

# LiftSeat

*no-lift solutions*

WHITE PAPER

## Toileting and Fall Risk in Acute Care

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## Seriousness of Problem

Patient falls now represent a new and significant financial risk to hospitals. Effective with discharges on or after October 1, 2008, Medicare, as well as many states and private insurers, will not reimburse hospitals for the additional cost of treating injuries that result from preventable conditions, including patient falls, which occur during a patient's hospitalization. Hospitals are not allowed to bill the patients for these unreimbursed costs. With the threat of nonpayment for patient falls, all hospitals must quickly and proactively develop strategies that will both prevent falls and reduce fall injury rates.

Falls among acute care patients are common and may lead to injuries and prolonged hospitalization. They occur in most hospital services and affect young as well as older patients. A recent study found 50% of all falls were elimination-related, i.e., a fall occurring during an activity related to elimination or the need to toilet.<sup>1</sup> Over 40% of falls are reported to have resulted in patient injury, ranging from minor cuts and contusions to fractures, major head trauma, and death, with patients under the age of 65 being just as likely to suffer a fall-related injury as patients 65 and older.<sup>1</sup> Studies have shown that elimination-related falls are a significant predictor of a fall-related injury with a fall involving a bedside commode as a particularly high risk factor for serious injury of a patient.<sup>1</sup>

Aside from potential patient harm, assisted toilet transfers can lead to severely debilitating pain and injury to hospital caregivers. Manual and repetitive handling tasks associated with toilet transfers can require high physical demands due to the difficulty of lifting and moving a patient because of the weight of the patient and the tendency of a patient to fall or lose balance. Moreover, performing patient handling in the confines of small bathrooms and/or patient rooms, cluttered with healthcare equipment and/or furnishings, works against the caregiver being able to use good body mechanics. For the hospital, staff injuries often result in economic consequences consisting of increased workers' compensation, and other lost time, costs as well as shortages of needed nursing staff. The latter may in fact contribute to a higher incidence of patient falls as it has been found that there may be a correlation between fall rates and patient to nurse staffing ratios, i.e., fall rates have been found to be generally higher in those services with higher patient to nurse staffing ratios.<sup>1</sup>

## Susceptible Patients

Patient falls occur in most acute care hospital services, e.g., medicine, surgery, orthopedics, neurology, cardiology, oncology, obstetrics, include many diagnoses, and are associated with a variety of complex patient attributes, conditions, and actions. Patients attempting to perform unassisted, elimination-related activities account for a large proportion of hospital falls.<sup>1</sup> Among the factors that contribute to an increased risk of elimination-related falls are:

- Reduced strength and balance
- Impaired mobility
- Limited joint range of motion
- Partial or no weight bearing
- Use of certain medications
- Post-op
- Orthostatic changes
- Need for toileting assistance
- Inappropriate toilet height
- Inappropriate use of bedside commodes for patients with difficulty in transfers
- Instability of bedside commodes and raised toilet seats

Orthostatic changes are an often over looked elimination-related fall risk factor. When orthostatic changes in inadequate blood circulation exist, the amount of blood getting back to the heart and brain may be reduced. Patients may have low blood volume throughout the body or their blood may pool excessively in the extremities or both. When healthy people rise to a standing position, gravity causes about 750 ml of blood to fall to the abdomen and legs, resulting in a decrease in blood flow to the brain. In patients with orthostatic changes, cerebral blood flow decreases more prominently while the patient rises to his/her feet. When the heart receives less blood from the limbs during the sit-to-stand motion, the brain releases chemicals and alters the pulse and blood pressure in an effort to get the blood flowing upwards again. When this chemical response is accentuated, patients can develop a rapid heart rate (tachycardia), low blood pressure (hypotension), and orthostatic symptoms. The result is that when a patient rises to his/her feet after toileting, the aforementioned can occur and the patient will faint and then fall.<sup>2</sup>

Although it can occur with a patient of any age, orthostatic hypotension (OH) is a relatively common finding among the elderly, occurring in up to 50% of patients. Because of age-related physiologic changes in the cardiovascular system and a blunted response

to the recruitment of the sympathetic system, older people tend to be vulnerable to orthostatic stress. Some conditions, such as hypertension, diabetes mellitus, low blood volume, and use of medications, may even further impair the ability of the elderly to cope. Patients with OH experience more frequent dizziness, difficulties in walking and, as a consequence, are more susceptible to falls.<sup>2</sup>

## Strategies of Reducing Fall Risk

Steps that can be taken to reduce the risk of elimination-related falls include:

### MEDICAL STRATEGIES

- Review medications to decrease any potential or real side effects that may increase the risk of falling.<sup>3</sup>
- Limit combinations of medications when possible, e.g., sedatives, analgesics.<sup>4</sup>

### REHABILITATIVE STRATEGIES

- Teach patient and nursing staff safe toilet transfer skills.
- Instruct patients to rise and make position changes slowly.<sup>4</sup>
- Ensure availability and accessibility of ambulatory assistive devices, e.g., walkers and canes.<sup>1</sup>

### NURSING STRATEGIES

- Assess each patient's risk for falling, including the potential risk associated with the patient's medication regimen, and take action to address any identified risks.<sup>5</sup>
- Ensure that staff is aware of patients' fall risk factors and toileting needs.
- Target prevention strategies to patients at high risk for falling.
- Respond to toileting requests promptly, especially if the patient requires assistance to get to the toilet.
- Increase staff assistance with ambulation.<sup>1</sup>
- Toilet at risk patients routinely.<sup>4</sup>
- Ensure that patients with impaired mobility can reach/use the nurse call bell. If they cannot, consider asking the patient if they need to go to the toilet and/or the use of a fall alarm to warn staff of unassisted transfers.

## ENVIRONMENTAL STRATEGIES

- Create a safe environment with minimal hazards, removing obstacles and clutter.
- Provide proper illumination in the environment.<sup>6</sup>
- Minimize highly polished floors.<sup>6</sup>
- Install slip resistant flooring and slip-resistant adhesive strips in areas such as the floor next to the sink and toilet.<sup>6</sup>

## EQUIPMENT STRATEGIES (\*)

- Consider toilet durable medical equipment to make toilet transfers safe.
- Consider transfer and lifting equipment to support toilet transfers.

(\*) Selecting the right toileting equipment is dependent upon a variety of patient, staff, and environmental factors. LiftSeat Corporation offers an Assessment Tool designed to assist hospitals in selecting the correct equipment for patient and staff safety.

## References

<sup>1</sup> Hitcho EB, Krauss MJ, Birge S, Dunagan WC, Fischer I, Johnson S, Nast PA, Costantinou E, Fraser VJ. Characteristics and Circumstances of Falls in a Hospital Setting: A Prospective Analysis. Washington University School of Medicine. 2004.

<sup>2</sup> Tideiksaar, R. 2008.

<sup>3</sup> Registered Nurses Association of Ontario. Health Education Fact Sheet. Reduce Your Risk for Falls.

<sup>4</sup> The University of Texas Health Science Center at Houston. Fall Prevention/Intervention Strategies. August 7, 2003.

<sup>5</sup> Joint Commission on Accreditation of Healthcare Organizations. 2005 National Patient Safety Goal - Fall Reduction for Applicable Settings.

<sup>6</sup> Tideiksaar R. Falls in Older Persons – Prevention and Management. 1998.