

Personalized multimedia program may help prevent falls in patients without cognitive impairment

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A patient education program combining videos with one-on-one follow-up did not appear to reduce the risk of falls among all older hospital patients, but was associated with fewer falls among patients who were not cognitively impaired, according to a report posted online today that will be published in the March 28 print issue of *Archives of Internal Medicine*.

"Falls are a leading [patient safety](#) incident event in general hospitals and are especially common in older patients," the authors write as background information in the article. About 30 percent of these falls result in injury, which could lead to lengthier hospital stays, the risk of institutionalization and potential legal complaints against the facility.

Terry P. Haines, Ph.D., of Monash University and Southern Health, Kingston Centre, Victoria, Australia, and colleagues conducted a [randomized controlled trial](#) assessing two forms of multimedia patient education designed to help prevent falls in the hospital. A total of 1,206 older patients at two Australian hospitals were randomly assigned to one of three groups between January 2008 and April 2009.

A group of 401 received the complete intervention, involving written materials, videos and one-on-one follow-up with a trained health professional at the patient's bedside. The program presented data about frequency and causes of falls, invited patients to reflect on their own risk

and identify problem areas, then guided them toward developing goals and strategies for prevention. Another 424 patients received only the materials from the program and no individual follow-up, and a group of 381 received usual care, which varied by hospital but usually consisted of risk screening, use of alert items such as wrist bands and generic interventions such as checklists.

During the study period, 247 participants fell and 97 sustained injuries, including five fractures. Overall, the rate of falls per 1,000 days per patient did not differ significantly among the three groups (9.3 in the control group, 8.6 in the materials-only group and 7.6 in the complete intervention group).

However, among the 906 participants who did not have cognitive impairment, falls were less frequent among those in the complete program group (4 per 1,000 days per patient) than among those in the materials-only group (8.2 per 1,000 days per patient) or the control group (8.7 per 1,000 days per patient). Only 6 percent of patients who received the complete intervention fell, compared with 11 percent in the control group. Based on this data, the authors estimate that providing 33 patients with this intervention would prevent one from falling, and using it for 15 patients would prevent one fall.

"Many of the strategies pursued by patients as a result of participating in the complete program focused on (1) working more effectively with staff members caring for them; (2) identifying environmental hazards; and (3) using appropriate aids, equipment and clothing," the authors conclude. "These proposed strategies form a plausible mechanism of action for reducing falls among these patients and highlight the importance of behavioral elements in the causes of falls in this setting."

Among patients who were cognitively impaired, those receiving the full intervention had a higher rate of falls resulting in injuries than those in

the control group (7.5 vs. 2.9 per 1,000 days per patient), and a similar proportion of patients who fell overall (26 percent vs. 24 percent). "Cognitive impairment can limit the ability of patients to adhere to the planned safety-promoting behaviors and is a reason why an education program might not be beneficial among these patients," the authors write. "Further research is warranted to examine the efficacy of the complete program targeted at cognitively intact patients and used within the context of a broader falls-prevention program that uses other strategies to reduce [falls](#) among cognitively impaired patients."

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