

Preventing Back Injuries Among Caregivers

Allina Hospitals and Clinics



COMMON PURPOSE
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Learning Objectives

Upon completion of Allina SPM training, participants will be able to:

- 1) Explain the risk of injury to patients, self, and co-workers related to manual lifting, transferring, repositioning and movement of patients.
- 2) Describe Allina's SPM policy and recognize that proper selection & use of the most appropriate equipment is required to meet the lift and push/pull limitations set forth in it.
- 3) Perform basic assessment relevant to safe patient moving including patient needs, environmental evaluation and equipment selection.

This educational program will be followed by hands-on training in your department to prepare you to competently use Safe Patient Moving equipment to protect the health and comfort of your co-workers, patients and yourself.



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Health Care Working is a High Risk Occupation

- *Caregivers have one of the highest rates of injury*
- *12% of caregivers leave the profession each year due to back injuries*
- *Over 52% of caregivers complain of chronic back pain*



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Impact of Back Injuries

- Life changing
- Career changing
- Expensive



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Review of Key Ergonomic Risk Factors

- Force
- Repetition
- Awkward posture



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Risk Factors for Injury from Moving Patients

- How do injuries to caregivers stack up against the basic ergonomic risk factors?
 - *Patients getting heavier every year--requiring more force to move them.*
 - *High repetition of tasks---injuries cumulative in nature.*
 - *Lack of space in care rooms and asymmetric, bulky load (i.e., the patient) foster awkward postures.*

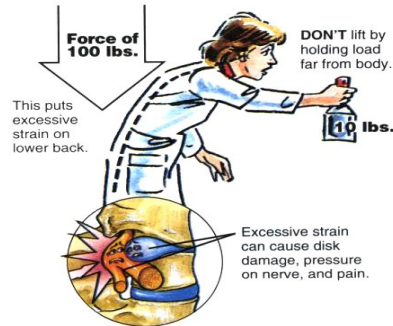


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What typically happens in spinal injury incident?

- Disks may be injured “silently” over time from lifting **WITHOUT** perception of pain
- By the time severe pain is felt, extensive damage may have already occurred



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How Can these Injuries be Stopped?

- *20+ years of experience show that body mechanics education and training in lifting techniques **DOESN'T WORK***
- *Consistent, proper use of mechanical patient moving devices **DOES** reduce injuries!!*



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Why Good Body Mechanics Just Isn't Enough

- Safety limit for force on lumbar spine per NIOSH: 764 lbs.
- Forces exerted to perform pull up in bed without equipment:
 - Two Person 858- 1476 lbs.
 - One Person “Hook” 2062 lbs.
 - Two Person w/ Gait Belt 1100 lbs.
 - Hug Lift 1424 lbs.



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Recommendations for Maximum Repeatable exertions for men and women

How many of YOUR patients are this light???

Percent Capable Population	Maximum Acceptable Weights (lbs.)	
	Females	Males
90%	31	51
75%	35	68
50%	39	86
25%	46	103
10%	51	121



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Safe Patient Moving is also *THE LAW!*

- Legislation in Minnesota requires hospitals to develop a Safe Patient Moving policy and appoint a committee by July of 2008.

By July of 2011, facilities must complete:

- assessment of all patient care areas
- purchasing of appropriate equipment for those areas
- training on the use of the equipment

- *Did you know?*

- *Allina is proud to have implemented a safe patient moving program that was used as a **model** in the development of the MN state law!*



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Why is safe patient moving important?

- As well as preventing injuries among caregivers, Safe Patient Handling can also enhance the overall quality of care and improve clinical outcomes for your patients by:
 - Improving overall hygiene
 - Increased comfort and safety
 - Fall avoidance
 - Reduction in bruises and skin shearing
 - Better bowel and bladder function
 - Great sense of personal dignity
 - Overall acceleration of rehabilitation results



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Allina Safe Patient Moving Policy

Purpose:

- *To protect the health of patients and employees when patients require assistance in moving through the use of mechanical aids/devices.*
- *Specific goals:*
 - reduce to “0” all patient moving health effects for both employees and patients.
 - reduce the lifting demands for patient moving tasks to or below 32 lbs.
 - Reduce pushing and pulling demands for staff (that is, when moving gurneys, beds, wheelchairs etc.) to less than 44 pounds for peak and 29 pounds for sustained pushes.



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Allina Safe Patient Moving Policy Statement:

- *When patients receive care at Allina Hospitals & Clinics and require assistance from employees to move (e.g., assisted transferring, lifting or repositioning), that assistance is provided in a manner that is safe for both the patient and employee.*
- *Specifically, mechanical lifting equipment and/or other approved patient moving aids should be used in all circumstances when lifting/moving patients except when absolutely necessary, such as in a medical emergency or as part of the patient's care plan.*
 - In these circumstances, appropriate parties should make a plan to move the patient with available resources in a way that minimizes risk of injury to patient and caregiver.



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Where are the risks?

Care-giving tasks with a high risk of injury for you and your patient

- Picking a patient up from floor
- Transfer wheelchair to bed
- Transfer car to wheelchair
- Transfer-- wheelchair to toilet
- Repositioning – in bed or chair
- Applying anti-embolism stockings (use lift to hold limb)
- Transferring a patient from bed to stretcher
- Transfer-- wheelchair to exam table



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One or more pieces of Safe Patient Moving equipment is available to you to do each of these tasks safely and comfortably for you and your patient! You will learn about this equipment on the following pages and in hands-on training to follow.

SPM Equipment Types

- **Full lifts** -must be used with patients who have very limited ability to support their own weight and those who are disoriented or uncooperative.



Overhead full body lifts



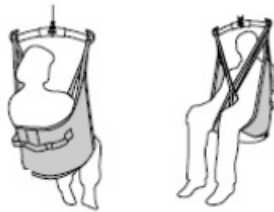
Free standing full body lift

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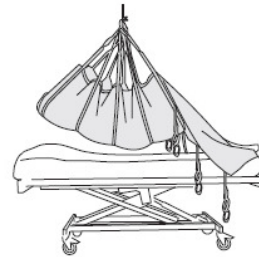
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Full Body Lifts can be used for a variety of tasks with Different Slings (DEMO)

•With the use of a **chair-loop sling**, these lifts may be used to address a patient fall emergency, or to transfer a patient sit to sit, supine to sit or sit to supine.



•With the use of a **repositioning sling**, these lifts also allow for power assisted lateral transfers, turning and boosting (with the exception of the Arjo Maxi Lift)



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SPM Equipment Types-Sit- to- stand (a.k.a. Pivot transfers) (DEMO)

- often used for pivot transfers between chair or toilet to bed

Patients must:

- have some ability to support their own weight (approx. 20-30%) and have no knee flexion restrictions
- have some upper body strength
- be cooperative and not exceed the weight capacity of the stand



Sit-To-Stand (Pivot) Device



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SPM Equipment Types

Lateral Transfer Devices

- Used for laterally transferring a patient from bed to stretcher or table in a supine position



AirPal

Uses bed of air to reduce friction. Often found in ER, OR and Imaging



On3

Uses mechanical arm and patient's sheet to move patient laterally.



Maxi Sky

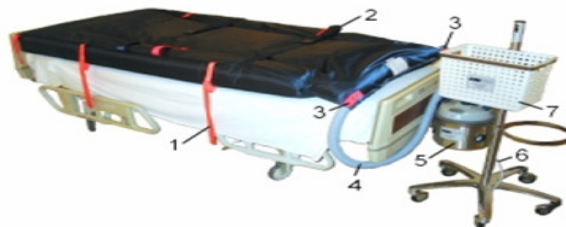
Overhead lifts can also be used as a lateral transfer device when used with the repositioning sling



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Focus on the AirPal for Power Assisted Lateral Transfers (DEMO)



- AirPal used with patients who can tolerate lateral transfer in a level position, and who weigh 1000 lb. or less. It should not be used with unstable spinal fractures unless post op.



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Other SPM Equipment you may use in your worksite

- **Stretcher (or “Cardiac”) Chairs** are devices which allow a caregiver to assist a total dependant patient to a seated position without using a full lift.
- Stretcher Chairs adjust from a stretcher (flat) position to a chair (upright) position—allowing caregivers to transfer the patient laterally.
- Stretcher Chairs may also be used for patient transport.



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Other SPM Equipment Types

Powered Transport Devices

- used for transporting bariatric patients or when traveling long distances.
- may be built-in (dedicated to one item), or moveable between items needing pushing/pulling.
- Tugs are typically used to move heavy objects such as linen or nutrition carts, beds and other medical equipment.



Zoom Cart



"Tug"



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The Hill-Rom Patient Bed as a Safe Patient Moving Device

- Hill-Rom beds are designed for patient control and comfort; they also aid in the prevention of skin breakdown, and they can ***ALSO help you in safe patient moving***, if used properly:

- Four points to remember about Hill-Rom beds to aid in Safe Patient Moving:

- 1.) **AUTOFIRM** the bed **BEFORE** you move the patient!
- 2.) Boost patient only to bed marker.
- 3.) Set heel pressure zone to each patient.
- 4.) When transporting patients in their bed, steer from the foot of the bed.



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Friction Reducing Devices

- These devices do offer some other options for reducing friction while laterally transferring patients or boosting, ***ONLY when other mechanical devices are unavailable or cannot be used (per Allina's Safe Patient Moving Policy)***.
- They can also be used in conjunction with transfer devices (e.g. On3) to further increase the reduction in force when transferring larger patients.



Slipp Sheet



No-lift Turners



Ergo Slide



Z-sliders



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Plan Ahead *Before its Time to Move Your Patient*

- Plan your move mentally before you start
 - Be proactive; ask the caregiver you are receiving your patient from if they are going to be able to transfer themselves; if not, prepare for the moves you may have to do once they arrive.
 - Before your patient arrives to or from the Emergency room, would it make sense to have a repositioning sling on the bed/cart before they arrive?
 - If you know your patient will need to be transferred in the location they are traveling to (e.g. CT, X-ray, etc.), it might make sense to leave the AirPal mattress under them so other areas can utilize the equipment...and it's less turning for the patient too.



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The Four Step Patient Transfer Process

Step One: Assess your Patient

Step Two: Assess the Area

Step Three: Select, Acquire and Check Equipment

Step Four: Execute the Transfer



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Tools for Assessing a Patient's SPM Needs

- 1) Use the patient's **Fall Risk Assessment** to help determine if a device is needed to move them.
- 2) You can also use **Get Up- and- Go Test** Scoring to help determine their level of mobility:
 - Rises in single movement = 0
 - Pushes up in one attempt = 1
 - Multiple attempts, then successful = 3
 - Unable to rise w/o assist = 4
 - If their score is less than 3, no device is needed.
 - If it is 4, a full lift (or lateral transfer device, depending on the move) is needed.



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Tools for Assessing a Patient's SPM Needs

If the patient's Get Up and Go score = 3, "able to rise, but multiple attempts needed," you may use a sit-to-stand to move them if it is available **UNLESS**:

- the patient is uncooperative, dizzy or on benzodiazepines, in which case a full body lift may be the better choice.



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Patient Handling Assessment Criteria -Examples of *Further Considerations*

1. Weight:

- If weight <32 lbs. , then manual lift OK
- If weight exceeds equipment limit then bariatric equipment will be indicated

2. Special Considerations:

- Can patient lie flat? If not, don't use On3 or repositioning slings
- Severe pain? If so, consider if move is absolutely necessary

3. Sling concerns:

If so, use nursing judgment to select appropriate sling

- Intact limbs?
- Intact skin?
- Concerns about joint integrity?

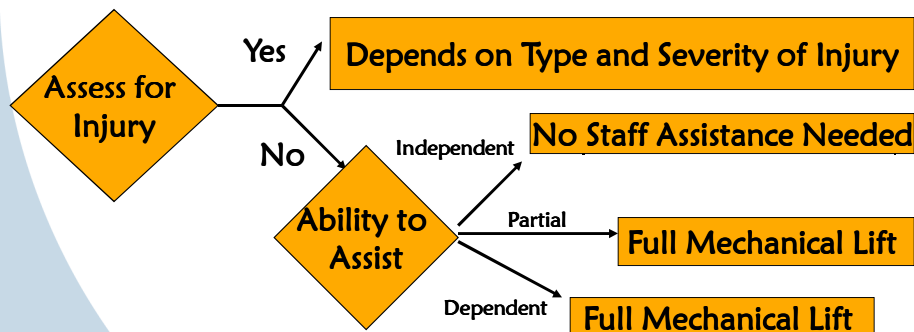
Keep in mind as we move forward, applying assessment guides are not fail proof tools and cannot take the place of nursing judgment! If you are in doubt about what to use to move a given patient, ask your department safety coach/SPM SuperUser, preceptor, or supervisor!!



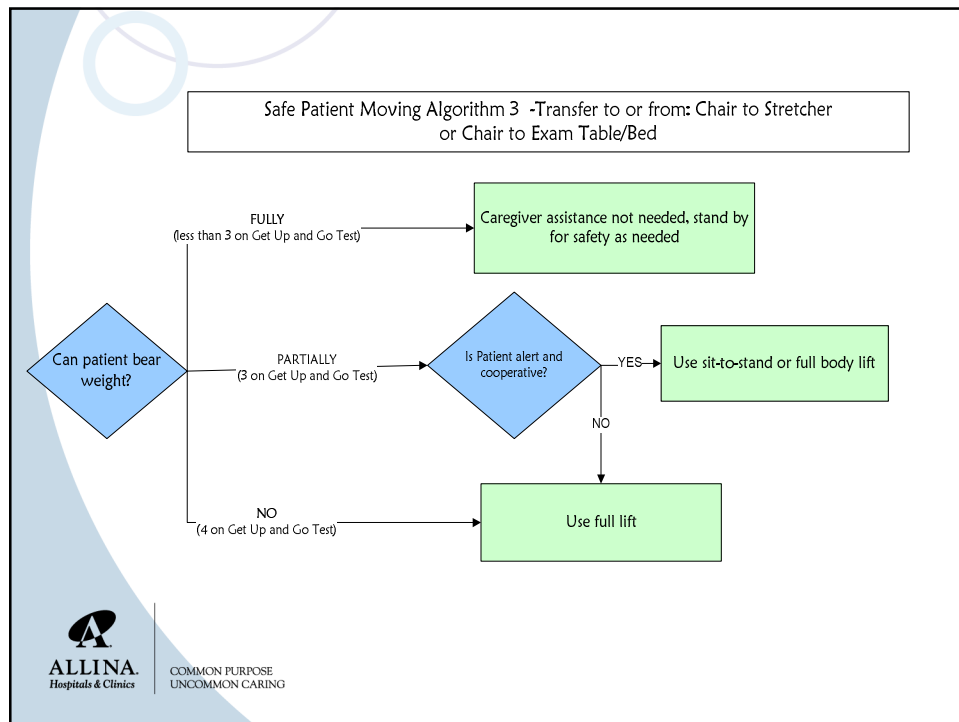
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Sample Algorithms

Task: Picking a Patient up from the Floor



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Use the patient assessment tool and the algorithms to determine the appropriate lift equipment to use for each patient.

Case Study #1

A patient who was walking to the bathroom lost his balance and fell to the floor. He is not considered a fall risk patient and was not seriously injured during the fall. He weighs 215 lb and is 5' 8" tall. The nurse needs to get him off the floor and onto the commode so he can finally use the toilet. What should the nurse do?

ANSWER:

- Even if this patient was not considered a fall risk before, his condition has changed, so to be protective we would require the use of a full body lift at this point.
 - An overhead lift is OK if fall occurs within 2 feet of the midlines of the track---but no more to prevent swinging as patient lifts off the floor
 - A free standing full body lift such as the EZ Lift or Maxi Lift would work too.



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Case Study #2:

You've been called upon to do a commode transfer on station X. The patient weighs 427 pounds, is cooperative, and the RN has confirmed that he can bear most of his own weight and has no problems with his shoulders; his *Get Up and Go* score is a 3. There are no overhead lifts on this unit. How would you recommend performing the transfer?



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ANSWER:

- Patient Get up and go score =3, patient weight a special consideration no other special clinical considerations.
 - Most likely, your first line of response would be a sit-to-stand device such as the EZ Stand--be sure you check to see that the device has the capacity to safely move this patient!
 - If there were an overhead lift in the room could you use that with a chair-loop sling? Probably.



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Case Study #3:

A patient comes into a Med Surg unit for a procedure. It becomes evident that in addition to her primary medical condition, she is undergoing severe alcohol withdrawal. She is able to walk, but is quite unsteady (Get up and Go score =3) and it is unclear whether she can ---or will--- follow instructions. You know that ambulation of this patient would be therapeutic for her. She needs to go to the bathroom and wants to walk there. What do you do?



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ANSWER:

- There really is no clear or unique right answer here, even if you use the tools for assessment and decision-making that you were given. This could easily happen in “real life”. Here your nursing judgment comes into play.
- Given your overall nursing assessment of this patient and circumstance, you may choose to do a pivot (sit-to-stand) transfer to a commode using a floor device, or utilizing the sit-to-stand device without the footplate, ambulate her to the restroom, or maybe you just decide to use a bedpan. The guidelines and tools only get you so far.
- **Tip:**
 - Keep in mind that harnesses can be used with sit-to-stand devices deliberately as part of rehabilitation therapy for patients working on gait. The patient can progress as to how much weight s/he is to bear with the device rather than the caregiver being that which would catch the patient to prevent a fall in the event they are no longer able to support their weight suddenly.



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Detailed Competency Checklists for Safe Patient Moving Equipment at Allina can be found on the AKN:

- | | |
|-------------------|-------------------|
| • Air Pal | • Multi Lift |
| • EZ Lift | • On-3 |
| • EZ Repositioner | • Opera |
| • EZ Stand | • Stedy |
| • Maxi Lift | • Stretcher Chair |
| • Maxi Sky | • Zoom Gurney |



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Conclusion

- Caregivers can prevent injuries to themselves and their patients by *consistent*, appropriate use of SPM equipment to move patients who requires assistance.
- Allina Hospitals and Clinics require caregivers to use SPM equipment *each & every time* a patient is moved
 - You will learn more about the specifics of SPM equipment available in your work area during your department specific SPM training.



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