

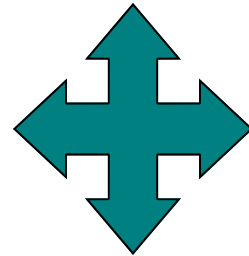
# Study: Low Beds, An Integral Part of a Fall Prevention Program

## Problem:

- High fall rate of 15.5 per 1,000 bed days of care.
- Several serious fall injuries within short period of time.
- 38% of patient falls were occurring during the night shift.
- Fall rate was three times higher than National VA benchmark of 5.5.

## Action Plan:

- Implement a hospital-wide Fall Prevention Program.
- Re-educate staff about Morse Falls Scale, incident reporting, and incontinence program.
- Perform patient falls assessments upon admission, transfers, and when falls occur.
- Identify fall-risk patients with a green I.D. bracelet and a sign on patient room doors.

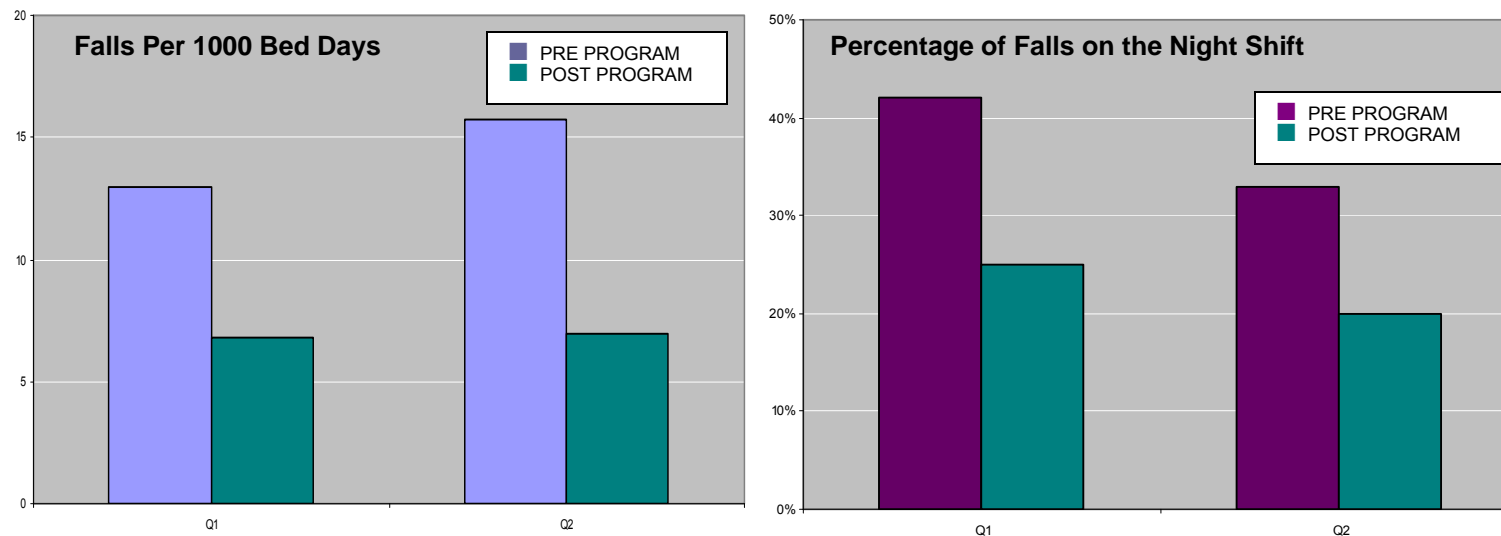


## Equipment Implemented:

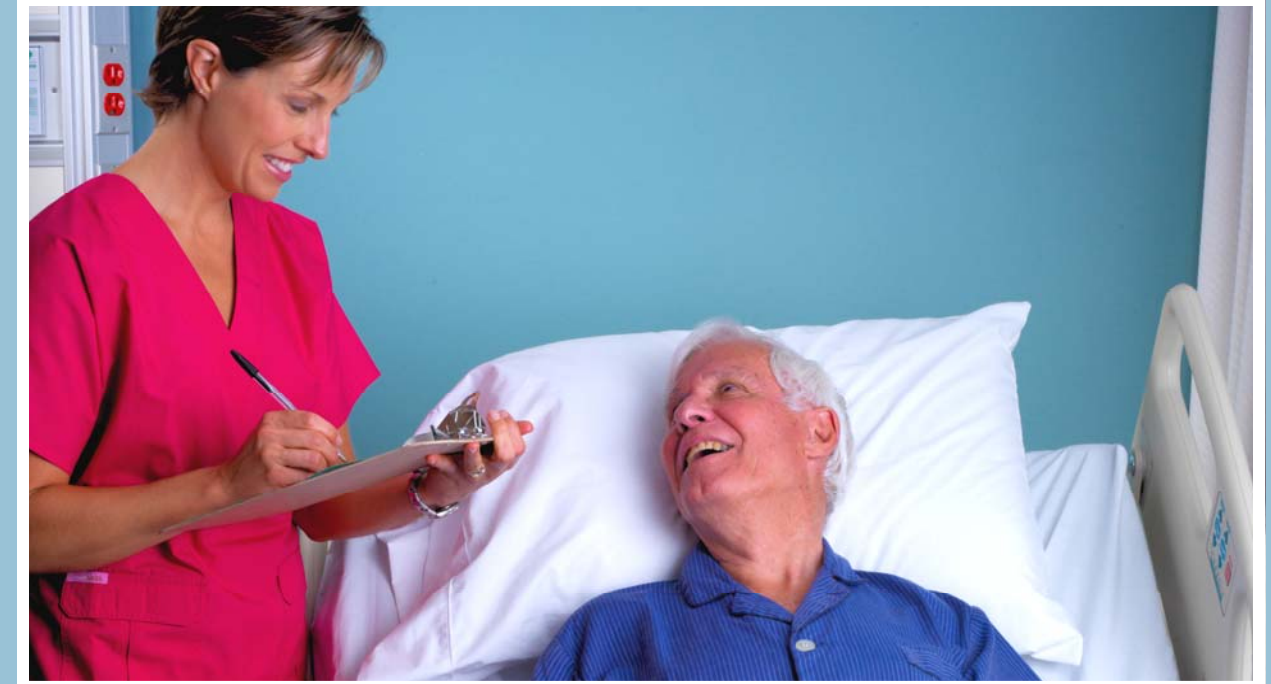
- Purchased low hospital beds: Spirit (8.75" low) and Arro (6.75" low).
- Installed Bed Exit Alarms.
- Used floor Fall Pads.

## Final Results:

- Fall rate dropped to 3.5 per 1,000 bed days of care.
- No serious injuries related to falls were reported within a 6-month period.
- Reduced patient falls during the night shift by 40%.



"Low beds certainly contributed to lowering our fall and fall-injury rates. I certainly feel low beds helped in achieving 'no serious patient injury'. Low beds are the way all hospitals should progress, especially with our aging population. The Spirit bed has proven to be a winner, especially with wheelchair bound and shorter patients - today's patient population wants to be as independent as they can." M.D. - Risk Manager VA Medical Center, NY



The Effective Use of Low Beds To Reduce Patient Falls and Fall Injuries.

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# Study: The Utilization and Effectiveness of Low Beds In an Acute Care Hospital.

## Problem & Objective:

Falls among acute care patients generally range from 2.3 to 7 falls per 1,000 patient days<sup>(1-4)</sup>. Falls are the leading cause of injury in hospitals, with approximately 30% of inpatient falls resulting in injury, and 5% of falls resulting in serious injury<sup>(5, 6)</sup>.

Can falls from bed and their related injuries be reduced using height adjustable low beds in an acute care setting?



## Design, Setting & Participants:

**Time Frame:** Three months commencing July 1, 2006 and ending Sept 30, 2006.

**Test Location:** An acute care hospital in Tulsa, Oklahoma, USA. Units studied were 9-East Medical, and 11-East Cardiac Step-Down.

**Project Facilitator:** Dr. Rein Tideiksaar.

**Equipment Used:** A fixed number of low hospital beds and a fixed number of standard hospital beds (not low) were used throughout the duration of the study. Low beds used in the study had low heights ranging from 6.75"-8.75" (without a mattress).

**Test Subjects:** Acute care patients ranging from 18 to 90 years-old with varying fall risks. Each patient was given a falls risk assessment upon admission. Patients with the highest fall risks were placed in low-height beds.



## Reporting Methods:

**Data Collection:** Nursing staff on units 9-East and 11-East were trained to report all patient falls to the nurse manager. All falls data was recorded, tracked, and analyzed by the nurse manager using a computer-based fall reporting log.

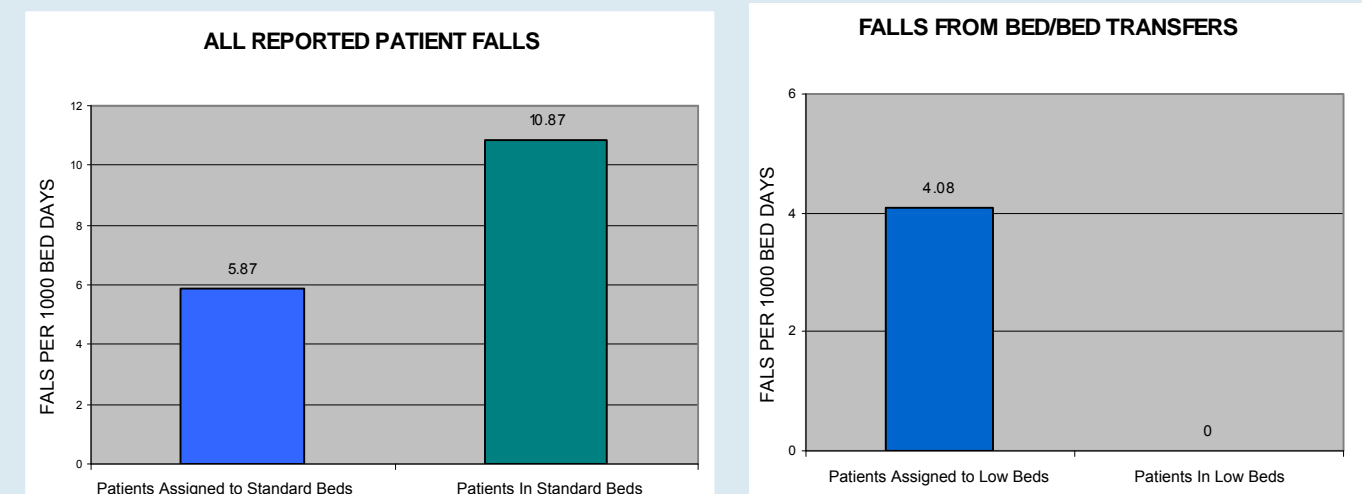
**Definition of Fall:** Any unplanned descent to the floor. Falls are reported as such whenever a patient is observed falling, or a patient is found lying on the floor.

### Levels of Injury:

- Class I** No injury reported.
- Class II** Minor injury: a small scrape, abrasion, bruise, or reddened area, which heals without treatment within a few days.
- Class III** Moderate injury: a suspected bone injury requiring an x-ray, but no evidence of fracture is seen, a laceration that requires suturing and medical treatment, or an IV site which infiltrates post fall requiring treatment.
- Class IV** Major injury: a confirmed fracture of any bone or head injury, or a change in neurological status.

## Final Results

- Patients assigned to low beds had a much higher overall fall rate than patients assigned to standard beds. This result is likely due to the fact that the patients assigned to low beds were high fall-risk patients.
- Falls that were not related to bed/bed transfers occurred in hallways, showers, bathrooms, and from chairs.
- The fall rate for falls from bed or during bed transfers was 0 (zero) for patients in low beds, and 4.08 for patients in standard beds.
- 56% of falls from standard beds resulted in injury. Injuries included scrapes, abrasions, skin tears, and bone fracture.
- 65% of overall falls, and 100% of falls from bed, were related to bathroom activity.



“Results showed that low beds were effective in preventing falls. The beds were kept in the low position, floor mats and bed alarms were employed. Bed alarms alerted nurses to patient ‘roll outs’ from bed. The low beds were ‘nurse friendly’ and facilitated caregiving tasks. Incorporating a low bed into an organization’s fall prevention program is crucial to the success and sustainability of preventing injurious falls.”

Dr. R. Tideiksaar.

### DR. REIN TIDEIKSAAR CREDENTIALS:

Dr. Rein Tideiksaar has been active in the area of fall prevention for over fifteen years. He has directed numerous research projects on falls and has developed fall prevention programs in assisted living, home care, acute care, and nursing facility settings. Dr. Tideiksaar has written numerous articles and book chapters on falls and related topics. He is the author of Falls in Older People: Prevention and Management, Third Edition (Health Professions Press, 2002). From 2000 to 2003, Dr. Tideiksaar was the Senior Vice President of Fall Prevention and Injury Reduction Systems, Elder-Care Companies, Inc., Point Pleasant Beach, New Jersey. Prior to 2000, he was Director of Geriatric Educational and Clinical Programs and Director of the Falls and Immobility Program, Department of Geriatrics, Southwest Medical Associates, Inc., Las Vegas, Nevada. He has also served as Director of Geriatric Care Coordination, Sierra Health Services, Inc., Las Vegas, Nevada, and Director of the Falls and Immobility Program, Department of Geriatrics and Adult Development, Mount Sinai Medical Center, New York, New York. Dr. Tideiksaar obtained a doctorate from Columbia Pacific University and a physician assistant certification from the State University of New York at Stony Brook. Dr. Tideiksaar completed his geriatric training at the Parker Jewish Geriatric Institute, New Hyde Park, New York.

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