

DoD Ergonomics Working Group NEWS



Issue 125, January/February 2012

<http://www.denix.osd.mil/ergoworkinggroup/>

Safe Patient Handling: Ceiling Lifts

Over the past several years, the U.S. Army Public Health Command (USAPHC) has been developing and implementing a Safe Patient Handling Program for the Army Medical Command. This comprehensive program implementation plan is designed to decrease caregiver injuries, improve patient outcomes, and provide the highest levels of comfort possible for patients and our healthcare providers.

One of the goals of a comprehensive Safe Patient Handling Program is to minimize or eliminate work-related musculoskeletal disorders among patient care providers. Implementation of a comprehensive program includes seven essential elements:

- Ergonomic site assessment
- Facility champions
- Unit peer leaders
- Multidisciplinary facility Safe Patient Handling Committee
- Minimal lift policy
- Comprehensive training
- Equipment

Once an ergonomic site assessment has been completed, a facility can make decisions about what types of equipment will best suit their needs and budget. The primary factors that contribute to staff use of equipment is accessibility and ease of use. Ceiling lifts are one of the most common and versatile types of equipment.

Ceiling Lift Rails

Ceiling lifts consist of rails that are either mounted into the ceiling via the underlying ceiling structure or with unobtrusive wall-mounted supports. These fixed rails can be installed in several different configurations and may consist of:

- One **straight rail** over a bed. This configuration limits the use of the motor, sling, and lift to the area directly below the straight rail.
- A **traverse rail**, sometimes referred to as an H track or XY track. This commonly consists of two stationary rails positioned parallel to each other, with a third rail that slides back and forth on the two stationary rails, allowing the ceiling lift to be used anywhere within the space between the two fixed rails. The use of a traverse system encourages increased use and provides flexibility.



Continued on page 2

Ceiling Lift Motor

The motor of a ceiling lift typically sits inside a box that slides on the rail and lifts and lowers a patient suspended in a sling. Motors come with different lifting capacities depending on the manufacturer. There are standard motors that lift approximately 500 pounds and bariatric motors that can lift in excess of 1000 pounds. Manufacturers have found different ways of utilizing the motors for this additional weight allowance and can provide their specifications. The motor is typically controlled by a handheld device that the healthcare provider uses to raise and lower the patient in their sling.

Take into consideration how the motor and handheld device are charged. For example, some manufacturers have a home base system where the motor and handheld device is either moved manually or moved automatically to one spot where it recharges. Other systems include rails that are constantly charged so that the motor remains charged no matter where it is located in the system.

Ceiling Lift Sling

The selection of slings can be overwhelming, but there is a sling for nearly any diagnosis and condition.

- **Basic Slings.** There are several basic slings, in a variety of sizes, that can be used in many ways from seating a patient to assisting with a patient's hygiene needs to helping healthcare providers reposition sheets.
- **Specialized Slings.** Depending on patient populations, there may be a need for specialized slings such as supine slings, amputee slings, pediatric slings, ambulation slings, limb support slings, bathing slings, and so on.
- **Disposable or Laundered Slings.** Slings are available for both one-time use and that can be laundered for repeated use. A facility might primarily use laundered slings but have disposable slings available for specific settings such as the operating room.

Continuous and effective training on the many types and uses of slings will assist healthcare providers in becoming more comfortable with their use. Providers will also become more knowledgeable about the different ways slings can be used to assist with patient care and movement tasks beyond the fairly straightforward traditional bed-to-chair, chair-to-chair, or bed-to-bed transfers.

Other Uses

Ceiling lifts can be designed with extension rails in place to allow the patient to be moved into a bathroom area. Because many bathrooms are relatively small spaces, and there is the potential for wet surfaces, bathrooms can present unique challenges for staff to assist patients and eliminate falls.

- **For dependent patients,** a ceiling lift into a bathroom provides a safe transfer to and from the commode and shower and improves the ease with which a healthcare provider assists with toileting and hygiene.
- **For less dependent patients,** a ceiling lift and ambulation sling in a bathroom can provide greater independence to stand at a sink and perform basic activity of daily living tasks without the fear of fatigue and falls.

In addition to adult inpatient rooms, ceiling lifts should be included in areas such as pediatrics, radiology, emergency room, operating room, morgue, mother/baby unit, physical and occupational therapy, ambulance bays, and family waiting or rest areas.



For more information about implementation of Safe Patient Handling Programs, recommended ceiling lift coverage, and other transportable patient-handling equipment, please contact Ms. Kelsey McCoskey, Ergonomist, or COL Myrna Callison, Ergonomics Program Manager, USAPHC, at Armyergonomics@amedd.army.mil.