

Rate of falls in hospitals significantly reduced after use of intervention for fall prevention

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Use of a fall prevention tool kit, which included a fall risk assessment, patient-specific prevention plan, an educational handout and a poster for over the patient's hospital bed reduced the number of older patients with falls in hospitals, according to a study in the November 3 issue of *JAMA*, a theme issue on aging.

Patricia C. Dykes, R.N., D.N.Sc., of Partners HealthCare System, Brigham and Women's Hospital and Harvard Medical School, Boston, presented the findings of the study at a *JAMA* media briefing at the National Press Club.

"[Falls](#) are a public health problem worldwide. Hospitalization increases fall risk because of the unfamiliar environment, illnesses, and treatments. Patient falls and fall-related injuries are devastating to patients, clinicians, and the [health care system](#). A single fall may result in a fear of falling and begin a downward spiral of reduced mobility, leading to loss of function and greater risk of falls. [Older adults](#) are more likely to be injured from a fall. Injurious falls increase hospital costs and lengths of stay," the authors write. No previous evidence supports short-stay hospital-based fall prevention strategies to reduce patient falls, according to background information in the article.

Dr. Dykes and colleagues investigated whether a fall prevention tool kit (FPTK) using [health information technology](#) (HIT) would decrease

patient falls in hospitals. The study, conducted January through June in 2009, compared patient fall rates in 4 urban U.S. hospitals in units that received usual care (4 units and 5,104 patients) or the intervention (4 units and 5,160 patients). Slightly more than half (51.3 percent) of patients were ages 65 years or older, with the average age among this patient population being 79 years. Among patients younger than 65 years, the average age was 48 years.

The FPTK integrated existing communication and workflow patterns into the HIT application. Based on a valid fall risk assessment scale completed by a nurse, the FPTK software tailored fall prevention interventions to address patients' specific determinants of fall risk. The FPTK produced bed posters composed of brief text with accompanying icons, patient education handouts, and plans of care, all communicating patient-specific alerts to those involved with the patients.

After the intervention period, the researchers found that fewer patients had falls in intervention units ($n = 67$) than in control units ($n = 87$). Analysis indicated the intervention units had a significantly lower adjusted fall rate than control units. The researchers also found that the intervention was significantly better for older patients but had no effect in younger patients. No significant effect was noted in fall-related injuries.

The authors calculated that just for the 8 units involved in the study, the FPTK could potentially prevent 1 fall every 4 days, 7.5 falls each month, and about 90 falls each year.

"To our knowledge, this is the first fall prevention clinical trial that provides evidence for using a specific HIT intervention to reduce falls in short-stay hospitals," the authors write. "The effectiveness of the FPTK in older patients provides evidence that a HIT program that tailors interventions to address patient-specific determinants of risk and is

implemented within existing workflows is effective in acute care hospitals with older adults. Because patient falls in hospitals are a major risk factor for fractures and other injuries, reducing falls is an important first step toward injury prevention, and any reduction in patient falls has clinical significance."

"Further study is needed to determine if a similar program evaluated over a longer period of time can significantly reduce repeat falls. Moreover, work is needed to develop a set of interventions that will prevent fall-related injuries. However, the FPTK was effective at reducing numbers of falls in intervention vs. control units."

More information: JAMA. 2010;304[17]:1912-1918.

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