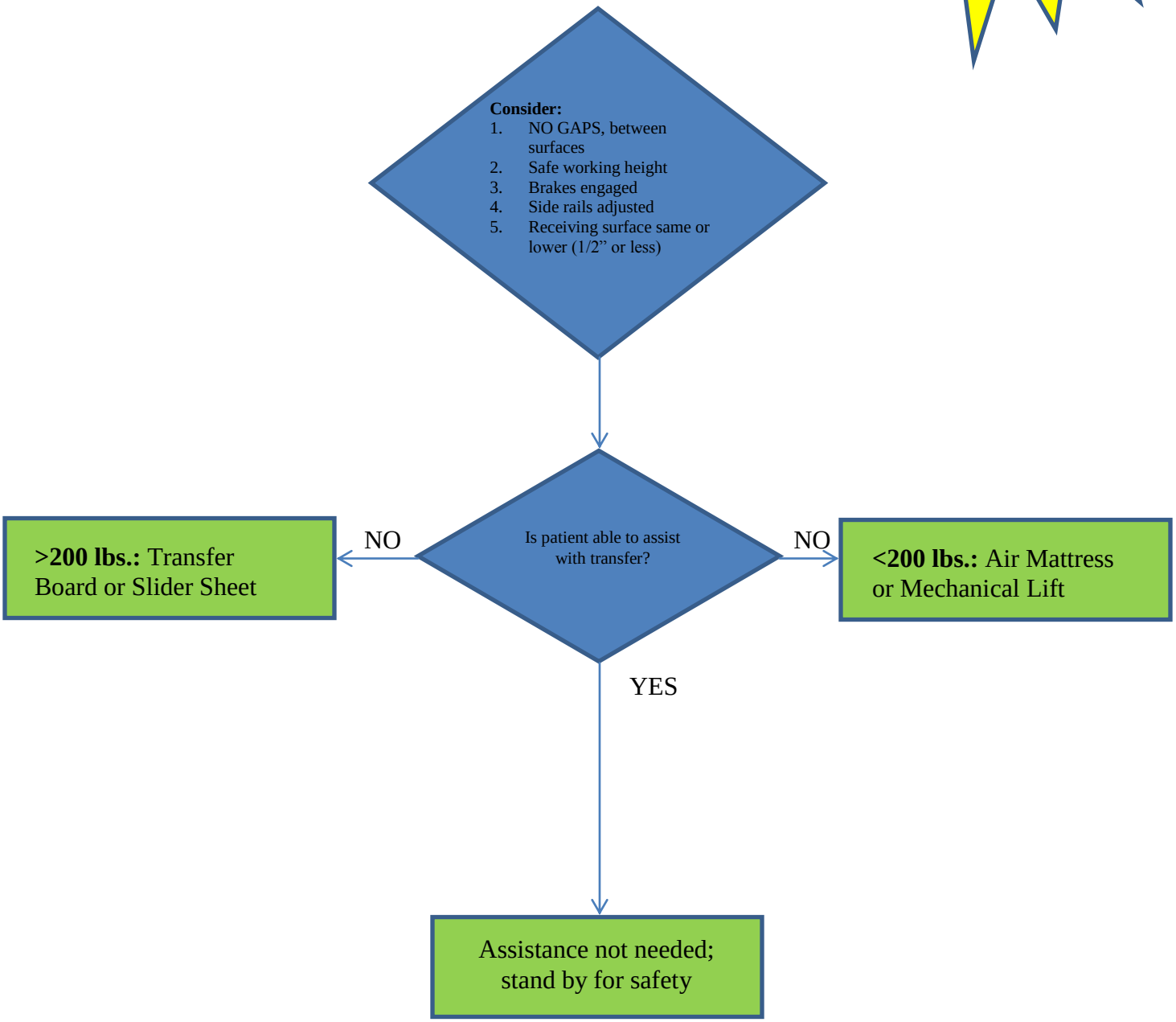


LATERAL TRANSFER

(bed to stretcher/table)

Algorithms are tools to assist in making decisions, CLINICAL JUDGEMENT MUST BE EXERCISED!

Lifting of 35lbs or greater is prohibited

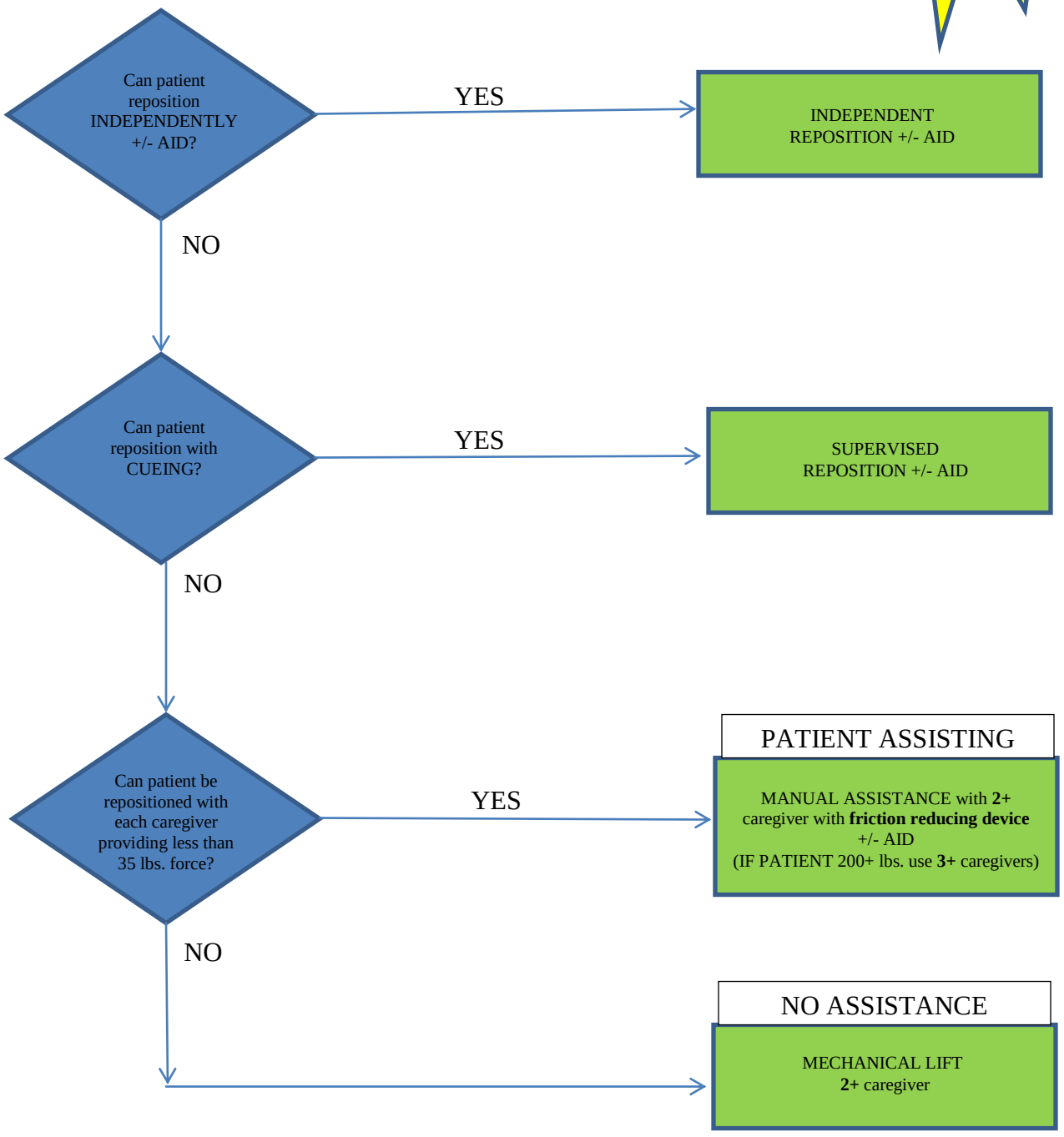


REPOSITIONING ON A FLAT SURFACE

(bed/stretcher/table)

Algorithms are tools to assist in making decisions, CLINICAL JUDGEMENT MUST BE EXERCISED!

Lifting of 35lbs or greater is prohibited



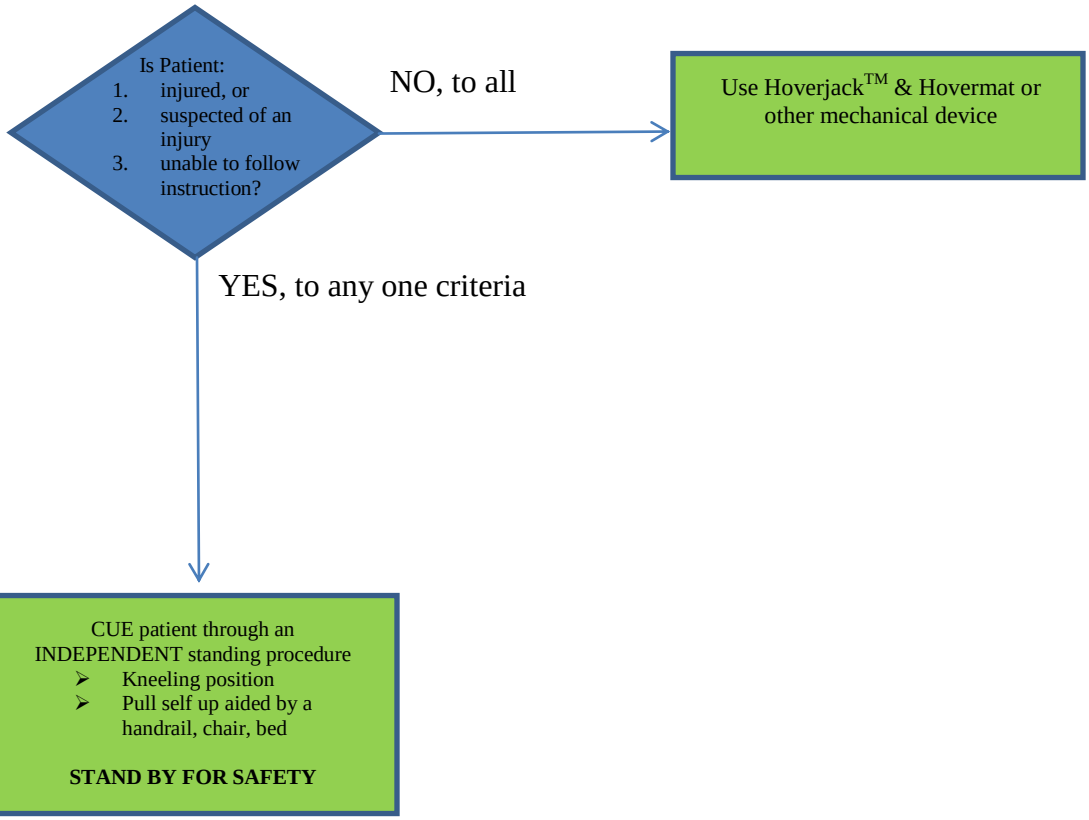
CONSIDER: use of Trendelenburg bed position when boosting to reduce shear forces on the patient's skin and pressure ulcers when sliding, as well as effort of the slide

Algorithms are tools to assist in making decisions, CLINICAL JUDGEMENT MUST BE EXERCISED!

RECOVERING FROM A FALL

(to bed/stretcher/table)

Lifting of 35lbs or greater is prohibited

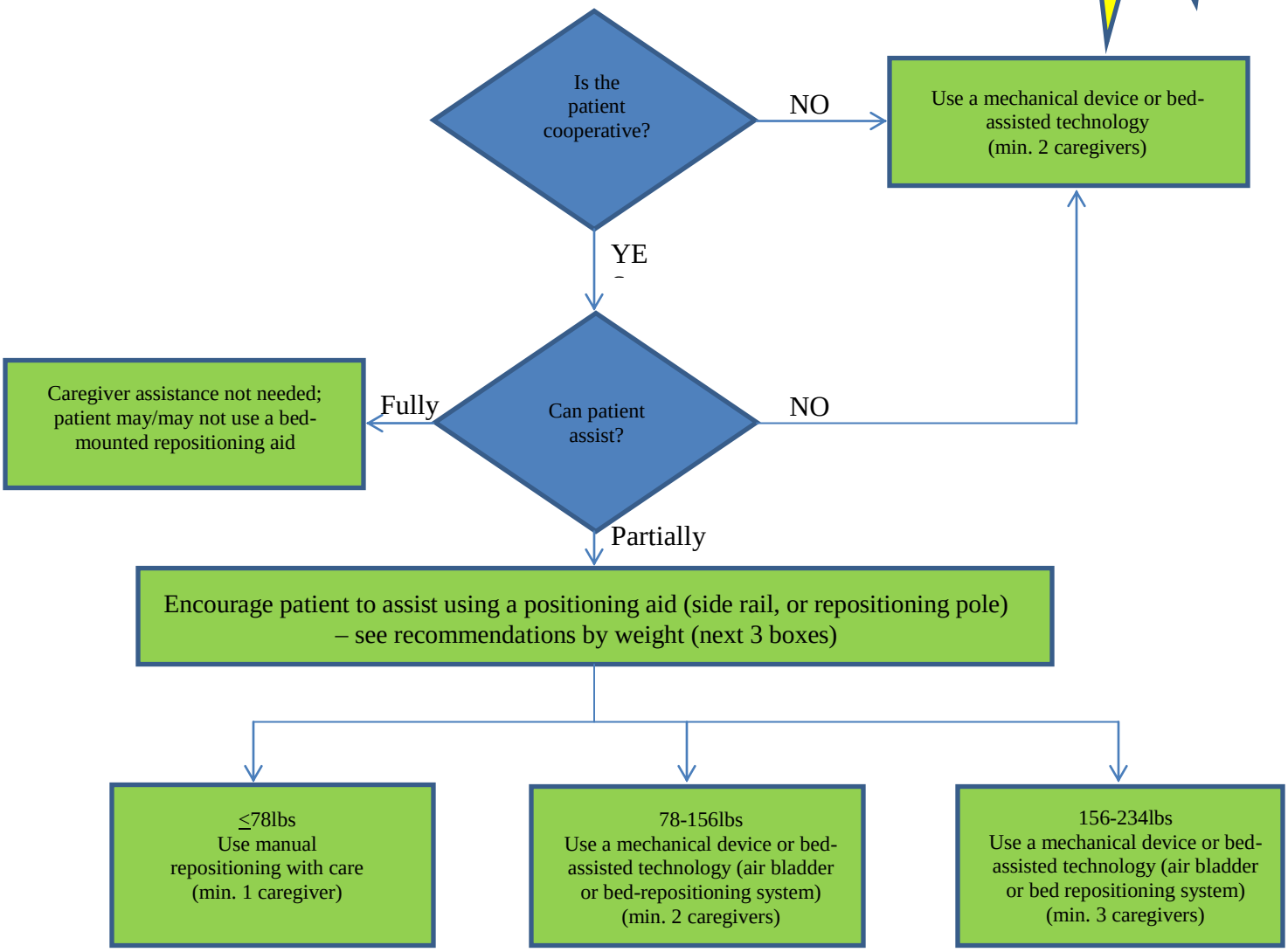


ORTHOPAEDIC PATIENT TURNING

(in bed/stretcher/table)

Lifting of 35lbs or greater is prohibited

Algorithms are tools to assist in making decisions, CLINICAL JUDGEMENT MUST BE EXERCISED!



TIPS:

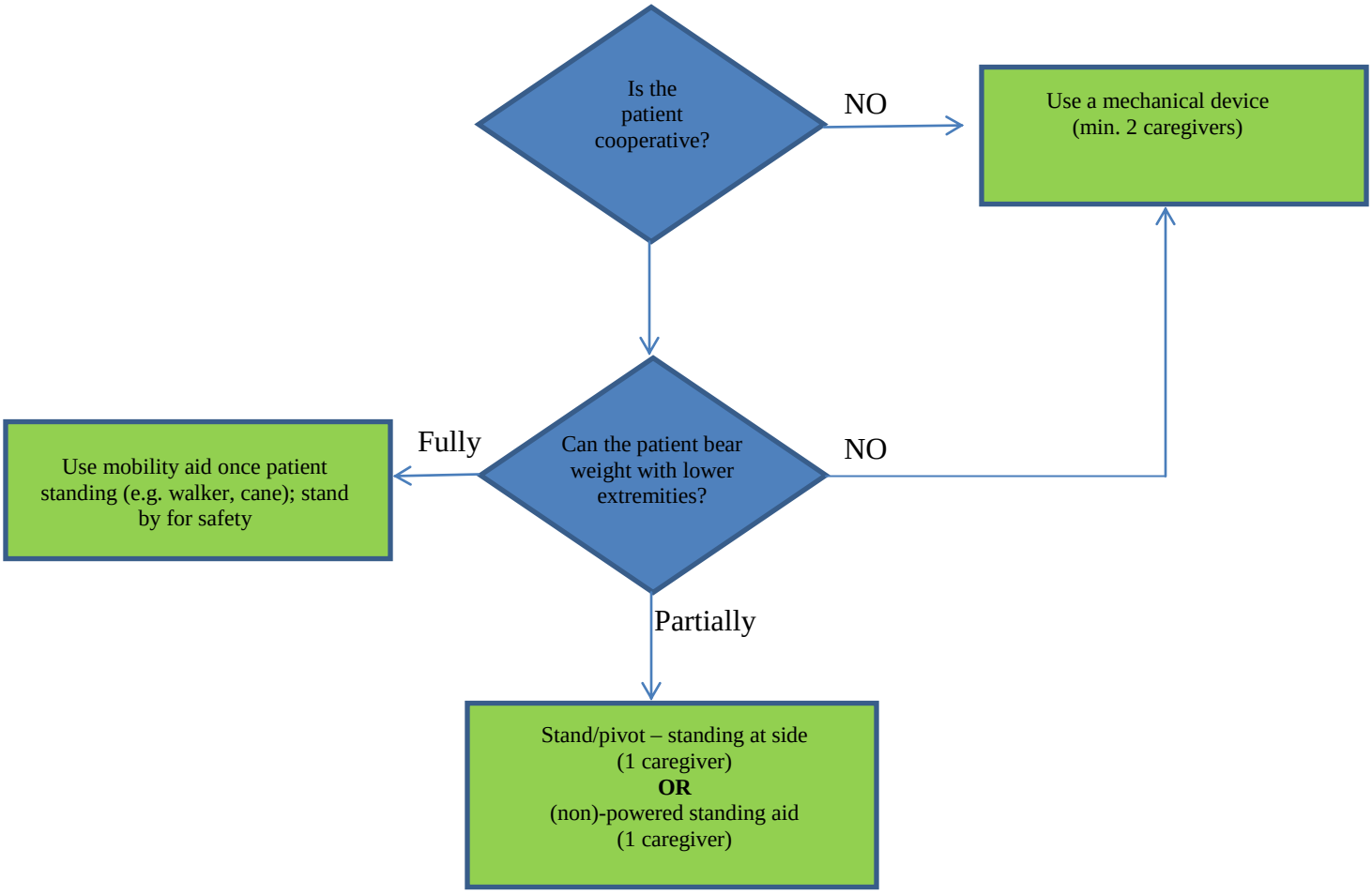
1. Maintain orthopaedic precautions as prescribed while performing this activity.
2. Select sling to meet and maintain the patient's pre-op or post-op positioning precautions.
3. If the patient weights more than 234lbs a mechanical device must be used. Use clinical judgment to select number of caregivers required.

Algorithms are tools to assist in making decisions, CLINICAL JUDGEMENT MUST BE EXERCISED!

ORTHOPAEDIC STANDING TO/FROM SIT

(Post-Operative Total Hip Replacement etc.))

Lifting of 35lbs or greater is prohibited



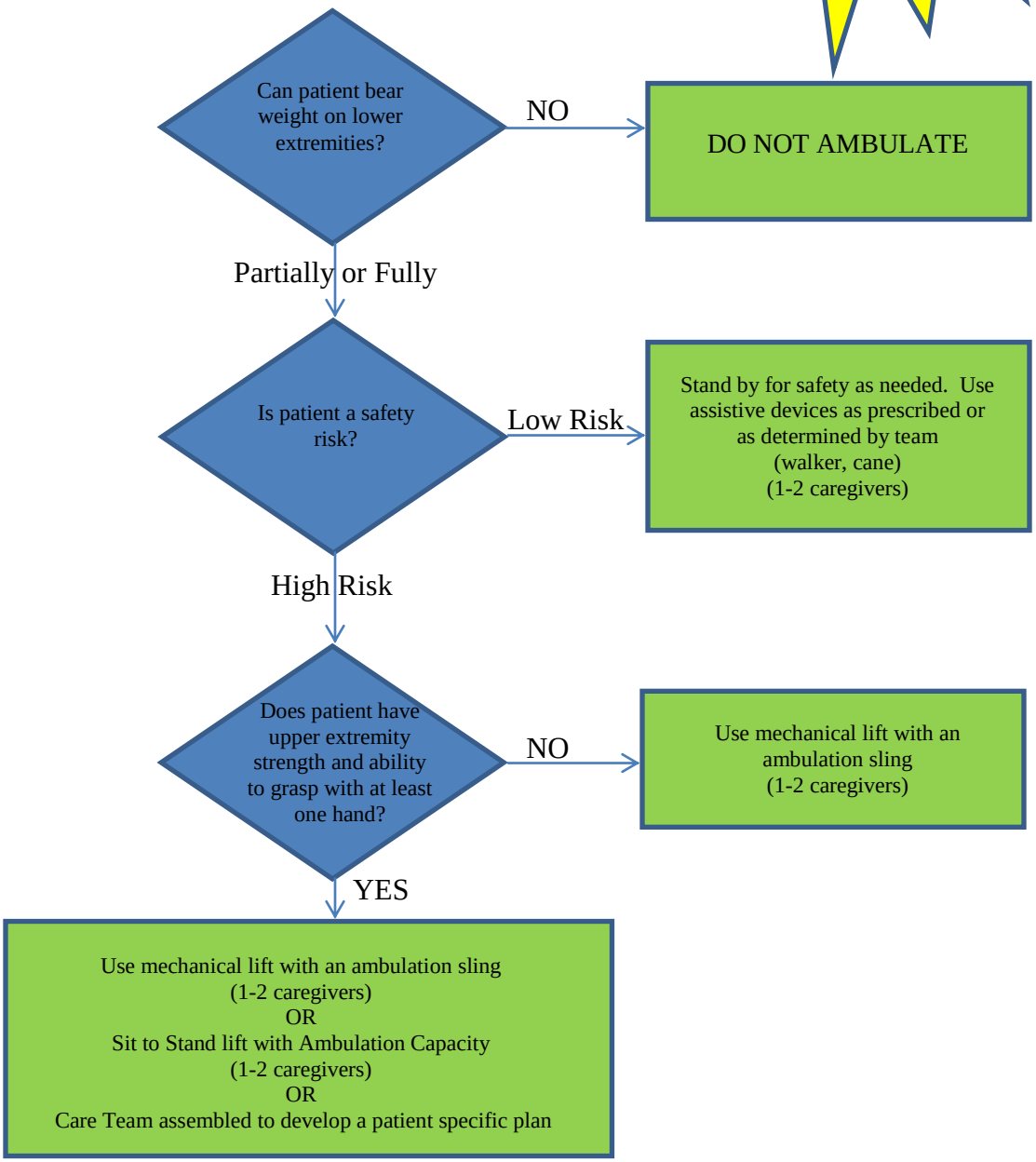
Tips:

1. Maintain orthopaedic precautions as prescribed while performing this activity.
2. Select sling to meet and maintain the patient's pre-op or post-op positioning precautions.

AMBULATION

Algorithms are tools to assist in making decisions, CLINICAL JUDGEMENT MUST BE EXERCISED!

Lifting of 35lbs or greater is prohibited



Tips:
Low Risk – a) lack of combativeness; b) ability to follow instructions; c) medical stability; d) experience with the assistive device.

High Risk – a) combativeness, b) lack of ability to follow instructions; c) medical instability; d) lack of experience with the assistive device, e) neurological deficits, f) bariatric.

Table 1: Lifting and Holding Legs or Arms in an Orthopaedic Setting

Patient Weight, lb (kg)	Body Part	Body Part Weight, lb (kg)	Lift		Hold		
			1 hand	2 hands	2 hands <1 min	2 hands <2 min	2 hands <3 min
<40 (<18)	Leg	<6.3 (3)					
	Arm	<2.0 (1)					
40–90	Leg	<14.1 (6)					
(18–41)	Arm	<4.6 (2)					
90–140	Leg	<22.0 (10)					
(41–64)	Arm	<7.1 (3)					
140–190	Leg	<29.8 (14)					
(64–86)	Arm	<9.7 (4)					
190–240	Leg	<37. (17)					
(86–109)	Arm	<12.2 (6)					
240–290	Leg	<45.5 (21)					
(109–132)	Arm	<14.8 (7)					
290–340	Leg	<53.4 (24)					
(132–155)	Arm	<17.3 (8)					
340–390	Leg	<61.2 (28)					
(155–177)	Arm	<19.9 (9)					
390–440	Leg	<69.1 (31)					
(177–200)	Arm	<22.2 (10)					
>440 (>200)	Leg	>69.1 (31)					
	Arm	>22.2 (10)					

***Note.* These are guidelines for the average weight of the leg and arm and are based upon the patient's weight. The maximum weight for a 1-handed lift is 11.1 lb. and for a 2-handed lift, 22.2 lb. No shading**: Okay to lift and hold; use clinical judgment and do not hold longer than noted. **Gray shading**: Do not lift alone; use assistive device or more than one caregiver.

Examples from Table 1: It is safe to manually lift the leg of a patient weighing 120 lb with two hands to place the leg in a sling, but it should not be manually held for more than a few seconds. Similarly, it is safe to manually lift the arm of a patient weighing 185 lb with two hands, but the arm should not be held in place longer than 1 min. In addition, it is safe to lift the arm of a patient weighing up to 440 lb with two hands, but the arm should not be held manually for more than a few seconds.

Table 2: Limb Weight Factor for Lifting or Holding a Limb with a Cast

Limb	Limb Weight Factor[a]	1 hand	2 hands	2 hands <1 min	2 hands <2 min	2 hands <3 min
Leg	0.157	11.1 lb (5.1 kg)	22.2 lb (10.2 kg)	11.6 lb (5.3 kg)	7.8 lb (3.5 kg)	6.4 lb (2.9 kg)
Arm	0.051					

[a]From *Occupational Biomechanics*, by D. B. Chaffin, G. B. J. Anderson, and B. J. Martin, 1999, New York: Wiley. Copyright 1999 by John Wiley & Sons.

To determine whether it is acceptable to lift or hold a limb with a cast, multiply the patient's weight by the limb factor above (0.157 for leg and 0.051 for arm) and add the weight of the cast to obtain the total limb weight. Compare the calculated limb total to the value in the appropriate task box (e.g. 11.1lbs for 1 handed lift). If the amount exceeds the total value in the box then assistance should be provided – additional hands or mechanical device.

SAFE WORK PRACTICES BY TASK

TRANSFER FROM BED TO STRETCHER

Before commencing the task/procedure, make sure you have the following materials or equipment available:

1. Stretcher/Bed
2. Second flat surface i.e. stretcher, x-ray table, OR Table, morgue stretcher
3. Long or ¾ Transfer Board/Samarit Board or Sheet or Mechanical Lift and Matching Sling or Hover Mat

1. **Process Description -** Perform Risk Assessment then,

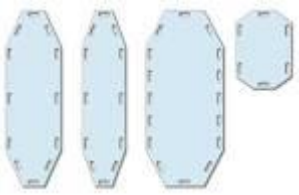
Transfer from bed to stretcher, one of the most common transfers, can require the help of one or more caregivers, depending on the patient's size and condition and the primary nurse's physical abilities. Techniques for achieving this transfer include a slippery sheet or sliding board. **NOTE: MANUAL METHOD SHOULD ONLY BE USED IN THE ABSENCE OF MECHANICAL LIFTS (SEE BELOW FOR MECHANICAL LIFT).**

A) General Instructions for Bed to Stretcher:

- Tell the patient (where applicable) that you're going to move him from the bed to the stretcher, and place him in the supine position
- Ask team members to remove watches and rings to avoid scratching the patient during transfer
- To prevent injury, remember to use good body mechanics with all transfers
- Store equipment at bedside or other dedicated location following use. Equipment should always be patient-dedicated to prevent transmission of infection

B) Sliding-board transfer: (*METHOD FOR INSTALLING BOARD SHOULD BE USED FOR SLING LOADING)

Implementation:



- Place the stretcher parallel to the bed, and lock the wheels of both to ensure the patient's safety
- Place the bed/stretcher at a good working height for the shortest care giver (waist/elbow height)
- ***Stand next to the bed, and instruct a co-caregiver to stand next to the stretcher
- ***Reach over the patient and pull the far side of the bed sheet toward you to turn the patient slightly on his side. The co-caregiver then places the sliding board and/or slippery sheet beneath the patient, making sure the board/sheets bridges the gap between stretcher and bed **(REPEAT AS NEEDED TO LOAD SLING)**

- Ease the patient onto the sliding board and release the sheet. The co-caregiver then grasps the near side of the sheet at the patient's hips and shoulders and pulls him onto the stretcher in a smooth, continuous motion. She then reaches over the patient, grasps the far side of the sheet, and log rolls him toward her
- Remove the sliding board as your co-caregiver returns the patient to the supine position

C) Ergoslide (or other friction reducing sheeting system)

- Two caregivers are required to load and use the ergoslide
- Inspect ergoslide for any damage. DO NOT USE IF frayed or otherwise of concern
- Fold/roll the two sheets together in 6" increments, leaving a 6" flap of the sheets at the end, this flap is for placement under the patient's head
- Place the bed/stretcher at a good working height for the shortest care giver (waist/elbow height)
- With patient prone on the bed or stretcher, take the folded sheets and place them underneath the patient's pillow/shoulders (this can be accomplished by gently rocking transfer sheets side to side with the assistance of the other care giver – allow the patient to assist as much as possible)
- Unfold/roll sheet one fold at a time, using quick lateral motions in unison with other care giver (it may help to anchor the upper hand to the mattress)
- If resistance is encountered at patient's buttock resist urge to jerk and either continue to pull easy or rock sheets from side to side
- Using webbed handles of top sheet, staff on same side, pull patient across horizontal surface to desired position on next horizontal surface (CAUTON: both surfaces should have wheels braked and be as close together as possible)
- Ergoslide can also be used to pull a fallen patient along the floor to a ceiling lift.
- Once ergoslide is loaded, it can be used to assist in loading slings, using the same folding sequence with the sling and then unrolling the sling between the two ergoslide sheets
- To remove the ergoslide sheets, reach under the patient's ankles and fold the sheet corner under itself. Start with bottom sheet first to avoid any shearing of patient skin or tugging by the care giver. Tip: pull the sheet shiny side against shiny side and pull at a constant 45° angle away from the body

D) Mechanical Lift Use:

Note:

- Generally, two caregivers are needed to use the lift.
- Slings/harnesses and lifts must be from the same supplier i.e. Handicare lift use Handicare sling
- Slings should be removed after each use, unless otherwise documented on the patient's care plan

Implementation:

- Ensure lift is in working order and patient's weight is within the lifting capacity of the device
- Adjust the height of the bed to a comfortable working level for the caregivers, and release side rails
- Select appropriate size and style of sling (positioning sling with ceiling lift is best for this procedure)
- Load sling by log rolling patient and fan-folding sling to tuck under patient and repeat for second side – ensure all straps are free (or with use of Ergoslide)
- Raise the head of the bed slightly for patient comfort and to prevent the head from swinging when the lift is engaged

- Instruct the patient to fold arms across their chest (or position arms for them)
- Load sling straps to the lift
- Verbally prepare the patient for the lift
- Using the remote hand control attached to the lift, raise the patient until just clear of the first surface (or from floor to the adjacent bed surface– if patient has fallen)
- Gently guide the patient along the track and centre over the next surface
- Lower the patient
- Remove sling as necessary, using the reverse of the above 'loading' guidelines
- Sling may be required at the next transfer point (i.e. Morgue) and can be left for that purpose

E) Hover/Air Mat Use:

1. **Process Description**

a) In an emergency room setting, it is preferred that the hovermat be placed on the surface (stretcher) prior to patient being placed on the stretcher by the Ambulance Attendants – otherwise, log roll patient as instructed to install the hovermat under the patient.

b) Use hovermat according to manufacturer's guidelines.

2. **Potential Hazards of Hovermat:**
   Without following all manufacturers' guidelines and additional precautions in the next section, you could risk the patient falling from the transfer surface and injury to yourself.

3. **Hovermat Special Precautions/Steps:**

a) Whenever possible, 2 trained staff should be present to perform the transfer (a brief risk assessment would assist in determining the necessity i.e. patient disoriented, not following instructions well, patient on a spinal board)
b) Use 2 trained staff, when the patient is on a spinal board.
c) Whenever possible, use appropriately sized hovermat, otherwise the mat can be unstable.

Blue Handled Mats (28" wide mat) are for the small to average-sized population, Pink Handled Mats (34" wide mat) for Bariatric/Wide Patients, Green Handled Mats (39" wide mat) are for a much larger Bariatric Patients – all mats take 1200 lbs/544kg of weight.

d) **Center patient** on the hovermat, and be observant of placement throughout the inflation/deflating process; as well as during the transfer. *(There is an increased risk of patient rolling off the hovermat if positioning of patient is not strictly adhered to)*
e) Plug in unit (ensure this is done prior to hooking up air tube to mat, to prevent unsupervised inflating of mat), and place canister to the receiving side of transfer, for ease of turning off air while still keeping contact with patient. If pump will not reach, two persons must carry out the transfer in order to keep patient secured and safe.
f) Have the patient cross their arms over their chest throughout the use of the hovermat.
g) Apply straps whenever the hovermat will be inflated
h) Move the hovermat with the patient on it by alternating head and toe as lead (a see-sawing motion across the surface). There should be a slight downward grade between surfaces, and brakes applied where applicable.

ALL OF THE ABOVE IS REQUIRED TO PREVENT THE RISK OF PATIENT ROLLING OFF THE HOVERMAT AND LEADING TO PATIENT/STAFF INJURY

1. Ensure the hose used to inflate the hovermat is secured to the mat by the snap dome located within the Velcro section of the hovermat. This prevents the hose from suddenly removing itself from the hovermat and hitting someone.
2. Clean mattress with disinfectant wipes or other hospital approved cleaning method.

After all transfers:

- Position the patient comfortably on the stretcher, apply safety straps where applicable, and raise and secure the side rails.

4. Special Precautions of Lateral Transfer

Manual Transfer: When transferring an immobile or markedly obese patient from bed to stretcher, first move patient, in increments, to the edge of the bed. Then rest for a few seconds, reposition the patient if necessary, and pull patient onto the stretcher. If the patient can bear weight on their arms or legs, two or three caregivers can perform this transfer. One can support the buttocks and guide the patient, another can stabilize the stretcher by leaning over it and guiding the patient into position and a third can transfer any attached equipment. If a team member isn't available to guide equipment, move I.V. lines and other tubing first to make sure it's out of the way and not in danger of pulling loose (disconnect tubes if possible).

Depending on the patient's size and condition, a transfer can require two to seven people.

STANDING TRANSFERS TO/FROM BED TO CHAIR
(Non-mechanical Methods)

Before commencing the task/procedure, make sure you have the following materials or equipment available:

1. Stretcher/Bed
2. Second seated surface (i.e. wheelchair, commode)
3. Transfer Board
4. Gait Belt
5. Pivot Disc/Patient Pivot Turner/Non-mechanized Sit-Stand/Gimme a Lift

1. **Process Description:** Perform risk assessment, then:

Transfer from bed to chair is a common transfer, and can require the help of one or more caregivers, depending on the patient's size and condition; and the primary nurse's physical abilities. Techniques for achieving this transfer may include a gait belt and pivot device, or perhaps a transfer board.
NOTE: IF PATIENT IS UNABLE TO WEIGHT BEAR OR MANAGE A TRANSFER BOARD INDEPENDENTLY OR YOU ARE UNCERTAIN, A MECHANICAL LIFT SHOULD BE USED.

Implementation:

- Tell the patient that you're going to move him from the bed to a chair. The patient should be able to independently sit on the edge of the bed.
- Ask any team members to remove watches and rings to avoid scratching the patient during transfer
- To prevent injury, remember to use good body mechanics/power stance with all transfers
- Store equipment at bedside or other dedicated location following use. Equipment should always be patient-dedicated to prevent transmission of infection.

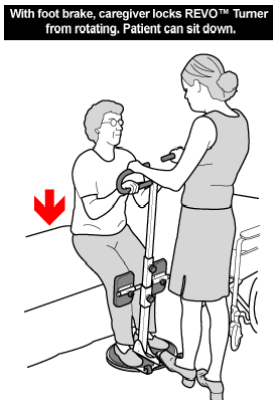
Standing Pivot - Gait Belt/Pivot Disc:

- Prepare equipment (remove footrests where necessary) and ensure it is in good repair
- Place the wheelchair parallel or slightly angled to bed and set brakes
- Ensure patients feet are flat on the ground and knees slightly bent
- For those patients with difficulties pivoting, place their feet on a pivot disc
- Place gait belt low on trunk of patient
- Instruct patient and cue them into the best position for standing - feet beneath or slightly behind knees; shoulders forward of hips
- Using their hands on the flat surface, where able, to push up
- Standing beside patient; apply light pressure to their low back or by gripping gait belt loop if used, to assist them to a stand – using a unified count to stand on
- Pivot patient on disc or cue them to move feet to pivot and step back so the calves are touching the chair
- Again, using a light touch at the low back/gait belt assist patient to sit down

Seated Transfer – Small Transfer Board:

- A transfer board is used to assist and teach the patient with limited or no use of lower extremities to transfer between surfaces
- This procedure requires one or two caregivers
- The transfer belt must be used to allow caregiver safe handling of patient
- Ensure that:
    - The origin and destination surface heights are equal or that the surface at the end of the transfer is lower
    - The patient wears proper clothing, buttocks covered, to allow the patient to smoothly slide on the board (can use towel/pillow case to facilitate slide)
    - The wheelchair is placed parallel or at a slight angel on the patient's stronger side
    - All the wheels on the equipment in use are locked unless otherwise required
    - The foot rests and arm rests closet to the patient are removed from the wheelchair
- Explain to the patient what you are going to do and what they must do to help with the procedure
- Slide the transfer board underneath the buttock of the patient. Position a towel or pillow case between the patient's buttock and the transfer board. The towel is then used to assist the patient along the board.
- The transfer board is partially under the patient's buttock and the other end of the board extends halfway across the seat of the other surface, bridging the gap between them
- On count of 3 assist patient to slide across the board
- Place one foot between patient's feet (contact below patient's knee may be necessary for control) and the other foot behind in a wide stand to provide a sturdy base of support. Patient's feet should be shoulder-width apart and pointing towards the chair.
- Caregiver positions self, facing the patient with knees bent, abdominal and gluteal muscles tightened, shoulders and hips in line and trunk straight to reduce stress on lumbar spine. Grasp the transfer belt on both sides under the arms, holding patient as close as possible.
- Remove the board from underneath the patient once they are firmly supported by alternate surface
- Replace arm rest and foot rests

Transfer – One Person Transfer with Walker or other hand held standing transfer device:



- Patient must be able to weight bear with at least one leg
- A Transfer/Gait Belt may be used to allow guidance of the patient through the move
- Place the transfer belt around the patient's waist
- Place walker in front of patient
- Stand on patient's affected side (if they have one) and hold belt in the back while standing beside the patient
- Instruct patient to lean forward and push up off bed. **Note: the walker is not used for support until the patient has pushed off the bed and is standing with some balance**
- The patient will place hands on the walker for support
- Patient's hips should be between or close to the back posts of the walker

- The patient will take small steps toward the chair and initiate the turn. The walker will be turned in stages as well, as the patient moves from bed to chair. Assist with the positioning of walker as needed.
- Once at the chair, instruct the patient to feel for contact between the back of the knees and the chair seat before attempting to sit
- Ask the patient to reach for the armrests by bending forward at the waist and slowly sit down
- If the patient has a leg with decreased weight bearing status and/or decreased knee/hip range of motion (ROM), ask the patient to straighten leg out in front before sitting down to avoid injury
- Remove the walker from in front of the patient
- Ask patient to lean forward and push with feet and hands, or "wiggle back" into the chair if required

After all transfers

- Position the patient comfortably on the 'chair', apply safety straps where applicable

2. Special Precautions:

Bariatric patients are best assessed by a team of health care professionals prior to their first weight bearing experience. Physiotherapy should be part of this team.

MECHANICAL TRANSFERS TO/FROM BED TO CHAIR

Before commencing the task/procedure, make sure you have the following materials or equipment available:

1. Bed/stretcher
2. Wheelchair/commode/Chair
3. Mechanical Ceiling Lift
4. Mechanical Floor Lift
5. Sit and Stand Assist (SARA Lift)
6. Matching Sling

1. Process Description

Mechanical lift is used when a patient is unable to weight bear or pivot and caregiver would have to support greater than 35 lbs.

Two caregivers are required to properly fit and apply the sling. Mechanical lifting devices are designed for surface to surface transfers over short distances. They are not used for transporting patients.

Implementation:

Transfer from Chair to Bed – floor or overhead lift

- Engage locks on chair (brakes on the floor lift are OFF)
- Adjust bed height to comfortable working position for caregivers, raise head of bed if necessary for patient comfort
- Inspect all lifting equipment for safety (including sizing of sling)
- If the patient requires placement of sling, stand in front, lean the patient forward in the chair
- Position horseshoe area of the sling behind the back, at the level of the coccyx, making sure the identification label on the sling is on the outside and centered between the patient's shoulder blades
- Lean patient back into the chair
- From a kneeling or squatting position, lift one leg and secure the leg portion of the sling around the hip, under and up between the legs. Repeat for the other leg.
- Criss-cross straps between the legs (where applicable)
- Move lift toward/above patient, instruct patient to keep arms tucked in sling
- Adjust lift height and position sling boom so that it is parallel to the patient's shoulder and at an appropriate height for attaching the sling loops
- Attach matching shoulder strap loops to sling boom on each side to ensure patient is evenly suspended. Then repeat for leg straps.
- Using the remote hand control (or crank) raise the patient until just clear of the chair, and check sling loops to ensure properly seated.
- Continue to raise patient until clear of the chair
- Pull lift away from the chair, using lift handles
- Lower the boom to a suitable height for transport. A second caregiver may steady the patient during transport by grasping the side handlings on the sling
- Adjust boom height if necessary to bed height
- Rotate patient into correct position above bed
- Adjust lift as required for bed and into suitable position to lower patient into the bed
- Second caregiver can assist in guiding patient onto bed surface as patient is lowered
- Continue to lower lift until straps can be easily removed from boom
- Remove sling from patient, using safe biomechanics and instructions from above

NOTE: keep floor lift legs as wide as possible when lifting to maintain stability of unit

Transfer from Bed to Chair

- Adjust bed height for comfort of caregiver, apply the brakes on the chair
- Inspect all lifting equipment for safety (including sizing of sling)
- Using sling loading techniques from above and safe body mechanics log roll patient
- Raise head of bed if necessary for patient comfort
- Instruct patient to keep arms tucked in sling
- Move lift in and adjust as necessary, load loops onto sling boom
- For most occasions, shoulder sling straps should be short and legs loaded long
- Using the remote (or crank) begin to lift patient until just clear of bed
- Check sling placement on patient and then move lift to chair
- If floor lift in use, swing patient so that their legs are now facing the mast of the lift

- Ensure lift is as close as possible to the chair and patient is centered
- Begin lowering the patient, their coccyx should be grazing the backrest of the chair. The wheelchair should slightly tip backwards as the patient is lowered – this would be a sign of GOOD placement of the patient into the chair.
- A second caregiver may assist by guiding the patient using the back handles on the sling
- Once seated, remove straps from the lift
- Squat or kneel in front of the patient to remove the leg straps of the sling
- Lean patient forward to remove the rest of the sling from under the patient

<u>Transferring with a SARA Lift</u>

- The patient must be able to sit with minimal support and weight bear. They must be able to tolerate a harness under the arms and have no history of shoulder problems
- A SARA is not used when the orders are: "feather or toe-touch, partial weight-bearing or no weight-bearing (i.e.: hip surgery)
- If necessary assist patient to a seated position, with feet flat on the floor
- Apply the harness as per manufacturers guidelines (stored with the lift)
- Position the lift in front of the patient and widen the base of the lift
- Instruct the patient to place feet on the foot place of the lift
- Adjust the shin pads to align with the top of the patient's knees, resting against the shins
- Attach the harness loops to the boom without tugging or straining
- Instruct the patient to grasp the handles on the boom and lean back into the harness until it feels snug
- Activate the hand control panel on the lift and lift the patient until just clear of the bed. Tell the patient to continue to hold onto the lift handles
- Pull the lift away from the bed and swing in the direction of the chair
- Move the chair as close as possible to the lift
- Adjust the base of the lift if necessary to accommodate the base of the chair
- Position the patient over the chair and activate the control panel on the lift to lower the patient into the chair
- A second caregiver may grasp the harness to guide the patient into the chair

2. Special Precautions:

Bariatric patients and sometimes surgical patients are best assessed by a team of health care professionals prior to their first weight bearing experience. Physiotherapy should be part of this team.

TURNING/REPOSITIONING A PATIENT IN BED WITH TWO CAREGIVERS

Before commencing the task/procedure, make sure you have the following materials or equipment available:

1. Slider Sheet (multi glide, ergoslides, Breeze-type sheet)
2. One-way glides
3. Positioning Sling
4. Stretcher/Bed

1. Process Description

This procedure requires two caregivers. This procedure can be used to reposition a patient who has moved to either end of the bed, sideways on the bed or to reposition them side to side in the bed.

- Store equipment at bedside or other dedicated location following use. Equipment should always be patient-dedicated to prevent transmission of infection.

2. IMPLEMENTATION

- Always use a turning/positioning device
- Explain to the patient what is going to be done and how they must help
- Caregivers position themselves on opposite sides of the bed
- Lock the brakes of the bed
- Lower the bed rails
- Adjust the height of the bed to the shortest caregiver's height
- If the head of the bed is up, lower it unless the patient's condition contraindicates it
- Cross the patient's arms across their chest

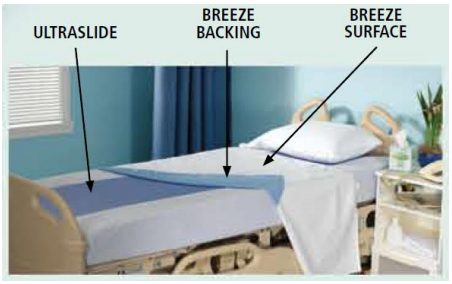
For the **Multiglide Sheets**

- Inspect the Multiglide for any damage. DO NOT USE IF frayed or otherwise of concern
- Have co-caregiver roll the patient away from you and place slider sheet under head and shoulders of patient, repeat for opposite side. Ensure tube is looping in a head to toe direction.
- Place a rolled towel/pillow case/sheet along the buttock of the patient and have it slightly tucked under the patients' buttock. A leg straddled position is now assumed by the caregivers facing the foot of the bed. While each, hanging on an end of the towel, prepare to pull on an angle up the bed. Keep arms close to body.
- For move, shift own body weight in direction of reposition – called a weight transfer from one foot to the other, reducing any force required of the arms or back
- Together: count "1, 2, 3, move". On the command "move", slide the patient gently toward the desired position
- Ensure that the patient is comfortable, safe and well supported throughout the procedure
- Multiglide can be removed without adjusting the patient by reaching under the patient's pillow and pulling the sheet across inside itself

For the **Ergo Slide Sheets**, **Ergoslide (or other friction reducing sheeting system)**

- Two caregivers are required to load and use the ergoslide

- Inspect ergoslide for any damage. DO NOT USE IF frayed or otherwise of concern
- Fold/roll the two sheets together in 6" increments, leaving a 6" flap of the sheets at the end, this flap is for placement under the patient's head
- Place the bed/stretcher at a good working height for the shortest care giver
- With patient prone on the bed or stretcher, take the folded sheets and place them underneath the patient's pillow/shoulders (this can be accomplished by gently rocking transfer sheets side to side with the assistance of the other care giver – allow the patient to assist as much as possible)
- Unfold/roll sheet one fold at a time, using quick later motions in unison with other care giver (it may help to anchor the upper hand to the mattress)
- If resistance is encountered at patient's buttock resist urge to jerk and either continue to pull easy or rock sheets from side to side
- Using webbed handles of top sheet, move patient to desired position in the bed using the shifting of your own body weight from one foot to another to create the move
- Once ergoslide is loaded, it can be used to assist in loading slings, using the same folding sequence with the sling and then unrolling the sling between the two ergoslide sheets
- To remove the ergoslide sheets, reach under the patient's ankles and fold the sheet corner under itself. Start with bottom sheet first to avoid any shearing of patient skin or tugging by the care giver. **Tip:** pull the sheet shiny side against shiny side and pull at a constant 45° angle away from the body



For **Positioning Slings**

- Two caregivers are required to load the sling
- Depending on the medical case, it may be appropriate to leave the sling under the patient to facilitate frequent positioning changes – such as log rolling, or bed boosting, in particular overnight
- Ensure lift is in working order and patient's weight is within the lifting capacity of the device
- Adjust the height of the bed to a comfortable working level for the caregivers, and release side rails
- Select appropriate sized sling
- Load sling by log rolling patient and fan-folding sling to tuck under patient and repeat for second side – ensure all straps are free (or with use of Ergoslide)
- Raise the head of the bed slightly for patient comfort and to prevent the head from swinging when the lift is engaged
- Instruct the patient to fold arms across their chest (or position arms for them)
- Load sling straps to the lift – lift should be positioned with 'bull horns' running along the length of the patient, not across the chest as it is performed for more upright transfers
- Verbally prepare the patient for the lift
- If **log rolling** the patient, use the sling/lift to move them to right or left side of the bed

(similar to a lateral transfer), lower patient then remove straps from the lift that are toward the centre of the bed, again raise the lift – the patient will roll towards the centre of the bed, choose desired position, prop with pillows then remove straps from the lift

- If **bed boosting** patient, use the sling/lift to raise the patient off the bed slightly, once steadied, now lower the patient (track placement should ensure patient is lowered in desired bed position)
- Remove sling as necessary, using the reverse of the above 'loading' guidelines

For the **One-way glides:**

- Inspect the One-way glide for any damage. DO NOT USE IF frayed or otherwise of concern
- Place the One-way glide on the bed prior to placing the patient in it if possible. If necessary, roll the patient to one side then insert the device underneath the patient's trunk.
- Make sure the directional arrows on the label are pointing in the correct direction
- Use sides of device or loops, where available, to reposition patient in the bed

3. Special Precautions:

Ensure at all times, upright posture – "S" curve is maintained by the caregiver.

REPOSITIONING THE PATIENT: TO AND FROM SEATED ON SIDE OF BED

Before commencing the task/procedure, make sure you have the following materials or equipment available:

1. Bed/stretcher
2. Pivot disc or multiglide (as necessary)/Gimme a Lift

1. Process Description

This procedure requires one or two caregivers. This procedure can be used to bring a patient from a lying position to a seated position on the edge of the bed. Should only be attempted with patients after consulting their care plan and assessment of their ability to understand, cooperate and assist.

- Store equipment at bedside or other dedicated location following use. Equipment should always be patient-dedicated to prevent transmission of infection.

<u>To sit a person up in bed:</u>

- The Anchor Pad is placed sideways on the floor next to the bed and close to the area of the patient's hips
- The lift is to be perpendicular to the floor

- The patient, lying on the side or back, grasps Grip C with their hand that is closest to the edge of the bed while grasping Grip B with their other hand
- The nurse then faces toward the headboard and placed the wide part of their shoe firmly on the Anchor Pad, with the other foot placed at a comfortable distance behind
- The nurse places two hands on the Palm Grip, with back erect, an pulls the lift parallel to the side of the mattress toward the foot of the bed, sitting the patient up

To lower and individual to a sitting position

- Have the patient place the back of their legs touching against the bed or chair
- The patient grasps Grips A&B while placing one foot on the Anchor Pad
- The nurse holds the Palm Grip upright while using resistance to slowly lower the individual

To lay an individual back:

- The patient grasps Grips B&C while the nurse stands on the Anchor Pad and holds the Palm Grip firmly, using resistance to lower patient

Transfer to a walker using the Lift

- Place the walker directly in front of the patient, place Lift inside of the walker, and then follow the above instructions on how to lift a person to standing position

2. Implementation

Laying to Seated:

- Lower the bed rails
- Stand at the side of bed facing the patient
- If friction is of concern, load pivot disc or multiglide where available under the buttocks of the patient by having them log roll for you
- Raise the head of the bed if the patient needs assistance sitting up
- Patient may be able to use strong side to control weak side by hooking the foot under the weak leg
- Assist the patient to move legs off the bed – abiding by lifting limits (estimates in Table 1 of Resource Manual and of how much patient assisting)
- Ask the patient to assist with repositioning by pushing the elbow of the underneath arm into the mattress and reaching across body with the uppermost arm pushing themselves into the sitting position, as the patient does this, guide the lower limbs downward
- The caregiver should pivot so that patient's legs swing downward as the caregiver's weight shifts to rear leg, keeping the back in its normal lordosis

Seated to Laying:

- Consider use of a friction reducing device and have placed prior to transferring patient to edge of bed from wheelchair etc.
- Raise the head of the bed if the patient has difficulty lying down
- Stand at the side of the bed facing the patient
- Patient may be able to use strong side to control weak side by hooking the foot under weak leg
- Ask the patient to assist with repositioning by supporting self with the elbow of the

underneath arm on the mattress and lifting legs onto the bed
- Assist legs – keeping within 35 lbs. limit, get assistance as necessary
- Reposition comfortably and raise side rail

3. Special Precautions:

Ensure at all times, a trunk posture – "S" curve is maintained by the caregiver.

INDEPENDENT/SUPERVISED PATIENT MOVEMENT

The guidelines are used for patients requiring minimum assistance with equipment set up and/or environment (i.e. IV Pole). Patient may require cueing.

Lying to Sitting:

1. **INDEPENDENT**
   Instruct patient to:
   - Lift head in direction of body movement
   - Reach arm across the body to edge of bed
   - Bring hips around, swing legs over edge
   - Push up into sitting position by straightening elbow

Sitting to Standing:

2. **SUPERVISED**

   - No physical assistance is required
   - Close supervision may be required
   - Verbal guidance or assistive device set up may be required

PRECAUTIONS WITH HEMIPLEGIC PATIENTS:

- Always roll hemiplegic patients toward their affected side
- NEVER pull on affected arm when moving or transferring the patient
- Assist patient to sitting position by supporting scapular girdle and pelvic girdle
- Ensure sling is applied to flaccid (paralyzed) arm
- Place chair on patient's unaffected side when transferring patient to chair; ask patient, (if able), to assist with transfer by placing unaffected arm on the armrest distal to the bed
- It is good practice to remove proximal armrest on wheelchair to facilitate the transfer

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Appendix 1:

MEDICAL CONDITIONS AFFECTING BARIATRIC PATIENTS DURING PATIENT HANDLING TASKS

Adopted from Safe Bariatric Patient Handling Toolkit, Veterans Integrated Service Network (2006): Patient Safety Centre of Inquiry

I. Severe pain and discomfort

Consequence: Pain, inability to assist with transfer, therefore increased dependency level.
Discussion: Moving patient can increase pain and impede patient's ability to assist safely with transfer.

II. Hip & knee replacements, joint instability, unstable spine, history of falls, fractures, contractures and spasms

Consequence: Pain, fall risk, increased injury, extending injury to the already affected joint, ligaments or bone.
Discussion: All movements put them at risk for pain. Weight bearing activities during transfers with these medical conditions put the patients at a risk for a fall, or extending injury to the already affected joint, ligaments or bone. If you try moving them in a lifting device, the sling position and posture required could put pressure on these affected body parts increasing pain and strain. Choose the least stressful in regards to pain, and stress to body parts that could cause injury when moving the patient.

III. Severe edema, wounds, diaphoresis, and poor skin integrity

Consequence: Interference in healing granulation or increased skin breakdown.
Discussion: Interference in healing granulation or increased skin breakdown through shearing, rubbing, abrading and pressure from equipment (i.e. slings during transfers).

IV. Postural hypotension, paralysis/paresis

Consequence: Fall risk, slippage through sling, unsupported limb may be bumped, stuck or caught.
Discussion: Patients are at risk for falls and slippage during transfers. Full support (supine) slings would be required to avoid falls and slippage. Unsupported limb at risk for being bumped, struck or caught.

V. Unstable spine/severe osteoporosis

Consequence: Pain, injury.
Discussion: Pain and injury if not properly supported during transfer.

VI. Splints, traction, fractures

Consequences: Misalignment and extension of injury, impedance of healing and pain.
Discussion: If not properly supported, this could result in misalignment and extension of injury, impedance of healing and pain.

VII. Respiratory/cardiac compromised

Consequence: Shoulder compression and respiratory distress.
Discussion: Transferring patients in flat lying positions or in slings that are compressing shoulders and chest can cause respiratory distress for patients. Angina or chest pain from coronary insufficiency can result if patient is required to move self more than he is physically capable.

VIII. Amputation

Consequence: Slippage and fall
Discussion: If leg is affected and there is poor sling fit, this may cause slippage and falls, if patient is transferring in a standing position

IX. Stomas, wounds tubes

Consequence: Pain and interference with tube drainage.
Discussion: Compression during transfer from slings or positioning can cause pain and interference with tube drainage.

X. Body mass, placement of

Consequence: apple-shaped (adipose accumulation in the abdominal area) pose an increased complication and stress to the cardiovascular and respiratory systems.
Discussion: Adipose can press on the critical organs of these systems.