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Top 10 Things to Know about Falls in Older Adults

Alexander Zirulnik, MD, MPH, Shan W. Liu, MD, SD

INTRODUCTION

Assessing falls among the older adult population in the emergency department (ED) is challenging. Multi-factorial fall assessments often take time, a resource that is limited in crowded and under-resourced EDs. Nonetheless, EDs have a unique opportunity to intervene to prevent recurrent falls. Patients may present soon after their fall and may be more open to interventions that can change their fall risk. Given the aging population, visits for falls among the older adult population will likely increase.[1] This brief report outlines the top 10 considerations when caring for older adult patients who present to the ED with a fall.

1. Falls are frequent and costly.

Falls are the leading cause of injury-related emergency visits among older adults in the United States, affecting an estimated 3 million individuals annually.[2] Furthermore, a previous fall doubles the risk of future falls.[3,4] Within six months of their discharge from the ED, up to 48% of older fall patients have a recurrent fall.[4-6] In another prior study, 23% of older fall patients had a recurrent fall 6 months after their initial ED visit.[7] The estimated direct medical cost of fall-related injuries is approximately $50 billion each year in the United States and will likely increase as the population ages.[4,8]

2. Falls increase morbidity and mortality

Aside from being frequent, older adult falls lead to a decline in health, social isolation, loss of confidence and increased risk of admission to nursing homes.[9] One in ten falls result in significant injuries.[10] Over 95% of hip fractures are caused by falls leading to 300,000 hospitalizations in the US annually.[11] Every 20 minutes, one older adult dies from a fall in the United States. With over 32,000 deaths annually, unintentional falls are the number one cause of death due to injury among the older adult population.[12] Unfortunately, fall-related mortality has increased an average of 4.9% each year.[13]

3. Falls are an increasing ED presentation.

Over 3 million ED visits are due to falls among older adults in the US, making it one of the of the most common complaints.[14] With the ever-aging population, this number is likely to increase annually.[1] However, the ED traditionally does not systemically assess patients' multi-factorial fall risks and misses unique opportunities to prevent future falls. With the rise of fall-related emergencies, the ED visit is the ideal site for a "teachable moment" and intervention when resources are available.[4]

4. Falls may result in distracting injuries.

Major injuries often lead to an altered and unequal perception of pain. Smaller injuries such as metacarpal fractures or lower extremity hematomas may be "distracted" by larger injuries such as a

femoral neck fracture. These missed injuries may lead to revisitation to the ED, significant morbidity or mortality. This principle highlights the need for repeat, complete physical examinations – often with direct palpation over injury sites.[15] Depending on the clinical context and protocols the CT "Pan-Scan" may be utilized in older adults who present from a ground level fall. While this imaging practice may help clinicians identify the full extent of intra-thoracic or intra-abdominal injuries, further studies are needed to assess if these findings are clinically significant.[16]

5. Older adults may present with an altered cognition and pain threshold.

Patients may present to the ED after a fall with an altered level of consciousness or sensorium either due injuries from the fall or prior altered state (such as cognitive impairment, dementia, delirium, polypharmacy). This leads to unique challenges in identifying injuries because the patient may not be able to effectively communicate or express pain or discomfort. Alterations in pain perception may also be present in patients who are presenting with shock, hypoxia, trauma brain injury, delirium, or intoxication leading to difficulties in assessment.[15] The history portion of the encounter may also be limited, and providers may depend on family or EMS collateral to assist in evaluation.

6. Falls are a vicious cycle.

Falls among older adults often create a negative reinforcement cycle that may in fact increase future risk of falling.[17] The fear of falling after a fall often leads to a reduction in physical activity. This leads to deconditioning and reduced muscle strength which results in worsening gait and balance, increasing the risk of future falls.[18] It is important to understand this relationship as the emergency department may see a patient in various parts of this cycle.

7. An ED visit is an opportunity for prevention in future falls.

Given the frequency in which patients present after a fall, the ED remains an important window of opportunity to prevent future falls. This ED visit may be the first time a patient has fallen or another visit in a series of previous falls; either scenario represents an opportunity for intervention. Following their evaluation, this "captive audience" may benefit from a multidisciplinary assessment of risk factors and if needed, higher level of care such as a rehabilitation, skilled-nursing, or assisted-living facility after discharge from the ED.

8. We should focus on high yield modifiable risk factors.

Many fall patients presenting to the ED have one or more risk factors that could be intervened on and modified to reduce future risk of falls. Polypharmacy and use of high-risk medications such as opioids, benzodiazepines, sedative-hypnotics, anticholinergics, antihistamines, muscle relaxants and more increase the risk of falls among older adults. Orthostatic hypotension increases with age resulting from decreased thirst, reduced baroreceptor sensitivity, decreased immobility and arterial stiffness.[19] Orthostatic hypotension could be modified by increasing fluid intake and implementing regimented physical activities. In addition, exercises that increase muscle strength and improve balance gait such as sit to stand exercises could be recommended and implemented. Modifications to the home environment such as improved lighting, instillation of grab bars, use of "grab" rugs and additions of non-slip mats to the shower or shower chairs are some strategies that could help prevent future falls.[20]

9. The treatment and prevention of falls requires a multidisciplinary approach.

The assessment and management of falls in the ED requires utilization of a multidisciplinary team of healthcare providers and if able, family members. When patients are brought in by ambulance, EMS personnel and paramedics serve as a key observer in the assessment of an older adult presenting after a fall. EMS can describe the home situation and the scene in which the patient was found. In certain

healthcare settings and communities, paramedics are part of community-based interventions providing post-discharge care and assessments of older adults in their homes.[21] Physical therapy evaluation and intervention in the ED has been shown to reduce revisit rates by up to two months, when available.[22] Follow-up with primary care providers should focus on fall prevention and de-prescribing medications that increase fall risks.

10. Emergency medicine needs innovative solutions.

Emergency medicine is always at the forefront of challenges. Given our crowding, much of these interventions practically cannot be done in the ED. Given the aging demographics means falls will only increase in the future, we need innovative solutions such as fall/syncope clinics, virtual observation fall clinics/paramedic programs and post-ED fall programs.

CONCLUSION

Falls in older adults are a growing challenge to ED care. EDs are likely the first place in the medical system to see these patients and provide a unique opportunity for fall assessment and intervention. EDs must be proactive in addressing fall risk among these vulnerable patients. While crowding often makes fall risk assessment in the ED difficult, ultimately decreasing future fall risk will decrease ED revisits and mortality and thus mitigate crowding. Falls are sentinel events and require a sentinel response across the health care system. The take home message is: falls are serious, associated with stealth injuries, and are sentinel events.

KEYWORDS

Older adults, Falls, Falling, Emergency Department, Emergency Medicine

AFFILIATIONS

Alexander Zirulnik, MD, MPH	Harvard Affiliated Emergency Residency, Massachusetts General Hospital, Brigham & Women's Hospital, Boston, MA
Shan W. Liu, MD, SD	Department of Emergency Medicine, Massachusetts General Hospital, Boston, MA; Department of Emergency Medicine, Harvard Medical School, Boston, MA

CORRESPONDING AUTHORS

Alexander Zirulnik, MD, MPH
azirulnik@mgh.harvard.edu

Sha W. Liu, MD, SD
sliu1@mgh.harvard.edu

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