



## KEY POINT SUMMARY

### OBJECTIVES

The study aimed at examining patient fall rates, fall-related serious injuries, the characteristics of fallers, risk factors (including environmental factors) contributing to falls and fall-related injuries in a 1300-bed urban academic hospital.

## Characteristics and Circumstances of Falls in a Hospital Setting

Hitcho, E., Krauss, M., Birge, S., Dunagan, W., Fischer, I., Johnson, S., Nast, P. A., Costantinou, E., Fraser, V. J.

2004 / *Journal of General Internal Medicine*  
Volume 19, Issue 7, Pages 732–739

### Key Concepts/Context

Patient falls refer to patients' unplanned descent to the floor with or without injuries to the patients. Patient falls are common for inpatients, averaging 2.3 to 7 falls per 1,000 patient days. About 30% of the falls lead to injuries, which contribute to higher healthcare cost. In order to prevent falls, it is very important to understand the epidemiology of patient falls, including the characteristics of fallers, the distribution and patterns of falls, contributing factors, and fall-related injuries.

Previous epidemiology studies of patient falls typically relied on retrospectively collected data from medical records or incident reports, which were often incomplete and might not include data about potential contributing extrinsic factors.

### Methods

In this prospective descriptive study, a total of 200 consecutive patient falls reported from various nursing units in the study period were examined in detail. Patient falls were identified by reviewing staff reports in the hospital's online adverse event reporting system. A fall data collection tool (including patient information, details of fall, factors contributing to fall, results of fall, and actions taken post-fall) was developed based on literature review. The tool was used to collect data around the falls from the adverse event reporting system, the electronic and paper medical records, interviews with patients, families and nurses, the staffing records, and observation of the environment where falls happened.



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## Findings

The fall rate was 3.38 falls per 1,000 patient days in the study period. The average age of fallers was 63.4 years. Most of the falls were unassisted, related to elimination needs, and happened in the patient rooms during the night shift. Environmental factors contributing to falls included wet floor and environmental obstacles (furniture, device, equipment). Video surveillance, patient placement close to the nurse station, and restraints were interventions most often used by staff for fall prevention. About 42% of patients who fell sustained injuries, ranging from pain/swelling to cardiac/respiratory arrest. Serious injuries were more likely to involve with bedside commodes.

## Limitations

There were several limitations of this study:

- Because the study was descriptive and observational in nature and there were no comparisons between different environmental conditions, the connections between physical environment and patient falls shown in the study should be interpreted cautiously and need further research to verify.
- The data collection methods in the study might not accurately capture all the falls and factors related to falls. For example, staff might not report all falls, especially those not resulting in injuries. Some information was collected in non-objective way, e.g. interviews, which relied on patients' recall of what happened.

## Design Implications

Although the study had limitations in determining specific environmental risk factors impacting patient falls and fall-related injuries, it did point out some important areas for fall prevention.

- One area is environmental design features facilitating nurses' assistance with ambulation and toileting such as wider bathroom doors.
- Another area is the removal of any possible fall hazards (e.g. flooring, equipment) in the route from patient beds to bathrooms to reduce elimination-related falls.
- A third area is the ease of patient monitoring or supervision by nurses so that they can quickly become aware of potential falls and provide assistance when needed.