



## KEY POINT SUMMARY

### OBJECTIVES

The objective of this study was to determine whether the rate of falls and associated serious injuries in a hospital aged-care setting can be reduced using a multi-strategy prevention approach.

### DESIGN IMPLICATIONS

Use design strategies that increase surveillance, optimize the environment, and improve the management of this high-risk population by a multi-strategy approach. The researchers recommend purchasing electric beds that can be lowered to within about 12 cm of the ground, which they deemed to be the most useful piece of equipment.

## Sustained Reduction in Serious Fall-Related Injuries in Older People in Hospital

Fonda, D., Cook, J, Sandler, V., Bailey, M.  
 2006 / *Medical Journal of Australia*  
 Volume 184, Issue 8, Pages 379-382

### Key Concepts/Context

Falls are the leading cause of injury in Australian hospitals, with 38 percent of all hospital incidents related to falls. In hospital settings, single interventions have not been proven successful in preventing or reducing falls, whereas multisystem or multi-strategy approaches have shown to be more effective.

### Methods

Baseline data was compared with the outcomes of a non-randomized multi-strategy approach to reduce falls that involved data gathering, risk screening with appropriate interventions, work practice changes, environmental and equipment changes, and staff education phased in over three months for all patients admitted to the Aged Care Services wards at Caulfield General Medical Centre, Melbourne, between January 2001 and December 2003.

### Findings

Root-cause analyses identified a number of key contributing factors, the major one being that 82 percent of falls were not observed. Over 60 percent occurred around the bed. Other contributing factors were ward equipment (e.g., beds, chairs); medical factors (e.g., hypotension, toileting issues, neurological and musculoskeletal impairment); intrinsic patient factors (e.g., confusion, impulsiveness, language barrier, footwear); environmental factors (e.g., lighting and floor surfaces); and staff attitude and knowledge (e.g., resistance to changing work practices and to adopting additional documentation). Over a two-year period there was a 19-percent reduction in the number of falls per 1000 occupied bed-days (OBDs) (12.5 v 10.1; P



### The Center for Health Design: Moving Healthcare Forward

The Center for Health Design advances best practices and empowers healthcare leaders with quality research providing the value of design in improving patient and performance outcomes in healthcare facility planning, design, and construction, optimizing the healthcare experience and contributing to superior patient, staff, and performance outcomes.

Learn more at  
[www.healthdesign.org](http://www.healthdesign.org)

= 0.001) and a 77-percent reduction in the number of falls resulting in serious injuries per 1000 OBDs (0.73 v 0.17;  $P < 0.001$ ).

### Limitations

The study's expanded definition of a fall recorded many minor and often insignificant events in the two-year follow-up period that were not likely to be coded at baseline, which may diminish the true impact of the outcomes. Conducting a randomized controlled trial in this type of setting was very difficult because of the high turnover of patients, their frailty, various acute illnesses, their cognitive impairment, and the heterogeneity of the interventions. Further, the multi-strategy approach allowed progressive introduction of simple and practical interventions without attributing outcomes to any specific intervention.