



KEY POINT SUMMARY

OBJECTIVES

To describe the temporal and spatial pattern of falls in relation to the different levels featured on the safety continuum model.

Understanding Design Vulnerabilities in the Physical Environment Relating to Patient Fall Patterns in a Psychiatric Hospital: Seven Years of Sentinel Events

Bayramzadeh, S., Portillo, M., Carmel-Gilfilen, C., 2019 | *Journal of the American Psychiatric Nurses Association*. Volume 25, Issue 2, Pages 134-145

Key Concepts/Context

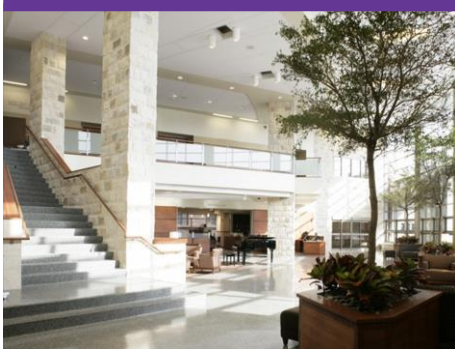
Finding effective ways to prevent patient falls and fall-related injuries has been an ongoing struggle and debate for many modern medical practitioners. Previous studies have shown that nearly 30% of falls that occur in hospital settings result in injuries and, subsequently, additional treatments. There is no debate that the physical environment itself can and should play a significant role in mitigating these incidents. Although patients receiving treatment in psychiatric units are especially susceptible to falls and fall-related injuries, little research has been done into the role the physical environment plays in these settings and contexts.

Methods

Fall-related data from an 81-bed psychiatric hospital were gathered from a seven-year period. Both quantitative and qualitative data were analyzed to understand the narratives surrounding each incident and its degree of prevalence. The average length of patient stay was eight days, with more than 150 staff members operating the facility at any given time. Staff collected sentinel event reports that outlined a list of factors that may or may not have contributed to each patient fall. These reports helped the researchers narrow down specific factors that may have contributed to higher or lower incident rates. 60 sentinel reports were randomly selected and statistically analyzed to determine if any patterns existed between certain locations or activities.

Findings

818 patient falls were recorded between January 2007 and December 2013. Most falls (39%) occurred in the geropsychiatric unit, which housed patients living with



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depression, with the second highest rate (32%) of falls occurring in the alcohol and substance abuse unit. Falls were mostly evenly spread between male and female patients. 45% of incidents were witnessed, while 55% were unwitnessed. The amount of unwitnessed made assessing fall patterns markedly difficult for the researchers, although patient rooms and bathrooms appeared to be the most prevalent sites for patient falls. In some cases, handrails and grab bars proved to be inconveniently located and may have actually contributed to the falls themselves; however, handrails do seem to reduce the risk of falls among patient populations overall.

Limitations

All data involved in this study were accessed and analyzed retrospectively; no new data were proactively gathered from patient populations or hospital staff. The authors note that patient treatment approaches were not factored into the study; specific treatment regimens may have contributed to overall fall rates among certain patients. Further, the authors note that there was a lack of data concerning the environmental design of the four units involved in this study.

Design Implications

The location and design of corridors in relation to patient rooms can contribute to fall rates among populations of ambulatory patients; designers should consider the layout of rooms and hallways when certain units are intended for patient populations who are at higher risk of falling. Handrail placement should be carefully considered in accordance with different patient recovery needs; height and length of the rails are especially important variables in both patient bedrooms and bathrooms.

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