



The Benefits of Using Patient Transfer Devices in the Emergency Department

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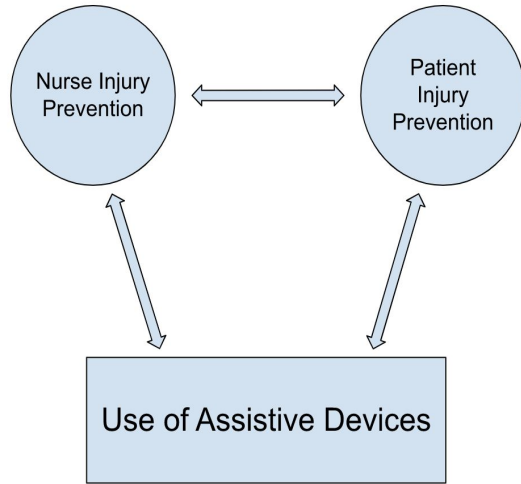
Abstract

The Emergency Department (ED) is known as one of the most fast-paced environments in which nurses work. Because of the nature of their responsibilities and daily tasks, ED nurses are at high risk of injury. One of those tasks that occur multiple times throughout the day is patient transfers. The Emergency Department staff is constantly moving patients in and out of the unit. Most often, patients seen in the ED are weak, in pain, elderly, or unable to transfer from vehicles, ambulance, stretchers, or wheelchairs independently or without minimal assistance. Our research focuses on the benefits of using assistive devices to aid in these transfers to prevent both nurse and patient injury.

Problem

According to the U.S. Bureau of Labor Statistics, instances of sprains, strains, or tears are twice as likely to occur to RNs in the hospital setting due to overexertion and bodily reaction to repetitive movement. On average, approximately 20,000 cases of musculoskeletal injury related to the inpatient hospital setting are reported each year. Patient transfers often occur multiple times throughout a patient's length of hospital stay. Transfers are considered a high-risk maneuver for the patient due to the potential threat of injury, falls, or dislodgement of critical access.

Theoretical Framework



We created our own theoretical framework based on our hypothesis and research focus. We chose this model because our research indicates that nurse injury prevention, patient injury prevention, and the use of assistive devices are connected to one another. For example, if a patient were to be unsteady when transferring from vehicle to wheelchair, the use of a gait belt would allow the patient to be assisted from the waist rather than from underneath the arms which could cause injury. This form of assistive device also allows the weight to be more evenly distributed around the waist rather than only from the side on which the nurse is standing. The gait belt would also prevent nurse injury by promoting proper body mechanics. The nurse can stand with their weight evenly distributed and lift up on the gait belt rather than tugging on the patient's arms or clothing. Therefore, this model demonstrates that when assistive devices are used, patients are less likely to experience a fall or injury. If the patient is steadier, so is the nurse in preventing overexertion to prevent the fall of an unsteady patient.

Evidence-Based Practice

Our first research study was performed in one university teaching hospital and two community hospitals. Over the course of 465 shifts, the participants reported 3,246 patient lifts or transfers and recorded information about the type of equipment used, if any, and factors that influenced their use or non-use of assistive devices. Their research discovered some of the factors influencing whether or not to use an assistive device include: availability of equipment, supplies, staff availability to help with equipment, patient unable to contribute, and the proximity of the equipment to the patient's room.

Our second study focused on the barriers related to the use of assistive devices. The facilitators researched how often patients are lifted and the relationship between the use of assistive devices and work-related musculoskeletal disorders. Their results established the most common barriers were time, inadequate staffing, accessibility to equipment, and higher acuity of patients. After receiving education about use of the respective devices and proper body mechanics, the participants reported plans to increase their use of assistive devices in their respective facilities.

Our third study was conducted by the Bureau of Labor Statistics. They conducted research regarding most common occupational injuries and illnesses among registered nurses. 74.4% of nonfatal injuries to registered nurses reportedly occurred in hospitals. Of those 74.4%, the most common nature of injury was sprains, strains, and tears resulting in an average of seven missed shifts due to workplace injury. These injuries are considered musculoskeletal disorders and occurred at an incidence rate of 46.0 cases per 10,000 workers (twice the rate for all other occupations).

Recommendations for Practice and Conclusions

Evidence Based Practice and our research indicates that assistive devices are one of the simplest ways to ensure both patient and employee safety regarding patient transfers. The most affordable way to accomplish these goals would be the availability of one gait belt for each patient room for ambulation and one gait belt per wheelchair to ensure availability for transfers to and from vehicles. Our research also recommends the availability of at least one slide board per unit, if not more, for stretcher-to-bed or stretcher-to-stretcher transfers. We also recommend the unit consider the purchase of a sit-to-stand device and provide education on the lift already available in the unit.

How to Properly Use a Gait Belt

1. Tell the patient you will be placing a gait belt on them and that it will be removed as soon as you are finished.
2. Place the belt buckle in front of the patient's mid section slightly off center to aid in comfort.
 - a. Ensure the belt is placed over the patient's clothing or gown and if the patient is very frail or thin place a towel in between the patient and the belt.
3. Tighten the belt until it is snug but not uncomfortable. Should be able to slide two fingers between the patient's body and the belt.
4. Facing the patient, pull them up while keeping your back straight and knees bent.



Gait belt. Keiro. (2021, April 7). Retrieved March 8, 2023, from <https://www.keiro.org/fact-sheet/gait-belts>

Amazon.com: Lambox vinyl gait belt-easy clean walking transfer belt ... (n.d.). Retrieved March 9, 2023, from <https://www.amazon.com/LAMBOX-Belt-Easy-Pediatric-Caregiver-Therapist/dp/B0BC77H6TC>

How to Properly Use a Slide Board

1. Ensure there are at least 2 staff members to help.
2. Raise/lower the bed to a safe and equal height, ensure the brakes are locked, lower the proper rails and have the patient positioned closest to the side of the bed where the transfer will occur.
3. Place a sheet on top of the slide board for transfer and decreased friction.
4. Roll the patient away from the stretcher and place the sliding board under the patient.
5. Roll the patient back to supine position with their feet straight ensuring the patient is centered on the board.
6. Bring the stretcher/bed to the side near the patient and position the stretcher lower than the bed ensuring the brakes are locked.
7. Position the team around the patient so the weight is distributed equally.
 - a. The leader will count down from three
 - b. The person on the far side of the bed will push the patient
 - c. The person on the side of the stretcher will shift their weight, bringing the patient with them by pulling the sheet.
 - d. Those at the head and the feet will ensure the patient is secure and lifting the feet and head/shoulders.
8. Slide the patient all the way off until they are centered on the bed/stretcher.
9. Remove the slide board from under the patient.
10. Ensure the patient is comfortable.



Bergman R, De Jesus O. Patient Care Transfer Techniques. [Updated 2022 Oct 17]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK564305/>

Transfer Slide Board for transferring patient. Transfer slide board for transferring patient | Taitung Instruments Co. (n.d.). Retrieved March 8, 2023, from <https://www.omnia-health.com/product/transfer-slide-board-transferring-patient>

How to Properly Use a Sit-to-Stand

1. Place a gait belt around the patient.
 - a. Be sure not to hold the patient by the underarms because it may cause damage to the patient's shoulders.
2. Roll the sit to stand close to the bed, locked, and the seat moved to the side.
3. Instruct the patient to sit on the side of the bed with their feet flat on the sit to stand and hands on the armrest.
4. Stand facing the patient, bend your knees and hold the gait belt to use as Leverage. Rock the patient back and forth and on the count of three pull the patient as the patient pushes up.
5. Tell the patient to lean forward on the sit to stand as you push the seat behind the patient and tell them to sit back.



How to Properly Use a Lift

1. Roll the patient to one side and place the folded sling behind the patient's back.
2. Roll the patient to the other side over the folding sling, pull it from under them and straighten it out.
3. Pull the leg loops forward and under the thigh.
4. Cross the loops.
5. Roll the base of the lift as far under the bed as possible, locating the cradle over the patient.
6. Make sure to not have the wheels locked when lifting the patient rather allow the lift to move a little with the adjustment of weight.
7. When both sides of the sling are attached, raise the patient slowly.
8. Raise the patient up just until their buttocks are just above the mattress.
9. Grab the steering handles and move the lift away from them and/or lower the patient into whatever seat or transport device.



Fact sheet: Taking care of you: Self-care for family caregivers. (n.d.). Retrieved March 9, 2023, from https://www.cdss.ca.gov/agedblinddisabled/res/VPTC2/4%20Care%20for%20the%20Caregiver/Taking_Care_of_You_SelfCare_for_Family_Caregivers.pdf

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