

Falls, Injuries, and Alarm Fatigue

White Paper

Patient Falls & Injuries

Patient falls in healthcare institutions are a serious problem. Even though hospitals have devoted quality improvement and research efforts to prevent falls, patient falls consistently compose the largest single category of reported incidents in hospitals (*The Joint Commission, 2005*).

- A reported 79.5% of falls occur in patient rooms. (*Nursing Ergonomics, 2008*)
- Approximately 22% of all reported falls are falls from bed. (*Rehabilitation Nursing, 2008*)
- Falls are the most common cause of nonfatal injuries. (*CDC, 2011*)
- Serious injuries, such as fractures, sprains, lacerations, or concussions, occur in 10% of inpatients who fall. (*MedSurg Nursing, 2006*)
- “Patient Falls” is listed by CMS as one of 10 hospital-acquired conditions that is high cost, high volume, or both, and can reasonably be prevented through the application of evidence based guidelines. (*CMS, 2011*)

Alarm Fatigue

Alarm fatigue refers to the response - or lack of it - of nurses to more than a dozen types of alarms that can sound hundreds of times a day - and many of those calls are false alarms.

- ECRI Institute listed alarm hazards as second among its top 10 technology hazards of 2010.
- According to the Boston Globe, more than 200 deaths nationwide over the past five years have been associated with problems with patient monitor alarms. In many of those cases, it's believed "alarm fatigue" is to blame. (*Feb 2011*)
- On a 15-bed unit at Johns Hopkins Hospital in Baltimore, staff documented an average of 942 alarms per day — about 1 critical alarm every 90 seconds. (*Boston Globe, Feb 2011*)

Common Alarm Hazards (*Patient Safety & Quality Healthcare March/April 2011*)

- Inappropriate Alarm Modification (tampering)
- Alarm Desensitization & False Alarms
- Non-Restoration of Alarm Settings (staff errors)
- “One Size Fits All Approach”. Every clinical environment is unique, therefore there is no alarm system that is best for every situation. By being able to customize settings, you improve the effectiveness of the alarm system.

CHG Solution

The Spirit Select® bed is the leading hospital bed solution for patient falls, injuries, and alarm fatigue.

A. 10" Ultra Low Bed Height

- The lower the bed height, the less risk of serious fall injury (*J. Lloyd, 2011*)
- Provides safer transfers for shorter, frail, elderly, and post surgery patients
- Helps patients to feel more secure and less restless during sleep

B. Integrated Bed Exit Alarm

- Monitors patient bed-exit activity
- Reduces patient wandering
- Alarm Tracking capability assists with Fall Protocols and Fall Risk Measurement

C. Alarm Fatigue Prevention

- Customization - Multiple volume, and chime options
 - Nurse Call and Priority Call options
 - Lockable settings eliminates tampering
- Staff Errors - Instantly arms when patient is detected in bed
 - Automatically restores alarm settings for staff
- Desensitization - Automatically resets a False Alarm

D. Programmable Nightlight

- Automatically turns ON/OFF when patient exits/enters bed
- Reduces trips and falls at night, during toileting
- Ensures nightlight doesn't disturb patient while sleeping

Clinical Results

Spirit Select combines key safety features to reduce patient falls - Low Bed Height and a Bed Exit Alarm with Fatigue Prevention. The following customers have shared their fall data with CHG:

St. Clair Hospital in Pittsburgh, PA: After implementing Spirit beds and Bed Exit Alarms with Fatigue Prevention, St. Clair's fall rate decreased from 3.8 to 1.9. Their fall injury rate decreased by 50%.

Orlando Health in Orlando, FL: After implementing Spirit bed and Bed Exit Alarms with Fatigue Prevention, Orlando Health's fall rate decreased from 5.1 to 2.0. Their fall injury rate dropped to zero.

Studies

- Study performed by Dr. John Lloyd, Ergonomics specialist for the VA Patient Safety Center of Inquiry.
- Measured fall injury risk at bed deck heights from 9" up to 35", in 1-inch increments.
- Study shows that risk of head and brain injury is directly proportional to bed height.
- Please refer to full study "Biomechanical Evaluation of Patient Falls from Bed".