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## Preventing Falls in Older Persons Steps in the Right Direction

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**Among older persons,** falls are common (about 25% of older US adults fall each year), injurious (approximately 37% of those who fall require medical treatment or restrict their activity for at least 1 day), expensive (approximately \$50 billion per year is spent on medical costs related to falls), and are a worsening problem. In fact, age-adjusted rates of fatal falls increased 41% in the US from 2012 to 2021.<sup>1</sup> Moreover, because the incidence of falls rises with increasing age, the absolute number of older adults who fall will increase dramatically as the next generation enters the highest-risk age groups.

In response to the burden of falls, substantial research efforts have been undertaken. The US Preventive Services Task Force (USPSTF) updated Evidence Report and Systematic Review published in this issue of *JAMA*<sup>2</sup> identified 83 fair- to good-quality randomized clinical trials to inform the USPSTF updated Recommendation Statement,<sup>3</sup> 32 of which were new since the previous review. These trials support exercise for fall prevention (incidence rate ratio [IRR], 0.85 [95% CI, 0.75-0.96] for falls and IRR, 0.84 [95% CI, 0.74-0.95] for injurious falls). The evidence for multifactorial interventions demonstrated similar reductions in falls (IRR, 0.84 [95% CI, 0.74-0.95]) but not injurious falls (IRR, 0.92 [95% CI, 0.84-1.01]).

On this basis, the USPSTF reiterated its 2018 recommendations for fall prevention with a B recommendation for exercise (recommended for all over 65 years of age at increased risk of falls) and a C recommendation for multifactorial interventions (individualized decision based on the circumstances of patient's prior falls, comorbid medical conditions, and values and preferences).<sup>3</sup> Although the USPSTF recommendations are sound, the devil is in the details.

Given the demonstrated benefits of exercise for cardiovascular disease,<sup>4</sup> cognitive function,<sup>5</sup> and favorable associations with all-cause, cardiovascular, and cancer mortality,<sup>6</sup> specific fall prevention exercise recommendations need to be considered in the context of universal exercise recommendations, including aerobic and muscle strengthening exercise.<sup>7</sup> Different kinds of exercise benefit different outcomes. The fall prevention exercise programs in the USPSTF review most commonly included gait, balance, and functional training (30/37 studies reviewed), and many programs included strength and resistance training (25 studies); flexibility training and endurance training were seen less frequently.<sup>3</sup> In general, functional exercises that focus on movements performed in daily

activities and balance appear to be more effective for fall prevention than walking or resistance training alone.<sup>8</sup>

Counseling a patient to exercise more is rarely enough to change behavior. Even if the patient agrees to exercise, regular exercise is hard to maintain. Less than half of community-dwelling persons 65 years or older meet physical activity guidelines, and this percentage was stable from 2007 to 2016.<sup>9</sup> Barriers include poor health, costs, and lack of access to exercise programs.<sup>10</sup> In the USPSTF review, exercise was generally delivered in supervised group settings (24/36 studies), which would require access to transportation; however, 9 trials studied supervised individual physical therapy, which can be provided at home. The biggest obstacle to exercise is patient inertia and choice to engage in other sedentary activities. In 2013-2014, persons 65 years or older spent an average of 7.9 hours per day sitting.<sup>9</sup>

For multifactorial interventions, which are tailored to the patient's identified risk factors, the situation is even more complicated. Frequently, these interventions focus on persons at markedly higher risk of falls—the USPSTF review found that study participants in multifactorial intervention trials had double the rate of falls compared with the national average for older people. Although having a history of falls was the most common pathway for entry into these trials, some studies recruited participants based on risk factor(s) besides fall history. After being identified as at higher risk for falls, participants in multifactorial intervention trials then undergo a comprehensive assessment of fall risk factors, such as an evaluation of physical function, medications, home environment, and vision, among others; however, the particular risk factors assessed vary by study, complicating interpretation of the evidence. After a patient is assessed, they receive many recommendations and their engagement in each one may vary because these recommendations often involve behavior change. For example, in a large trial, only one-third of patients were willing to identify actions to reduce use of medications that increase fall risk, especially hypnotics.<sup>11</sup> Interestingly, interventions such as exercise that have been demonstrated effective when delivered as single interventions under research conditions<sup>8</sup> have not led to effectiveness when delivered as parts of multifactorial interventions in pragmatic trials,<sup>12,13</sup> perhaps because implementation is more challenging as interventions become more complex and multifaceted.

So where does this leave clinicians in 2024? Although evidence suggests it is important for primary care clinicians to recommend exercise, the major challenge is transforming this recommendation into action in the daily lives of older persons. More research needs to be conducted on motivators



Multimedia



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of exercise initiation and adherence. Technology may have a facilitating role as video exercise classes have become widespread since the COVID pandemic, with virtual platforms showing promise for reducing falls.<sup>14</sup> The recommendation for multifactorial assessment and risk reduction for selected patients can be accomplished either by referral to a clinic that specializes in falls prevention, if available, or by the primary care clinician performing the components of the assessment. However, multifactorial fall assessments take time, a scarce commodity in primary care. Interdisciplinary teams may help but require institutional commitment to mobilize resources and redesign workflows. All fall prevention referrals, whether

for exercise or multifactorial interventions, should be complemented by addressing risks for injury on falling, particularly treatment of osteoporosis, where indicated.

Even if primary care clinicians faithfully implement the USPSTF recommendations, a significant reduction in falls and their resulting injuries is still far off. Health systems need to establish fall prevention programs that include multifactorial assessments and interventions. Policymakers need to ensure access to effective exercise programs, including providing insurance coverage. And, above all, older persons need to be active participants in exercise and reduction of risk factors for falls.

#### ARTICLE INFORMATION

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