

# Older Adult Falls in Emergency Medicine, 2023 Update



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## KEYWORDS

- Emergency medicine • Accidental fall • Geriatric • Trauma • Implementation
- Emergency medical services • Technology • Falls prevention

## KEY POINTS

- Low-level falls occur in one-third of adults older than 65 each year and are a leading cause of death in developed nations.
- Prehospital providers should represent the first-line health care professionals to manage falls and initiate innovative approaches to alleviate emergency department crowding.
- Emergency department falls research is limited by uncertainty regarding reliable and feasible approaches to identify and intervene on fallers at increased risk for recurrent falls.
- Systematic reviews have shown that emergency department falls screening is associated with fall reduction when interventions are done through the emergency department.
- Innovative technological approaches are showing promising results to assess dynamic fall risk, at home fall reduction interventions and identification of high risk fall patients.

## EPIDEMIOLOGY OF FALLS

Of 4 older adults, 1 will fall each year in the United States. Based on 2020 data from the Centers of Disease Control, about 36 million older adults fall each year, resulting in 32,000 deaths.<sup>1</sup> Emergency departments (ED) see about 3 million older adults for fall-related injuries<sup>1</sup> with falls having the ability to cause serious injury such as catastrophic head injuries and hip fractures.<sup>2</sup> One-third of older fall patients discharged from the ED experience one of these outcomes at 3 months.<sup>3</sup> Between 36% and 50% of patients have an adverse event, such as a recurrent fall, ED revisit, or death within 1 year after a fall.<sup>4,5</sup> Not only do falls lead to adverse health outcomes and disability, but also substantial economic burdens for the family and health system.<sup>2,6</sup>

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The Prevention of Falls Network Europe (ProFaNE) is the most widely accepted definition for falls, stating that it is “an unexpected event in which the participants come to rest on the ground, floor or lower level.”<sup>7</sup> The prevalence of falls is largely derived from single-center retrospective studies or secondary analyses of administrative databases, both of which may simultaneously underestimate the scope of fall injuries and overestimate the observed value of diagnostic and therapeutic interventions.<sup>8</sup> However, algorithmic approaches to improve the value of Medicare data are now under way,<sup>9</sup> as well as chart review methods that augment International Classification of Diseases, Tenth Revision (ICD-10) codes with the patient’s chief complaint<sup>10</sup> with newer research suggesting that Natural Language Processing can accurately identify falls based on ED notes compared to using ICD or chief complaint coding.<sup>11</sup>

Frailty is an important predictor of falls, but widely used measures of vulnerability among older adults in ED settings do not exist.<sup>12,13</sup> Similarly, existing constructs of “frailty” fail to accurately identify subsets of nursing home residents at increased risk for falls.<sup>14</sup> However, injurious falls presenting to ED trauma units are more commonly community-dwelling individuals.<sup>15</sup> Geography is another factor in assessing the sequelae of falls. Rural fall victims are less likely to be hospitalized, have a shorter duration of hospital length of stay, and demonstrate higher 1-month readmission rates and mortality.<sup>16</sup>

In the United States, direct medical costs associated with falls totaled \$754 million for fatal and \$49.6 billion for nonfatal injurious falls in 2015, with significant variability between states.<sup>17,18</sup> As fall-related hospitalizations and associated costs continue to rise, ED identification of older adults at higher risk for fall-related injuries will become increasingly relevant. Nonetheless, ED fall interventions have yet to demonstrate cost-effectiveness, so quantifying the benefits and harms of fall-prevention strategies remains an unmet challenge.<sup>19,20</sup> This review focuses on prehospital and ED fall-risk screening and interventions and real-world barriers to implementation of these concepts, while exploring evolving approaches to management, such as post-ED falls clinics and technological approaches to monitor falls and fall risk factors.

## TECHNOLOGICAL ADVANCES WITH PRE-HOSPITAL FALLS DETECTION

Technology-based interventions have been used in a wide range of fall-prevention efforts, including diagnosing and managing fall risk, improving intervention adherence, and fall detection.<sup>21,22</sup> For example, a feasibility study using calcaneal ultrasound as one quantitative predictor of falls was recently published<sup>23</sup> as well as a study looking at sarcopenia as a marker for frailty and falls.<sup>24</sup> Other devices (ie, mobile phone-based systems) have many advantages, namely their popularity, decreasing costs, and portability.<sup>25,26</sup> Most smartphones also integrate all the required elements to develop autonomous and self-sufficient fall-detection applications.

Technology also has been seen as a means to help patients self-assess their risk of falling, which can potentially save money if patients do not need to do initial screening with a clinician.<sup>21</sup> This may be key to reducing costs as well as improving quality of care. The “Aachen Fall Prevention App” (AFPA) is the first reported mobile health application that empowers older patients (>50 years) to self-assess and monitor their fall risk<sup>27</sup>; however, there have been numerous other applications that have also demonstrated feasibility and usability.<sup>28–32</sup> Although technology is an important step in aiding in falls detection, a recent review of the literature on technology-based falls applications underscores a few important points: including older adults in the IT society for application development and ensuring ease of use, designing solutions that fit the older adult physical and cognitive profile, and

ensuring that all design principles help practitioners develop proper devices for older adults.<sup>22</sup>

Early detection of falls is also important, as long waiting times on the ground increase the risk of hospitalization and death.<sup>33</sup> Traditionally, fall alert systems depend on the older adult pushing a button and communicating with a central operating system. These systems may be less useful if the range of the device is restricted to the home or if the person cannot push the button (eg, if he or she is unconscious). Hence, using the accelerometer feature in today's smartphones, which older adults can easily carry, represents a promising new technology.<sup>26,34</sup> There is a plethora of work being conducted to develop smartphone-based fall-detection systems.<sup>22</sup> False negatives (fall has occurred but device did not recognize a fall) might be problematic using smartphones and the rate of missed falls will depend on the type of falls (forward vs lateral vs backward falls), type of algorithm used to determine if a fall has occurred, and where the smartphone or associated sensor is placed.<sup>22</sup> The percentage of false negatives ranges from 1.2% to 29.9% depending on the type of fall and the different application algorithms. False-positive (no fall occurred but device alarms as if a fall did happen) rates range from 5.9% to 21.9% depending on the various algorithms. No algorithm had an efficiency higher than 95% or 90% to avoid false positives and false negatives, respectively.<sup>25</sup> Biomedical engineers are now assessing the combined ability of smartphones and smartwatches to detect falls. Vilarinho and colleagues<sup>35</sup> found that together the smartphone/smartwatch could correctly identify 63% of falls. The Apple Watch Series 4 can detect falls and call EMS if a faller does not respond or agrees with the call, a technology currently being investigated by the GapCare II Intervention.<sup>36</sup>

Passive monitoring systems also exist and can be used in assisted living facilities to monitor falls. Patel and Gunnarsson<sup>37</sup> described a passive monitoring system that uses advanced motion sensor technology that learns the daily patterns of community residents in a senior home and sends alerts when abnormal events occur. Monitoring resulted in reduced falls and improved resident retention compared with the control group. However, among immigrant older adults, passive monitoring devices seem less likely to be used and interventions should be mindful of patients' social values in shaping how people and families interact with technology based older adult care interventions.<sup>38</sup>

## SYSTEMS-BASED PREHOSPITAL FALLS DETECTION RISK ASSESSMENT AND PREVENTIVE INTERVENTIONS

Emergency medical services (EMS) report a 3-fold increase in fall-related calls between 2007 and 2017.<sup>39</sup> Although pain or altered functional status is associated with transportation to the ED, EMS calls from personal alarm devices are less likely to be associated with the patient being transported as well as falls that occur in public locations or result in no clinical detection of apparent illness or injury.<sup>40,41</sup> The traditional scoop and run paradigm has shifted to a more evaluative, patient-centered process that empowers paramedics and paramedic extenders to assess intrinsic and extrinsic risks for future falls, because a subset of patients are heavy EMS users who infrequently require transportation.<sup>42,43</sup> ED and primary care providers often are not aware of EMS fall evaluations when patients are not transported to the hospital; however, there is evidence that combined effort between EMS providers and ED staff can result in a successful future falls prevention strategy.<sup>44</sup> Reducing recurrent injurious falls among patients in either prehospital or ED settings depends on reliable patient follow-up and often patient adherence to behavioral changes such as physical

therapy,<sup>45</sup> as well as identification of the subset of fall victims most likely to benefit from preventive interventions.<sup>41</sup> When fall victims are not transported to the ED, they may be referred to a “Falls Clinic” (discussed later) or provided information about other fall-prevention services.

EMS research thus far has demonstrated inconsistent fall-prevention benefits and no effect on reducing injurious falls.<sup>46</sup> One British EMS protocol trained prehospital providers to use an algorithm assessing fall risk and refer appropriate fallers who were not transported to the ED to a “Fall Clinic.” This intervention reduced future emergency calls but did not decrease or increase short-term injury risk and had a mean cost of \$23 per patient.<sup>47</sup> There are more recent trials looking at a personalized intervention for older adult falls not transported to the ED, but results are not yet published.<sup>48</sup>

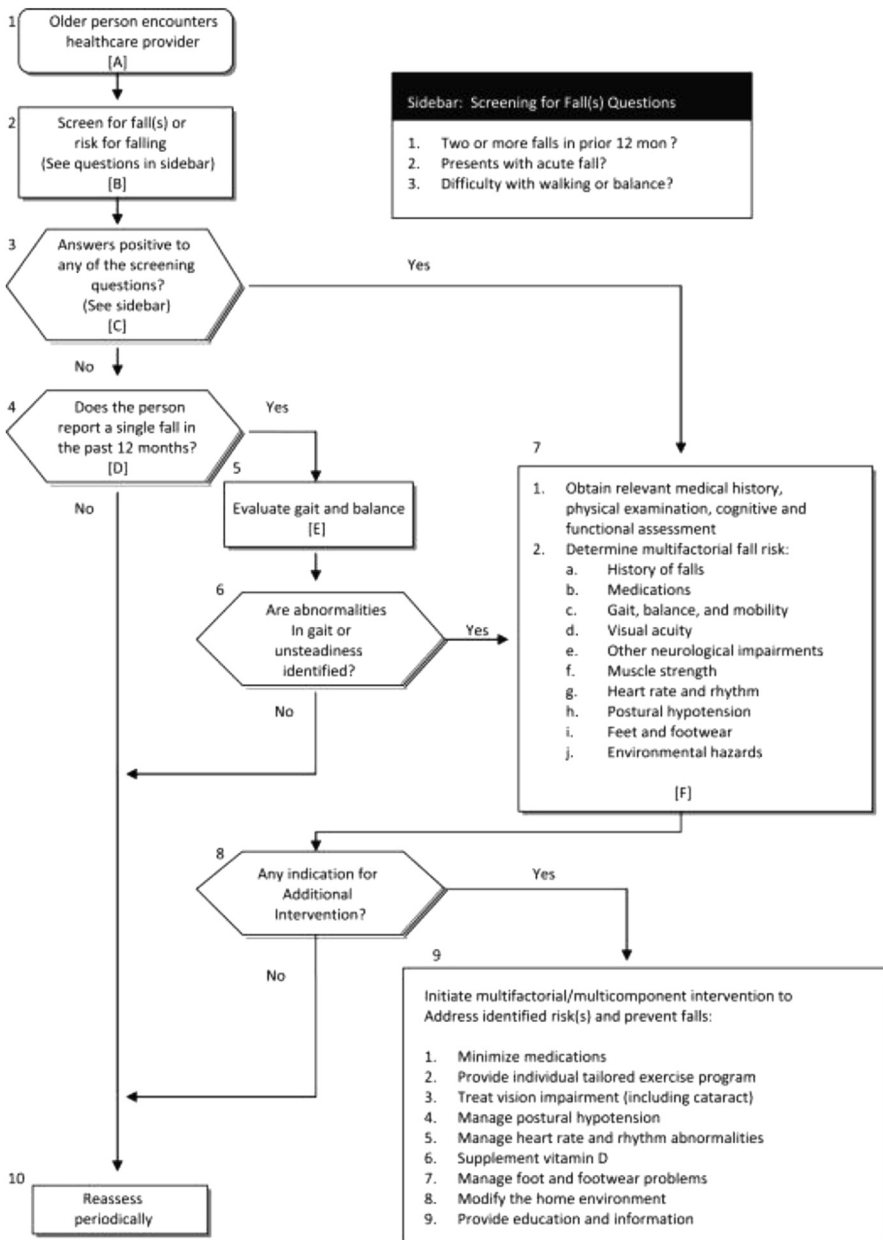
Multiple issues likely underlie the failure of EMS interventions to consistently reduce fall-related injuries. First, each region’s EMS system represents a unique domain with variable institutional interest in healthy aging or falls prevention buried within a constellation of competing priorities. Adapting EMS educational priorities with the guidance of a geriatric emergency medicine opinion leader has successfully overcome this inertia in some settings.<sup>49</sup> Second, reliably accurate, widely accepted, and routinely available EMS protocols to risk-stratify and intervene on fall victims do not exist.<sup>46</sup> The disappointing results of prior research may indicate selection of the patients less likely to benefit from specific interventions, because fall victims have a heterogeneous mixture of risk factors and comorbid illness burden. Third, referral to a “Falls Clinic” or to primary care is often dependent on patient compliance and effectiveness of the subsequent fall-reduction interventions, as is discussed later.

## EMERGENCY DEPARTMENT AND POST-EMERGENCY DEPARTMENT FALL RISK ASSESSMENT AND INTERVENTIONS

Management of geriatric trauma patients for ground level falls is increasingly being managed primarily by emergency medicine physicians even at designated trauma centers. Studies have even shown EM physicians have a 30% lower rate of admission compared to the trauma team with no difference in associated risk of mortality.<sup>50</sup> In addition to primary management of trauma, the ED is responsible for managing the complexities of caring for an older patient.

Unfortunately, most geriatric fall victims who are transported by EMS (or arrive by other transportation) to the ED do not receive guidelines-directed care.<sup>51,52</sup> Multiple emergency medicine and geriatrics professional societies have endorsed fall management guidelines (Fig. 1),<sup>12</sup> yet these recommendations remain largely untested and unavailable for many ED settings. In resource-strained ED settings, it is neither cost-effective nor feasible to label every older adult as high risk for ED or post-discharge falls. Yet relative to the injury burden falls represent, there is a paucity of ED research to develop instruments and predictors to distinguish high-risk from low-risk future fallers.<sup>46</sup> Triage nurses also evaluate fall risk, which can be a useful process for ED providers and inpatient services if effectively communicated between providers.<sup>53</sup>

Fall screening for high-risk individuals in the community setting has proven to be difficult, and multiple studies have shown poor predictive ability of screening for future falls in the outpatient setting, including the most commonly used “Timed Up and Go”.<sup>54,55</sup> Pooled analysis from the US Preventive Task Force shows the most beneficial interventions have been recruitment from the ED to reduce the number of falls independent of the screening tools used during the study. This suggests that patients



**Fig. 1.** American Geriatric Society/British Geriatric Society Guidelines to prevent falls in community-residing elderly. (From Panel on Prevention of Falls in Older Persons, American Geriatrics Society, British Geriatrics Society. Summary of the updated American Geriatrics Society/British Geriatrics Society clinical practice guideline for prevention of falls in older persons. *J Am Geriatr Soc* 2011;59(1):150; with permission.)

presenting for a fall to the ED are already by definition high risk.<sup>56</sup> These findings suggest the ED be a larger stakeholder in future falls prevention research and intervention.

Objective functional assessments like “Get Up and Go” have not accurately predicted future fall risk in ED patients.<sup>45,57–59</sup> This inaccuracy may reflect patient selection rather than test properties, because the “Timed Up and Go” test is more accurate in lower functioning older adults than in healthier community-dwelling individuals.<sup>60</sup> Emergency medicine nursing studies focus primarily on falls within the ED, which are not comparable with post-ED fall instruments or interventions. In addition, nursing studies of fall instruments oftentimes do not measure quantitative results for comparison with other screening instruments.<sup>61,62</sup> Ongoing efforts to derive, validate, and evaluate the impact of fall-risk instruments have proven challenging because of the large number of intrinsic and extrinsic factors associated with older adult falls and fall-related injuries.

The most recent Cochrane review of multifactorial interventions to reduce falls in community-dwelling older adults included 62 trials, but only 1 based in the ED.<sup>63,64</sup> The Prevention of Falls in the Elderly Trial (PROFET) randomized cognitively intact patients older than 65 following an ED falls-related visit to either routine care or to a detailed collaborative evaluation by a geriatrician and occupational therapist within 1 week of ED discharge. They determined that exercise and balance training are still the most effective tools in multifactorial interventions for future falls prevention. The comprehensive geriatric evaluation assessed visual acuity, balance, affect, mental status, and postural hypotension in a “day clinic,” with appropriate referrals based on these findings.<sup>65</sup> Few EDs have access to a “day clinic,” geriatrician, or occupational therapist, and the PROFET results have not been replicated. A telephone-based patient centered program RESPOND reduced falls and fall injuries in older patient populations in a 6-month intervention program from the ED in Australia. In this RCT, the number of falls decreased but not fall-related injuries. The intervention included a home visit, telephone follow-up, and module training.<sup>66</sup>

The Geriatric Acute and Post-acute Fall Prevention (GAPcare) is a recent ED randomized controlled trial of 110 adults over the age of 65 years with a recent fall. The study consisted of an assessment by an ED clinician with the GAPcare intervention involving a pharmacist conducting a bedside evaluation and physical therapy consult performing a fall risk assessment and plan. The intervention patients were half as likely to experience a subsequent ED visit and a third as likely to have fall-related ED visit within 6 months.<sup>67</sup>

### **Online Emergency Department Fall Resources**

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ED providers rely on outpatient fall resources for comprehensive risk assessment and definitive prevention interventions. Identifying these resources real time during a clinical shift is challenging because no central repository exists. Web-based resources from “fall clinics” include the CDC STEADI initiative, University of Wisconsin Medicine, and Live Long Walk Strong at Spaulding Rehabilitation Center in Cambridge, Massachusetts. **Table 1** provides a nonexhaustive list of Web addresses for representative “fall clinics.” CDC STEADI initiative is the most comprehensive for health care professionals and includes a fall risk checklist, case studies, functional assessments, patient information, and more. The University of North Carolina has an Otago exercise program with resources for finding Otago trained therapists. The American College of Emergency Physicians’ (ACEP) Geriatric ED Guidelines outlines an extensive workup for fall patients.<sup>68</sup> ACEP also created the *7 Step Fall Challenge*, a 7-minute video available on YouTube that clinicians can share with ED patients to educate them on fall risk and prevention.<sup>69</sup> In addition, Free Open Access Medical Education (FOAMed)

Table 1 Online fall resources	
Fall Clinics	
CDC STEADI	<a href="https://www.cdc.gov/steady/index.html">https://www.cdc.gov/steady/index.html</a>
University of Wisconsin	<a href="http://www.fammed.wisc.edu/northeast-clinic-takes-steps-prevent-elderly-falls/">http://www.fammed.wisc.edu/northeast-clinic-takes-steps-prevent-elderly-falls/</a>
University of North Carolina	<a href="https://www.med.unc.edu/aging/cgwep/courses/exercise-program/">https://www.med.unc.edu/aging/cgwep/courses/exercise-program/</a>
Live Long Walk Strong	<a href="http://spauldingrehab.org/conditions-and-treatments/live-long-walk-strong">http://spauldingrehab.org/conditions-and-treatments/live-long-walk-strong</a>
Emergency Medicine Cases	
ACEP 7 Step Fall Challenge	<a href="https://www.youtube.com/watch?v=-ehHhdoJ2k8">https://www.youtube.com/watch?v=-ehHhdoJ2k8</a>
ALiEM	<a href="https://www.aliem.com/geriatric-em-falls-sentinel-events/">https://www.aliem.com/geriatric-em-falls-sentinel-events/</a>
The Skeptics Guide to Emergency Medicine	<a href="https://thesgem.com/2021/11/sgem351-how-to-stop-geriatrics-from-free-fallin/">https://thesgem.com/2021/11/sgem351-how-to-stop-geriatrics-from-free-fallin/</a>
Geri-EM	<a href="https://geri-em.com/">https://geri-em.com/</a>
GEMCAST	<a href="https://gempodcast.com/2017/03/13/ems-preventing-falls/#more-459">https://gempodcast.com/2017/03/13/ems-preventing-falls/#more-459</a>
CDEM geriatric curriculum	<a href="https://www.saem.org/about-saem/academies-interest-groups-affiliates2/cdem/for-students/online-education/m4-curriculum">https://www.saem.org/about-saem/academies-interest-groups-affiliates2/cdem/for-students/online-education/m4-curriculum</a>

resources increasingly highlight fall management challenges, including EM Cases and Skeptics Guide to Emergency Medicine. Geri-EM is an interactive e-learning web site focused on geriatric emergencies and including free continuing medical education with topics ranging from falls to end-of-life issues. Finally, the Clerkship Directors in Emergency Medicine in collaboration with the Academy of Geriatric Emergency Medicine for SAEM has created a geriatric curriculum for medical students.

## POST-EMERGENCY DEPARTMENT FALLS CLINIC

Access to falls clinics in the United States is inconsistent, but health outcomes researchers continue to explore the key attributes and efficacy of these outpatient resources. In Malaysia, a falls clinic was effectively able to use the STOPP/START criteria in identifying inappropriate prescribing practices that could have led to a fall.<sup>70</sup> Telephone-based phone follow-up with home-based services and education resulted in decreased falls and associated fractures, but no effect on fall injuries.<sup>66</sup> In the Netherlands, there are 23 fall clinics. Screening ED and primary care patients with the CAREFALL Triage Instrument suggests that on average, patients referred to a fall clinic from the ED have more fall risk factors than do those referred by primary care.<sup>71</sup> More importantly, patients referred from an ED have risk factors different from those referred from primary care, which may influence the impact of interventions.

Linking high-risk fall patients in the ED with appropriate outpatient resources is challenging. Simply distributing information about local falls prevention programs is unlikely to reduce fall rates or injuries.<sup>57</sup> In addition, although ED patients may report willingness to follow-up with a falls clinic, actual compliance rates are often quite low.<sup>45</sup> Patients in 2 separate pilot fall-prevention referral study report low compliance secondary to transportation barriers, conflicting social determinants such as caregiving duties, disinterest, unwillingness in seeing someone other than their primary care physician, and lack of sufficient motivation.<sup>45,72</sup> Reducing recurrent falls will



also depend on identifying and overcoming barriers to patient follow-up. Shared decision making and fall-specific patient aids may be one approach to improving patient compliance with fall-reduction interventions,<sup>58</sup> while keeping in mind potential barriers to shared decision making that are unique to the ED.<sup>73</sup>

Another approach addressing the barriers to follow up is to use telehealth in hospital at home model.<sup>74</sup> Telehealth in emergency medicine has been increasing due to the Coronavirus disease 2019 (COVID-19) pandemic, and multiple modalities have been adopted across the country.<sup>75</sup> The rapid adoption is due in part to changes in November 25, 2020 where the Center for Medicare & Medicaid services announced a home waiver and reimburse for "home hospital" services.<sup>76</sup> A pilot program for fall prevention from the ED is being performed at Massachusetts General Hospital and involves the use of virtual observation units. The intervention includes a virtual visit with an emergency physician for a safety evaluation and in-home safety evaluation by paramedics. The program also aims to identify patients who are high risk for need of further intervention and creating a treatment plan.

## RESOURCE ALLOCATION FOR FALLS MANAGEMENT IN THE EMERGENCY DEPARTMENT

Falls pose a significant financial burden for the healthcare system and only continue to grow with the increasing aging population. The continual shortage of healthcare professionals and services raises concerns on how these resources will be allocated.

The COVID-19 pandemic disproportionately impacted older adults in illness severity and hospitalization rates, and exposed the limitations of inpatient capacity to accommodate surges in hospitalization. In response, the American Geriatric Society (AGS) published a position statement for stakeholders in developing resource allocation strategies.<sup>77</sup> Although the consensus statement focuses primarily on policies in times of crisis, these recommendations extend to management of falls in the ED.

Clear identification and communication of available resources in a hospital or system setting is needed to create a more ethical resource allocation strategy. No consensus exists on fall screening tools for the ED.<sup>19</sup> Future research will need to focus on developing accurate tools for high-risk future fallers for appropriate allocation of fall-related interventions. Multifactorial intervention in the ED is costly and resource intensive; however, studies have shown a positive return on investment for community-based fall intervention that covered both implementation cost and program delivery cost.<sup>78,79</sup>

Unfortunately, determining which patients to screen, when to screen them, and who is best suited to screen them is the first issue. Although all older adults who come to the ED should be evaluated for fall risk, the feasibility of this type of approach is limited with so many other competing priorities. A more tangible approach would focus on recent fallers (within the past 2–4 weeks) because their chief complaint likely is related to their fall; the ED visit as a sentinel event could serve as an opportune teachable moment for high-risk patients.<sup>62</sup> Another option is to use other screens such as nutrition risk and frailty to target high-risk patients,<sup>80</sup> machine learning to categorize high-risk falls for appropriate resource allocation<sup>81</sup> or only intervene on fall patients who are discharged home. Ethical and pragmatic issues with delirium or nursing home patients also exist. These vulnerable subsets are more likely to be at risk of recurrent falls, but also may be the most difficult to prevent recurrent falls secondary to underlying frailty, disease burden, and cognitive impairment. For example, one multifactorial intervention in cognitively impaired ED patients was ineffective,<sup>63</sup> but exercise in and of itself can still be helpful and decreasing falls risk in this population.<sup>82</sup>



An even more challenging issue is what type of interventions are effective, available, and feasible for ED fall patients and their health care providers. Similarly, ED physicians will be hesitant to change sleep, depression, anxiety, and cardiovascular medications that specialists and primary care physicians have prescribed. However, the ongoing opioid epidemic is refocusing attention on analgesic prescribing and falls.<sup>83,84</sup> Practically speaking, ED physicians are likely only to implement interventions that are streamlined and highly effective in reducing recurrent falls. One challenge is the need to create fall programs in the ED that follow implementation science principles and/or quality improvement strategies to maximize successful outcomes.<sup>59,66,85,86</sup>

Another challenge is that it takes a village to be successful at managing an individual's fall risk.<sup>65</sup> Although family members, patients, EMS, and ED providers are often the first clinicians to see someone after a fall, the primary care doctors, physical therapists, case managers, and geriatricians often manage the sequelae. That said, all have a stake in fall management and must work collectively as a team. For example, physical therapy services in the ED are associated with fewer revisits up to 2 months<sup>87</sup> with the GAPcare study showing a 6-month reduction in future ED encounters with a combined physical therapy and pharmacy evaluation.<sup>67</sup> Multidisciplinary hip fracture pathways can reduce ED and hospital length of stay, while also reducing inpatient complications.<sup>88–90</sup> However, rarely are transdisciplinary falls experts and stakeholders at the same national/international meetings or institutional grand rounds to discuss lessons learned or to share stories of success. Though with development of surgical and EDs geriatric accreditation pathways, health systems are slowly beginning to see the benefits of such cross collaboration to stimulate support, innovation, and inspiration.

## NEXT STEPS

Knowledge translation begins with definitive research evidence. One immediate challenge for emergency medicine falls intervention is that much of the evidence regarding risk assessment and intervention has been developed for primary care doctors (eg, one guideline from the American Geriatrics Society, one from Stopping Elderly Accidents Death and Injuries, and another from the US Preventive Services Task Force).<sup>56,60,91</sup> No single, well-accepted, simple test or risk factor exists for falls and no single pre-hospital falls detection system exists that can accurately capture and intervene upon falls, particularly in the ED setting. Fall risk assessments are complex, multifactorial endeavors that can consume 10 to 15 minutes. Furthermore, a qualitative study indicated a number of barriers in implementing comprehensive falls assessment in the ED including lack of knowledge, paucity of evidence, heterogeneous self-perceived skills, perceived increased time, and workload.<sup>92</sup> In addition, ED fall patients often have acute injuries, weakness, dementia, delirium, or other chief complaints that make using commonly cited risk assessment instruments challenging.<sup>59</sup> The following important unanswered questions remain.

1. Which patients should undergo a risk assessment?
2. What functional tests should be conducted, if any?
3. What interventions are feasible in the ED?

Most ED clinicians cannot identify the approximate proportion of community-dwelling elderly patients who fall annually, and two-thirds of ED clinicians are unfamiliar with Geriatric Emergency Department fall-prevention guidelines.<sup>68</sup> Although 80% of respondents in one survey believe it is very important for them to prevent recurrent falls

among elderly ED patients, 46% would spend less than 2 minutes to do so. Most (87%) providers believe that there is not enough time to implement geriatric falls prevention in the ED. There is a need to do more training to general ED providers about fall risk factors, but education alone is unlikely to sustainably improve ED falls management.<sup>52,93</sup> Nonetheless, the ED can be an ideal place for a multimodal intervention as an ED fall is often a sentinel event for poor outcomes where patients have the most to gain out of an intervention. Thus, these visits may necessitate prioritizing specific interventions such as exercise or PT regimens and med reconciliations which demonstrated promising results for falls reduction,<sup>67</sup> creative interventions that do not depend on ED providers, such as a mobile falls assessment team, pre-hospital falls assessments/interventions, geriatric/physical therapy consults in the ED, telehealth appointments or home visits for safety evaluations,<sup>94</sup> or outside-the-box interventions such as incentives for ED providers who implement fall-prevention interventions.

### CLINICS CARE POINTS

- Emergency departments should develop tangible criteria and solutions when deciding how to initiate falls screening, such as frailty or timing of their most recent fall.
- Education and training for falls risk factors should be performed in conjunction with real time, multi-modal interventions.
- Emergency departments should consider pre-hospital care and resources outside of the emergency setting when trying to initiate both falls screening and falls interventions.

### DISCLOSURE

The authors have no commercial or financial conflicts of interest.

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