A Close Look at the Pivot Transfer

Altering Technique to reduce injury risk during patient transfer

Pless is an Injury Prevention Specialist and Director of Safe Patient Handling and Movement at Kaleida Health in Buffalo, NY. She has over 23 years of experience in health care, with nine of those years working in zero lift environments. In 1997, she spearheaded the implementation of a zero lift program in a long-term care facility in Niagara Falls, NY, expanding the program to acute care settings in 2003. She has helped many organizations and facilities implement zero lift and patient handling safety initiatives.

The pivot transfer is frequently used in long-term care to move patients with decreased weight-bearing ability, despite its high risk causing injury to both patient and caregiver. This editorial will discuss the risks involved in the pivot transfer and present a safer alternative-zero-lift sit/stand patient transfer equipment.

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The pivot transfer is an interim transfer used while a patient is gaining skill and strength, and it warrants close monitoring when used in daily living. When used successfully, the patient moves independently during the transfer. More often than not, the pivot transfer is executed with some level of assistance from the caregiver, increasing the injury risk. In my experience conducting incident investigations, I often discover that the patient involved was performing a pivot transfer, and either the caregiver was thrown off balance because the patient could not move his or her feet or the caregiver and patient lost their balance because their feet got tangled when the patient's feet or foot did not move. However, I have experienced reluctance on the behalf of some practitioners to acknowledge the dangers associated with the pivot transfer.

Pivot Transfer – What It Is and Isn't

In a true pivot transfer, the patient has to take at least one step, un-weight at least one foot during the pivot, and move toward the desired target. The reality of what occurs during the typical “pivot transfer” is much different, and the likelihood that it will go well each time it is executed is extremely poor. The patient’s function and performance can be inconsistent or can be affected by time of day and behavior. Often, the patient is moved from one surface to another without his or her feet moving and without a gait belt. The caregiver twists and swings the weight of the patient and move him or her to the desired surface with the patient’s feet stationary. The patient’s body is moved in parts; the top half is moved in the opposite direction from the planted bottom half. It is the patient’s trunk that is actually “pivoted”. Frequently, the transfer becomes a manual lift: the caregiver just lifts the patient, so that the patient’s feet barely make contact with the floor and do not bear any weight.

The pivot transfer is appropriate for a very small population. It has a sizable room for error, and it should never be used to move patients over a long period of time—patients who can perform the transfer are candidates expected to improve enough that they will not longer need the pivot transfer. In my experience, 90% of patients using the pivot transfer for 30 to 90 days experienced a deterioration of skills, exacerbated shoulder or knee injuries, or disease progression in those joints. Many had to stop using the transfer within 24 to 48 hours because of injuries suffered during the transfer. In addition, I have observed incidents or injuries in 100% of patients using the pivot transfer for more than 90 days.

After the patient is sitting upright, a band harness is placed around the lower truck. The patient places his or her feet on the base of the lift; the lift is then pulled up close to the patient and, with the lift arms lowered, the band harness is attached to the sit/stand lift. As the caregiver activates the electronic hand control, it begins to raise the lift arms that the patient's band harness is attached to and, as the lift arms rise, the patient is brought from a sitting to a standing position with minimal to no exertion by the caregiver.

Assessing Risk – Can Patients Pivot?

The first thing to look for when deciding whether patients should use the pivot transfer is their ability to move their feet. If you believe they can and do move their feet during transfer, have them demonstrate that to you over a 24-hour period, on all surfaces and to all surfaces. Sometimes caregivers do not realize that the patient's feet barely make contact with the floor and do not bear any weight during transfer. Also, talk to the caregivers and observe the transfers on all shifts at different times of day. Some caregivers have been doing improper transfers for so long that they do not recognize the manual lifting involved in a pivot transfer that is no longer successful. Weight bearing by the caregiver during transfers and ambulation with a degree of buckling are some of the most common causes of injuries. Be sure to meet with any caregivers who have been injured pivoting someone on or off the toilet, and analyze the employee injury records to see what other transfer tasks are causing injuries.

Examine the locations where pivot transfers take place. Does the environment always allow patients to move and pivot with their strong side first? When caregivers are faced with awkward postures and confined spaces, the success of the transfer decreases the risk of injury increases. In any given 24-hour period the pivot transfer can be conducted repeatedly on a patient, as many as 16 times, with the level of weight borne by the patient and his or her ability to execute this transfer changing every time. Add to this the unpredictability of the amount of weight that the patient can bear, and the caregiver is manually lifting under the worst conditions.

Sit/Stand Lift: Caregiver Considerations

1. This procedure always requires two people to assist.

2. Patient cooperation throughout the length of the transfer is necessary.
3. Endurance, performance, and ability to actively participate throughout the transfer are key.
4. Minimize the distance that needs to be traveled during a transfer to improve the caregiver's safety and decrease the risk for injury during push or pull acts.
5. Floor surface: non-carpeted surface is best for the caregiver, with less friction and effort during push and pull. Lifts are stable on carpet if it has a low pile, a tight weave, and a smooth surface. All flooring types need to be seamless and without cracks or breaks. Never bring the lift onto a wet, slippery area.
6. Doorways should be wide enough to admit the lift and patient without either one hitting the doorframe.
7. Thresholds need to be smooth and seamless. The lifts should not be pushed or pulled over a threshold that offers resistance due to its height or incline.
8. The area where the final transfer is going to occur needs to offer enough space for two caregivers to protect the patient and maneuver the lift without having to struggle or assume awkward postures.

Injuries from Pivot Transfers

Improper pivot transfers increase the risk of injury to both the caregiver and the patient. Repetitive traumas, bruises, skin tears, damage to the soft tissue supporting the joints (especially hips and knees), and fractures of a spiral or impact nature at the hips, knees and ankles are common. A correlation is not always drawn between the accidents or incidents and the pivot transfer. However, at one facility I saw a 64% decline in fractures and a 37% decline in skin tears and bruises 14 months after implementing zero lift- as well as zero lower extremity spiral fractures, compared to two the previous year.

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Many times the shoulders of the patient are used as weight-bearing joints, providing leverage for the caregiver and functioning as anchors. Exacerbation of arthritis and degenerative joint disease, as well as loss of range of motion occur over time, and the subtle damage caused by each pivot begins to compound and further compromise any chance for improvement in weight bearing. The facility

mentioned above experienced a 26% improvement in upper extremity range of motion overall, with fewer cases of shoulder joint decline and an increase in cases that remained stable or improved.

The use of a gait or transfer belt can reduce the risk of shoulder joint injuries, but it is not enough to correct the problems associated with the patients' inability to move their feet and take a true step toward the desired transfer target. The gait or transfer belt erroneously may also become a lifting tool when proper weight bearing and the ability to move the feet are absent.

Zero lift environments recognize these serious safety hazards. Most successful zero lift environments have stopped using the pivot transfer entirely, or have minimized and closely monitored its use, leading to reduced injuries, increased safety, and prolonged weight bearing for patients.

Patient Criteria for Sit/Stand Lift Use

1. At least 30-60% weight-bearing status. May be done with the use of one leg with the right set-up and harness.
2. Ability to hold on to the lift. If the ability to hold on is compromised then a harness needs to be selected that promotes increased safety and comfort. Harness styles vary; some incorporate lower body support to compensate for the inability to hold on.
3. Cooperation that is maintained throughout the transfer. There may be confusion, dementia, or behavior problems present as long as these conditions do not interfere with safe use of the lift. Over time, with repeated practice in a controlled setting, a patient can get accustomed to using the lift.
4. Able to move from supine to set when transferred from a bed. The risk of injury is great if the patient cannot assist with this move, as it becomes a manual lift for the caregiver, and the joints of the patient may be used as leverage. Some patients who cannot sit up may be transferred with the sit/stand lift after they have been mechanically lifted out of bed and are in a support upright position.
5. Certain medical conditions are contraindicated with the use of certain harnesses. Abdominal aneurism, stomas, wounds, skin integrity issues, colostomies, and new pet tube sites or spinal fractures could prohibit the use of a harness that fits snugly around the abdomen or trunk.

A full mechanical lift is the only alternative if the patient does not meet the above criteria for use of the sit-stand lift. If a patient's status or condition changes a reassessment is required. This lift should be considered for all transfers that involve minimal, moderate, or extensive assist by the caregiver

An Alternative-Sit/Stand Lift

Sit/Stand patient transfer equipment is an alternative to the pivot transfer that allows patients to bear weight while it facilitates safe and proper joint alignment and increases protection and comfort (see photo, right). This equipment is for patients with at least 30% to 60% weight-bearing status and the ability to hold on with at least one hand, or two hands if a simple band harness is used, and who are cooperative with the use of the equipment and have the endurance to tolerate weight bearing and upper extremity use.

The distance that the lift is moved during the transfer depends on the patient's functional status with upper body use, weight bearing, endurance, fatigue, and tolerance to prolonged standing. You must always consider the type of flooring, doorways, and thresholds that patient may need to travel over. Remember this is an active participation transfer, not a passive transfer like the full mechanical lift.

The properly assessed candidate can experience an improved quality of life and increased safety. They are afforded the opportunity to be repositioned safely and more frequently, placing less burden on the caregiver's back, and can bear weight safely and for longer periods of time. Patients that were traditionally pivoted from one place to another—for example, from a wheelchair to a stable chair in a dining room or from a wheelchair to a toilet—can be transferred properly with the sit/stand lift.

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The therapy department can also use the sit/stand lift for treatment in the clinic setting, since it is an active transfer with therapeutic value. The patient who may have difficulty accepting the transfer or who may require special considerations in use of the lift would benefit from an assessment and monitored use in this professional controlled setting. Patients with altered weight-bearing status due to orthopedic concerns can use the lift to bear weight on one leg only. Using the sit/stand lift during

recovery from a total knee or hip surgery facilitates recovery with less risk of trauma or inflammation to the surgical joints. It can also decrease edema that is often caused by an improperly done pivot transfer.

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Assess Lifting at Your Facility

The health care industry has changed and the types of patients in our care have changed, yet some organizations have not changed their patient handling practices. The sit/stand lift is underutilized in health care, and it can be of enormous value in the care and treatment of patients. I often find either that health care workers don't know about the sit/stand lift or that there are none available in their facility. I recommend that facilities have at least one sit/stand lift for every eight to ten patients able to use one.

A system for employee training and competency with the use of sit/stand lift equipment needs to be embedded in the organization. The program needs to include new hire and present employees, and should be conducted as a yearly mandatory in-service. Repeated training and a competency check should also take place for any employee involved in an incident involving equipment use. Periodic audits conducted during routine transfers can help ensure that sit/stand lift transfers are being done

properly. The very same equipment intended to prevent injuries can cause injuries if used improperly or by people who have not been properly trained.

As facilities and institutions begin to recognize the value of patient transfer equipment, they will also begin to understand the need to use this equipment in areas beyond the patient's room. When we change the culture and truly understand the impact of the misused pivot transfer, we will enhance patient and employee safety.

This article was originally published in December 2005 Caring for the Ages, an official publication of the American Medical Directors Association (AMDA). For more information on Caring for the Ages and/or AMDA go to www.amda.com.