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MINIMIZING COLLATERAL DAMAGE: Reducing the Risks Associated With Patient Handling

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Abstract

The healthcare industry has long acknowledged there are no truly safe methods to manually move, transfer, or reposition a patient and the inherent danger of injury is always present.

“Over the past decade the most common patient handling approaches have focused on training in body mechanics and safe manual lifting techniques. There is strong evidence that these approaches are not effective in reducing caregiver injuries.

In contrast, there is extensive evidence that supports use of technology for safe patient handling as effective in reducing the strain of patient handling.”

Introduction

Manual patient handling tasks are high-risk activities for both the caregiver and the patient and are recognized as the primary cause of musculoskeletal disorders in the healthcare environment.

While keeping patients safe during a lift or transfer has traditionally been the primary concern, an increasing concern is protecting healthcare workers during this process.

“Nurses are clearly concerned about becoming injured during a patient handling task. The basis for their fear is that a back injury can end their careers.” Healthcare facilities nationwide are grappling with the ever-present threat of staff back injuries and looking for strategies to prevent them.

Recognizing the Risk

It's estimated that over forty-four million patients must be transferred each year.

A recent ANA news release stated “registered nurses and other health care workers are required to lift and transfer unreasonable loads, with the average nurse lifting 1.8 tons on an eight-hour shift” and “studies have shown that about 12% of nurses who consider leaving the profession cite back pain as a factor, and 52% complain of chronic back pain.

Recognizing the Risk

The release “One of the highest risks tasks for the healthcare worker is transferring a patient between the bed and the stretcher.”

This task, commonly referred to as a lateral transfer, requires the caregiver to reach over the stretcher to the bed and physically pull the patient across onto a stretcher. This movement forces the caregiver's body into an awkward posture that can cause musculoskeletal discomfort with potential cumulative injury.

Industry Initiatives

Recently, several states have adopted “no-lift” policies that call for health care employers to implement safe-patient-handling policies and provide systems to perform the lifting, transferring and positioning of patients that don't require undo physical exertion.

In May 2009 House Resolution 2381 was introduced into the United States Congress, which addresses this issue. The bill is now in committee.

Air-Assisted Transfer Technology

The Liftaem™ device enables healthcare professionals to easily transfer or reposition a patient from a bed to a stretcher or other surface. This technology is particularly suitable when performing lateral transfers involving patients with special conditions such as pressure sores or burns as well as with bariatric patients.

“It has been determined by Loyd and Baptiste that air-assisted transfer devices may be up to 85% efficient, meaning that forces equal to only 15% of the patient's mass are required to perform the transfer.”

To perform the transfer safely, the two transfer surfaces should be at the same height. The inflatable air transfer mattress with handles on each side is placed under the patient in the same manner as changing a bed sheet. A portable air supply is then attached to and inflates the mattress.

Air-Assisted Transfer Technology (continued)

Incoming air “lifts” the patient as air is released through the perforated underside creating a cushion of air that cradles the patient during the transfer. Pressure is distributed evenly across the patient’s body much like a traditional mattress. This allows the caregiver to remain standing upright without having to bend forward over the bed or gurney to initiate the transfer thereby reducing the strain on the lower back. The caregiver gently pulls the patient towards the new surface. Air transfer assist devices are intended to remain under the patient only as long as is clinically necessary to perform safe transfer functions.

“In a study on the use of devices for lateral transfer, caregivers who used air assisted lateral transfer devices reported significant reduction in perceived exertion during patient handling tasks when compared to manual methods.”

Closing The Loop On The Chain of Infection

Relative to infection prevention, air-assisted transfer devices are classified as “non-critical” items, which are items that only come into contact with clothing or intact skin, not mucous membranes. However, the use of these devices must be considered a potential source of infection or contamination since they come into contact with the patient and the hands of the caregiver.

Air-assisted transfer devices with reusable mattresses should be made of materials that allow for routine cleaning and disinfection. However, selecting a single-patient use mattress, which can be discarded once the patient is discharged, minimizes the possibility of cross-contamination. “Disposable products can facilitate and enhance infection prevention and control efforts in the healthcare setting and reduce the opportunity for cross-contamination.”[1] In the surgical setting, linting has been documented to increase the incidence of surgical site infections by providing a method for transporting bacteria.[2] Selecting a mattress of non-woven material, which has little or no lint present, further reduces the potential for infection.

Skin Integrity Concerns

Clinically, the absence of sufficient staff or assistive devices to reposition patients can lead to skin shearing and the development of pressure ulcers. “Conversely, safe patient handling can enhance the overall quality of patient care and improve clinical outcomes. Repositioning patients regularly can yield many benefits including a reduction in skin shearing and bruises.

The effect of pressure on underlying structures and tissue is magnified when shear forces are added. “Shear forces occur when patients are transferred in such a way that they

Skin Integrity Concerns (continued)

tend to slide.” The air-assisted transfer method reduces the opportunity for skin shearing and excessive pressure, whether it is used for a patient with compromised or healthy skin.

Conclusion

In conclusion, there is strong evidence to support the need of an air-assisted transfer device such as the Liftaem™ System when laterally moving or repositioning a patient.

As previously stated, educating the caregiver on lifting techniques and good body mechanics does not always reduce the potential for injuries. Depending on the lifting procedures used, the patient and caregiver may be at risk for serious injury.

Additionally, the healthcare facility must bear the financial liability that can result from these injuries. The importance of having an effective means of safely transferring and repositioning patients cannot be overstated.

Use of the Liftaem™ System can help ensure a safe and effective transfer for the patient and help minimize the potential for staff injury.

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