



## KEY POINT SUMMARY

### OBJECTIVES

This study focuses on the nursing home environmental characteristics that affect nighttime falling, particularly the discrepancy between lower leg lengths of frail nursing home residents and the height of their toilets and beds in lowest position.

## Bed and Toilet Height as Potential Environmental Risk Factors

Capezuti, E., Wagner, L., Brush, B. L., Boltz, M., Renz, S., Secic, M. 2008 | Clinical Nursing Research. Volume 17, Issue 1, Pages 50-66

### Key Concepts/Context

Approximately 60 percent of all nursing home residents have difficulty transferring out of bed independently. The ability to safely rise to a standing position is an important determinant of independence among older adults. The ability to transfer out of bed from a sit to stand position is dependent on several general patient characteristics such as age, functional status, and disease state.

### Methods

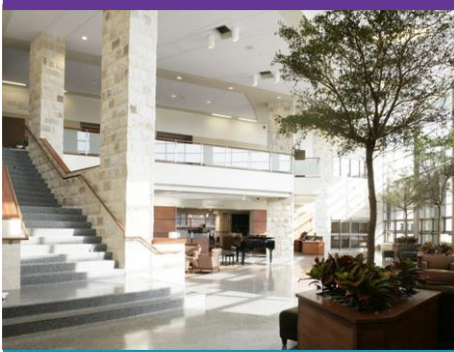
A retrospective observational design using secondary data from 263 nursing home residents at four medium-sized, Philadelphia metropolitan area nursing homes.

### Findings

Nursing home residents, regardless of physical or cognitive impairments or environmental barriers such as restrictive side rails or high bed heights, will continue to get out of bed. Although the 24 percent of residents able to transfer out of bed without human assistance had fewer physical or cognitive deficits, approximately half were known to get out of bed with raised side rails, and almost half experienced bed-related falls.

### Design Implications

Bed height adjustment should depend on the individual patient's lower leg length and ergonomic optimization for nursing staff providing care rather than the height of a particular bed style. Beds that provide the widest choice of bed heights that can be adjusted to a range of heights between 7 and 26 in. (including a 6-in. mattress) could accommodate the needs of residents with and without the ability to transfer and reduce injuries among nurses.



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Limitations

This study was limited by the data set available for secondary analysis. Further, the sample represented the most physically frail and cognitively impaired sector of the nursing home population, rather than a sample representative of the overall population distribution.

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