

EDITORIAL

A smarter approach to fall prevention: insights for action

Keywords: older people; accidental falls; fall prevention; clinical guidelines

Key Points

- Editorial to accompany: Retrospective evaluation of the world falls guidelines-algorithm in older adults.
- Falls are a leading cause of injury in older adults, yet translating evidence into practice remains a global challenge.
- Intermediate risk represents a pivotal opportunity for timely, low-cost interventions that prevent progression to high risk.
- Combining subjective tools like 3KQs with mobility assessments improves precision in identifying intermediate risk.
- Better risk stratification enables efficient fall prevention, emphasising self-management for most older adults.
- Governments must prioritise fall prevention by ensuring accessible services, supported through funding and infrastructure.

Each year, 37 million falls worldwide require medical attention [1]. The World Health Organization recognises falls as a leading cause of disability and death amongst older adults, with fall-related fatalities rising faster than any other type of injury over the past two decades [1]. We have robust evidence on how to prevent falls, yet, translating this knowledge into practice remains a persistent challenge [2]. The World Falls Guidelines (WFG) algorithm offers a structured framework to address this by stratifying fall risk and suggesting targeted interventions [3]. However, three recent papers have highlighted gaps in identifying the intermediate-risk group [4–6]—a group where timely, low-cost preventative measures can delay or prevent progression to high risk. Closing this gap represents both a clinical and economic opportunity for a smarter fall prevention strategy.

Stratifying fall risk using the WFG algorithm

The WFG algorithm uses a decision tree to stratify older adults into low-, intermediate- and high-risk categories,

guiding targeted interventions. The process begins with simple screening questions, such as the Three Key Questions (3KQ) or fall history, followed by assessments of frailty and mobility [e.g. gait speed or the Timed Up and Go (TUG) test] [3]. Achieving both high sensitivity and specificity in this process is critical for effective case finding. Van de Loo *et al.* evaluated different operationalisations of the WFG algorithm to balance sensitivity and specificity [4]. They found asking the 3KQs, ‘Have you fallen in the past 12 months?’, ‘Do you feel unsteady while standing or walking?’ and ‘Do you worry about falling?’, significantly improved sensitivity compared to relying solely on a single fall history question. Incorporating the 3KQs into routine health check-ups or community-based screening programmes therefore provides a systematic way to identify a broader range of older adults at intermediate or high risk. Asking about concerns about falling can act as a ‘red flag’, offering valuable opportunities for clinical engagement [7]. However, the 3KQs also had low specificity causing many older adults to be overclassified as high risk [4]. This can lead to inefficiencies in resource allocation and highlights the importance of additional measures, such as balance or mobility assessments, to refine stratification [8]. For mobility assessments, Van de Loo *et al.* found that gait speed was more effective than TUG at distinguishing the intermediate-risk group from those at low risk [4]. Hicks *et al.*, however, showed that the TUG test could also be useful if its threshold was lowered to capture a greater proportion in the intermediate-risk group [5]. Together, these findings highlight the importance of combining subjective and objective tools to improve the accuracy of intermediate-risk classification [8] and to ensure that more resource-intensive interventions are directed to the high-risk group where they are most effective.

Targeting the intermediate-risk group: a clinical and economic impact case

The WFG guidelines outline a continuum-based approach to fall risk, from low risk, including older adults who benefit most from primary prevention, to high risk, including older adults who require multidisciplinary intervention [3]. The intermediate-risk group represents a pivotal opportunity for intervention, as these older adults are at an increased but

manageable risk level. This group is uniquely positioned to benefit from timely, low-cost interventions that prevent progression to high risk, where care becomes more complex. Many older adults in this group can self-manage their risk with guidance from an exercise professional and access to support. Physiotherapy referrals and educational programmes can empower them to adopt behaviour changes and engage in balance and functional strength exercises, reducing their fall risk and improving their quality of life. Economic analyses have shown that targeted exercise programmes for older adults are more cost-effective than multifactorial interventions, further underscoring the value of focusing on this group [9, 10]. By identifying older adults at intermediate fall risk early, healthcare systems can maximise resource efficiency and reduce the burden on overstretched healthcare services, while empowering older adults to take an active role in their fall prevention.

Towards a smarter fall prevention strategy: call to action

The WFG algorithm provides a structured framework for stratifying fall risk and recommends targeted interventions, but this is only meaningful if the necessary services and resources are available to act on those recommendations. Many healthcare systems lack the capacity to deliver timely physiotherapy referrals, home hazard modifications or other interventions, such as cataract surgery, leaving significant gaps in care. Addressing these challenges requires systemic changes to expand access to essential services and improve resource allocation [2]. The economic burden of falls, reflected in the rising healthcare costs globally, underscores the urgency of investing in prevention as a public health priority. Technology, including wearables [11] and digital health programmes [12, 13], offers promising solutions to scale fall prevention efforts. Wearables can complement traditional assessments by providing real-world data on gait and balance [11], while digital exercise programmes have the potential to deliver cost-effective, home-based interventions [14]. However, these tools must be embedded within a healthcare infrastructure that supports their use [15]. We require governments to prioritise fall prevention through sustained funding for essential fall prevention services, alongside strategic investments in digital health infrastructure and workforce capacity. By aligning resources with evidence-based practices, healthcare systems can deliver timely support to all older adults. With these systemic changes, we can address the growing burden of falls and build a more sustainable healthcare model.

Conclusion

Falls remain a significant global challenge and the WFG algorithm provides a workable framework for addressing this issue. However, gaps in identifying older adults at intermediate fall risk must be addressed to fully realise its clinical

and economic impact. Combining the 3KQs with objective mobility assessments is crucial for improving case finding, enabling timely interventions and ensuring that resources are directed where they are most effective. A smarter fall prevention strategy demands coordinated action from governments, healthcare providers and innovators. Investments in essential services, such as physiotherapy and multidisciplinary care, alongside robust digital health infrastructure, are critical to scaling interventions and supporting older adults in managing their risk of falling. By aligning these efforts to the WFG algorithm's framework, we can reduce the burden of falls, improve health outcomes for older adults and create a more sustainable, equitable approach to fall prevention worldwide.

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