

ALUMNI SERIES:

Roles of Community Pharmacists in Fall Prevention

Falls can result in injuries that often result in hospitalization and mortality. Fall-related injuries can cause long-term impacts on health outcomes and overall quality of life. Addressing health issues stemming from falls can be an expensive endeavor, constituting around 0.85% to 1.5% of a country's total healthcare spending [1].

Falls in older people can be caused by various factors, including poor strength, instability, visual impairment, cognitive decline, and medications. Certain medications, particularly those that impact blood pressure or induce central nervous system (CNS) side effects, can significantly elevate the risk of falls (ROF), particularly in individuals with pre-existing clinical conditions associated with balance and mobility issues.

Fall risk-increasing drugs (FRIDs) refer to a group of medications associated with an increased ROF among older people such as benzodiazepines, antipsychotics, antidepressants, opioids, and sedative antihistamines. A systematic review has reported that the prevalence of FRID use at the time of a fall-related injury among older people ranged from 65% to 93% [2].

Hence, the active involvement of pharmacists in assessing and closely monitoring the use of FRIDs among older people is crucial. They can play a significant role in early identification, continuous monitoring, and interventions to minimize the ROF. This proactive engagement with pharmacists offers opportunities to enhance medication management and reduce the ROF in this population.

In the community setting, community pharmacists have a vital role in reducing the ROF among older people. Serving as primary healthcare contacts, they provide comprehensive medication therapy management and identify those at risk through patient interactions and assessments. Through thorough medication reviews, community pharmacists can identify potentially inappropriate medications (PIMs), including FRIDs. Collaborating with other healthcare providers, they can recommend deprescribing FRIDs, promoting safer medication use, and mitigating the ROF. Additionally, community pharmacists offer consultation and education to older people, raising awareness of medication-related fall risks.

Additionally, community pharmacists should also identify and educate older people with vitamin D deficiencies, emphasizing the importance of daily vitamin D supplementation for bone, muscle, and nerve strength. A previous study found that a daily intake of 800 to 2000 IU of vitamin D could reduce hip fractures by 30% [3]. In addition to promoting vitamin D intake for nutritional enhancement, community pharmacists could also consider advising older people to incorporate sufficient calcium (e.g., milk, yogurt, cheese) and protein-rich foods (e.g., dairy, eggs, oily fish) into their diets. This approach serves to optimize musculoskeletal health and acts as a proactive strategy to prevent falls and fractures.

Low-risk older people should receive education about fall prevention and exercise [4]. Community pharmacists can also advise older people to engage in moderate to high-challenge balance exercises like Tai Chi for at least 2 hours per week, as Tai Chi enhances balance and strength. The effectiveness of well-designed exercises (e.g., group-based Tai Chi) in reducing falls among community-dwelling older people has been well-demonstrated. For older individuals at high risk of falls requiring intensive exercise programs, community pharmacists may consider referring them to qualified professionals such as physiotherapists, exercise physiologists, or trained exercise instructors.

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