

SPOTLIGHT SAFE ENVIRONMENTS

Safety first

Protect important resources by planning for safe-patient handling

By Kathryn M. Pelczarski

Addressing safe-patient handling and movement needs have become an essential design element for healthcare facility construction/renovation projects. In addition, there are compelling reasons for existing facilities to make planning for a safe-patient handling program a high priority.

In recent years, drivers for improving the safety of patient handling include the growing obesity epidemic, the aging population and the prevention of patient injury. However, the primary driver is the need to prevent healthcare worker injury. Safety of the healthcare workforce has been identified by the Lucian Leape Institute, an organization dedicated to providing strategic vision for improving patient safety, as one of six transforming concepts that require system-level attention and action. This



is also critical to moving the national patient-safety agenda forward. And yet, according to the Bureau of Labor and Statistics in 2009, nursing aids, orderlies and attendants ranked first and registered nurses ranked sixth in the Top 10 list of occupations in the U.S. reporting the highest number of work-related musculo-skeletal injuries requiring days away from work.

The costs associated with corresponding workers' compensation claims can be exorbitant. According to OSHA in 2006, musculo-skeletal disorders were responsible for more workers' compensation claims among healthcare

workers than any other condition. The cost-savings associated with workers' compensation insurance and reduction in claims can provide financial justification for implementing a safe-patient handling program. Preventing staff injury reduces other associated costs such as employee replacement, use of temporary agency staff, overtime pay, incident investigation costs and possible patient injury.

It is widely recognized manual patient handling contributes to musculo-skeletal injuries among healthcare workers. According to National Institute for Occupational Safety and Health,

the maximum recommended weight limit for most manual patient-lifting tasks is 35 lb. This means most tasks involving manual moving or lifting of patients are inherently unsafe, especially if the patient cannot bear his/her own weight. The aging population presents special challenges because of requiring more physical assistance. Obese and morbidly obese patients compound the physical effort required by staff in performing patient-handling tasks.

Clinical consequences of unsafe patient handling can be daunting. Nurses suffering from musculo-skeletal pain may be reluctant to perform

patient-handling tasks and nurses on restricted duty may be unable to perform these tasks; this may result in limited patient movement and mobilization. Patient care is compromised and the potential for adverse events associated with prolonged bed rest increases. When an injured nurse attempts to perform patient-handling tasks with limited strength and pain, he/she may drop the patient or jerky or dragging movements can result in patient bruises or skin tears.

Many healthcare organizations have recognized the risks manual lifting poses to healthcare workers, and therefore have been promoting safe-patient handling programs. Canada and the United Kingdom have endorsed such programs on a national level. The trend for safe patient-handling programs has been slower to spread in the United States, but the momentum began after the American Nurses Association launched its Handle with Care campaign in 2003. By 2009, eight states (Maryland, Minnesota, New Jersey, New York, Ohio, Rhode Island, Texas and Washington) have enacted safe patient-handling legislation. Legislation is also under consideration at the federal level.

Ramifications for facilities and the construction and design industry are huge, as hospitals deliberate over the most appropriate patient-handling equipment to implement and consider key facility issues including space requirements and structural and design considerations to accommodate use of such equipment. In

2010, a new section requiring a patient-handling and movement assessment was added to the 2010 Guidelines for Design and Construction of Health Care Facilities as a major element of new design.

Getting started

A good starting point is for healthcare organizations to designate a multidisciplinary team charged with conducting a patient-handling needs assessment to identify equipment required for each service area. It also defines space requirements and structural/design considerations to accommodate safe and ergonomic use of patient handling-equipment. The team should include representation from administration, medical staff, nursing, physical therapy, occupational therapy, transport, risk management/patient safety, occupational health representation, clinical engineering, facilities staff, architects and engineers (particularly for construction/renovation projects) and materials management.

The multidisciplinary team should evaluate patient-handling needs through the continuum of patient care. Considerations should include:

- > Needs of the specific patient population including patient-dependency elements and patient size and weight;
- > Types of high-risk patient-handling tasks to be performed including lateral transfers, vertical transfers, repositioning a patient in bed or chair and mobilization and ambulation of patient;

continued on page 20 >>

Advertisement appeared here on original version

>> continued from page 19

> Type of patient-handling equipment required to reduce risk for each high-risk task such as fixed-ceiling lifts, mobile floor lifts, sit-to-stand lifts, lateral transfer devices, wheelchairs and transfer chairs.

In determining the quantity of each type of patient-handling equipment required, the team should consider the patient mix in each service area and the estimated frequency of each patient-handling task (e.g., repositioning in bed, transfer from bed to chair) for that patient population. For example, in an area where most patients have some upper body strength and can bear weight, purchasing a few sit-to-stand devices may be useful to assisting patients. In a neurosurgical ICU, where patients may lack upper-body strength and are unable to bear weight, fixed-ceiling lifts may be most appropriate for every patient room to assist with most patient-handling tasks.

It's also important to consider that patient-handling equipment must be readily available, when needed, or it is unlikely to be used. The size and weight capacity of each type of equipment must also be considered.

Due to the growing obesity epidemic, many healthcare organizations are opting to purchase patient lifts with a weight capacity of at least 500 lbs. for most locations. But even a 500 lb. weight capacity may be insufficient for some morbidly obese patients.

Facility and design considerations

The team will need to determine the specific location and configuration of the track systems for any fixed-ceiling lifts it plans to implement. For example, installing traverse tracks (H tracks) will afford broader coverage within the patient room and more options for transfers and patient-handling tasks. Curved tracks are frequently used for transitions from one room to another. The structural-load capacity of the area where the track will be mounted must be checked to ensure it is sufficient to support the combined weight of the lift, lifting equipment and other superimposed loads. Other items to consider in selecting and installing track systems include ceiling fixtures, items above the ceiling, wall-mounted barriers and structural materials in the building frame.

Sufficient space is needed to accommodate the patient, staff and patient-handling equipment. This ensures the task can be performed safely and ergonomically. For example, a bariatric patient unable to bear weight and is only partially cooperative would require a patient lift with a full-body sling and a minimum of three caregivers to assist in a vertical transfer from a bed to chair. Aside from space for the bed and

chair, this task requires sufficient space for the patient, the bariatric mobile floor lift, the three staff members and maneuverability for a 180-degree pivot turn with the mobile lift from the bed to the chair. The use of a fixed-ceiling lift could save on required floor space.

Performing simulations of patient-handling tasks in patient rooms, bathrooms or other common transfer locations provides a realistic and practical way to validate the space required for safe-patient handling.

Electrical requirements for the use and storage of patient-handling equipment must also be considered. These requirements will be dependent on the equipment type and manufacturer/model. For example, battery charging areas with electric services are typically required in storage areas for mobile floor lifts and sit-to-stand devices.

Storage space requirements should be sufficient to accommodate patient-handling equipment and all accessories. It is preferable for storage space to be centrally located within each

service area to facilitate availability, when patient-handling equipment is needed.

Finally, consideration of the safety of the destination points and transport route for moving patients from one location to another is also important. Doorway widths must be sufficient to accommodate equipment, along with the transport team and other items that must accompany the patient. For example, doorway widths on the transport route for a morbidly obese patient from the patient room to a procedure area must be sufficient to accommodate the bariatric bed used to transport the two or more staff members required, and the other essential equipment. Public corridors should be wide enough and clutter free for maneuvering a patient on a stretcher or bariatric bed. Check the size and weight capacity of each elevator to ensure it will accommodate the patient, the equipment and the staff. Avoid transport routes that include steep ramps because the level of strength and energy required to control the stretcher or bariatric bed on the incline is much greater.

In determining the quantity of each type of patient-handling equipment required, the team should consider the patient mix in each service area and the estimated frequency of each patient-handling task.

Kathryn M. Pelczarski is director of the Applied Solutions Group, ECRI Institute. Her role includes development of new services, and management of major projects related to patient safety, technology assessment and planning and procurement assistance. She has more than 23 years experience in healthcare consulting. She can be reached at kpelczarski@ecri.org.