

Standing Up Against Medication Mismanagement to Prevent Falls

Falls among the elderly can be particularly problematic, leading to reduced functioning, pain, and even death. Yet they are incredibly common, especially in nursing homes: according to *Industrial Safety and Hygiene News*, a typical 100-bed facility reports at least 100 to 200 falls per year. And one of the biggest contributors is medication use, with the risk increasing as the number of drugs a resident takes rises. To combat the problem, optimizing medication management should be a key prevention strategy.

> So Where Are We Today?

Many risk factors can cause a resident to fall. The most common include:

- Decreased mobility
- Balance issues
- Cognitive impairment
- Urinary incontinence
- Vision problems

Another major contributor to falls is medication, particularly certain drugs such as diuretics, type 1a antiarrhythmics, digoxin, and psychotropics. In fact, one study showed that there was a significant association between falls and the use of sedatives and hypnotics, antidepressants, and benzodiazepine.¹

In addition to specific medications that pose risks, polypharmacy – common among nursing home residents – also contributes to falls. In one study, the use of five or more drugs was associated with a 21 percent increase in the rate of falls over a two-year period.²

Research has also shown that non-adherence to medications increases the likelihood of a fall. A study of Boston-area seniors found that those who occasionally neglected their medications were significantly more likely to fall than those who took their medications as directed.³

> Raising the Risk of Readmissions

The consequences of falls among nursing home residents can range from mild to serious, with research citing:

- Five percent result in fractures, severe head injuries, joint distortions, and dislocations
- Five to ten percent result in soft-tissue contusions and lacerations

About 20 percent of falls require medical attention and account for over 80 percent of injury-related admissions to hospitals of people older than 65 years. Among nursing home residents, research shows that between ten percent and 25 percent of falls result in fractures or hospital admissions.

> Partnering for Protection

One of the best approaches to reducing the fall risk for residents is to have long-term care pharmacy providers play a central role in the multidisciplinary team's effort. Consultant pharmacists can assist organizations by:

- Ensuring adequate education is provided to residents on medication use, side effects, and drug-drug interactions, particularly those reactions that can increase the chance of falling
- Performing comprehensive medication reviews to identify residents taking medications that can increase their fall risk, incidents of polypharmacy, and safer alternative therapies
- Aiding in discharges from the facility to home by ensuring the safe use of medications by residents and optimizing adherence

While most falls are caused by multiple factors, including underlying medical conditions, there is a direct correlation between the increasing use of prescription drugs among the elderly and the rising number of medication-related falls. Since prescriptions require close attention to reduce the risk of injury, the involvement of a consultant pharmacist should be a key fall prevention strategy.

¹de Jong MR, Van der Elst M, Hartholt KA. Drug-related falls in older patients: implicated drugs, consequences, and possible prevention strategies. *Ther Adv Drug Saf.* 2013 Aug;4(4):147-54. www.ncbi.nlm.nih.gov/pmc/articles/PMC4125318/

²Dhalwani NN, Fahami R, Sathanapally H, Seidu S, Davies MJ, Khunti K. Association between polypharmacy and falls in older adults: a longitudinal study from England. *BMJ open.* 2017 Oct 1;7(10):e016358. open.bmj.com/content/7/10/e016358

³Sarah D. Berry et al. Poor adherence to medications may be associated with falls, *The Journals of Gerontology: Series A*, Volume 65A, Issue 5, May 2010, Pages 553-558. doi.org/10.1093/gerona/gdq027