Large-scale fall prevention study finds smaller than expected benefit

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Falls are the leading cause of injury-related death among older Americans and lead to 3 million emergency department visits every year. About one out of every three adults age 65 years and older falls each

year, and 20 to 30 percent of those who fall suffer moderate-to-severe injuries such as broken hips or head trauma. Investigators involved in the STRIDE (Strategies to Reduce Injuries and Develop Confidence in Elders) Study, jointly led by Shalender Bhasin, MD, director of Research Programs in Men's Health, Aging and Metabolism at Brigham and Women's Hospital, evaluated the effectiveness of a nurse-delivered, fall-injury prevention strategy delivered through primary care. This week in the *New England Journal of Medicine*, the team reports an approximately 8 to 10 percent reduction in serious fall injuries—an intervention effect that was lower than expected.

"The STRIDE Study represents the largest randomized trial of fall injury prevention strategies that has been published," said Bhasin. "We found that the treatment effect of the intervention in real clinical practice was lower than we anticipated. Even with the study as large as it was, it just wasn't large enough for the 8-to-10 percent treatment effect we saw to be statistically significant."

The trial was conducted in 86 real-world clinical practices with substantial input from patients, caregivers, health care professionals and other stakeholders. The study evaluated the effectiveness of a multifactorial intervention that included risk assessment and individualized fall injury prevention plans administered by nurse Falls Care Managers. These interventions included measures to address strength, gait, and balance impairment; medications; drops in blood pressure when standing up; feet and footwear; vision; osteoporosis and vitamin D; and home safety.

The trial enrolled 5,451 people aged 70 and older who were at risk of fall injuries from 10 health systems in the U.S. In the trial's intervention arm, a nurse Falls Care Manager worked with the patients and their physicians to identify risk factors for falls and fall-related injuries and to create care plans to reduce these risk factors. Plans included referrals to

community-based programs, as needed.

The study found that the multifactorial [intervention](#) did not significantly reduce the rate of serious fall injury, which was the primary outcome of the trial. The study did find a significant 10 percent reduction in self-reported injuries, a secondary outcome in the trial.

"The study reflects just how challenging it is to implement interventions to prevent fall [injury](#) in the real world," said Bhasin. "Our Falls Care Managers were passionate about the care of their patients and creating individualized plans for them. But measures that may reduce risk in the setting of a clinical trial can be less effective in the real world, where daily challenges such as being unable to afford transportation, or the cost of follow-up care, may delay or prevent access for patients. To achieve a larger reduction in serious fall injuries, we need to think about how to improve the delivery and access to key interventions like exercise in our health systems."

  More information: Bhasin, Shalender et al. "A Randomized Trial of a Multifactorial Fall Injury Prevention Strategy" *New England Journal of Medicine* [DOI: 10.1056/NEJMoa2002183](#)

Provided by Brigham and Women's Hospital