The Intersection of Falls and Dementia in Primary Care



Evaluation and Management Considerations

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KEYWORDS

- Falls Fall prevention Older adults Persons with dementia
- Rehabilitation services Risk assessment and management Physical therapy
- Occupational therapy

KEY POINTS

- Often falls and dementia are considered to be discrete conditions. However, these conditions frequently co-occur, and one may precede the other.
- Visuospatial or gait changes may occur in older adults before obvious cognitive deficits. A
 fall, especially more than one or one resulting in injury, should prompt clinicians to evaluate a person's cognition.
- Strong evidence supports fall risk assessment and management for noncognitively impaired older adults. Evidence also suggests that persons with cognitive impairment can benefit from interventions to reduce fall risk.
- Older adults with cognitive impairment can benefit from additional approaches to fall risk reduction, including involving caregivers and proactively engaging with rehabilitation specialists trained in falls and cognitive impairment who can use modified training techniques.
- Recurrent falls or one or more injurious falls may represent an inflection point to shift the focus of care from reducing risk to a more palliative, supportive approach.

INTRODUCTION

Although a substantial body of research has characterized the burden of falls among older adults, most discussions of fall risk and interventions do not explore the trajectory of falls among populations particularly at risk, such as persons with dementia.

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Often falls and dementia are considered to be discrete conditions, with their evaluation and management considered separately. However, these conditions frequently co-occur, and one may precede the other. This article summarizes what is known about the relationship between falls and dementia in community-dwelling older adults. The term "cognitive impairment" refers to persons with both mild cognitive impairment (MCI) as well as dementia unless MCI or the type of dementia is specifically stated.

BACKGROUND

The burden of falls has reached epidemic proportions. Each day, 74 people aged 65 years and older die from a fall—one person every 20 minutes. Approximately 30% to 40% of community-dwelling older adults fall annually, with those who are older, sicker, and more dependent falling more frequently and having a heightened mortality risk. Medical care for falls costs approximately \$50.0 billion annually in the United States. Perhaps just as alarming is the personal cost of falling, with older adults who have fallen experiencing heightened anxiety about falling, physical deconditioning and immobility, loss of independence, and the need for a higher level of care. Many older adults consider this loss of independence and psychological toll to be worse than death.

Despite there being good evidence of the effectiveness of fall risk reduction strategies to decrease fall risk by as much as 25% to 30%,^{5,6} many older adults forget about a fall or diminish its significance and do not discuss their fall with their primary care provider (PCP).⁷ Most PCPs report not knowing how to conduct a fall risk assessment nor how to systematically address risk once it is identified.⁸

Fortunately, the Centers for Disease Control and Prevention (CDC) have prioritized fall risk screening and management to help medical providers, their teams, and health care systems assess and manage fall risk. Based on clinical practice guidelines from the American and British Geriatrics Societies (AGS/BGS), the CDC developed the Stopping Elderly Accidents, Deaths, and Injuries (STEADI) toolkit.⁸ A cornerstone of STEADI is the validated 12-item "Stay Independent" falls screening instrument (STEADI questionnaire).⁹ This questionnaire identifies patients at fall risk: a score greater than or equal to 4 indicates increased risk of falling. Beyond the risk score, the STEADI questionnaire has clinical utility in that individual questions highlight certain actionable fall risk factors (eg, impaired balance). STEADI application has thus far focused on the general, community-dwelling older adult population, either explicitly excluding patients with dementia or without special regard for dementia diagnoses. ^{10,11}

THE BURDEN OF FALLS IN PERSONS WITH DEMENTIA

Epidemiologic research on falls among persons with dementia has found that cognitively impaired individuals have 8 to 10 times more incident falls than persons without dementia, 12 with falls being the second leading cause of hospital readmission for those with cognitive impairment. 13 Those who have dementia with prominent motor features, such as dementia with lewy bodies (DLB) and Parkinson disease dementia (PDD) are at the highest risk. 12 People with dementia are also more likely to injure 14 and less likely to recover from a fall. For example, Alzheimer type dementia (AD) confers a 3-fold increase in risk of hip fracture as well as an increased mortality rate subsequent to hip fracture. 15

FALL RISK FACTORS IN THE GENERAL OLDER ADULT POPULATION

Multiple factors influence an older adult's fall risk, and risk increases linearly with the number of risk factors present.² Risk factors include, but are not limited to, history of prior falls^{16,17}; age and age-related changes; female sex; autonomic dysfunction/orthostatic changes; chronic illnesses (eg, diabetes, depression); gait, strength, and balance deficits, including impaired static standing balance¹⁸; sensory deficits; central nervous system (CNS)-active medications; unsupportive footwear; improper assistive devices and home/environmental safety issues; behaviors/choices, such as alcohol consumption¹⁹; fear of falling²⁰; and frailty.²¹ Fall risk factors are broadly categorized as extrinsic (external to the individual) or intrinsic (within the individual) and also as modifiable or nonmodifiable,²² with some risk factors more pronounced or unique in persons with dementia (Fig. 1).

FALL RISK FACTORS IN PERSONS WITH DEMENTIA Demographic Factors

Similar to the general population, the risk of falls and injurious falls increases with age for those with dementia.²³ Women are at greater risk for falls,²⁴ injuries,²⁵ and fall-related hospitalizations²⁵ than men, and among persons with dementia, women are at greater risk for recurrent injurious falls resulting in hospitalization.²³

Gait and Balance Impairments

Gait and balance impairments are common, and often more severe, in persons with dementia. Evidence suggests that changes in gait may occur very early in the disease process and may precede any detectable cognitive deficits. For example, gait variability, or fluctuations in gait characteristics (stride length, speed) from one stride to the next, is associated with a 12-fold increased risk of cognitive decline over a 4-year period among adults with previously normal cognitive testing.²⁶ Other studies

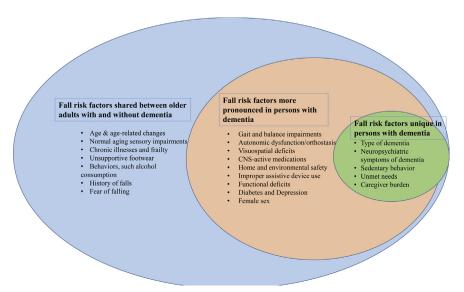


Fig. 1. Fall risk factors in older adults with and without dementia.

have also found significant associations between gait speed and cognitive changes preceding any formal diagnosis of cognitive dysfunction.²⁷

Sedentary Behavior

Community-dwelling persons with dementia spend most of the time in sedentary behavior and have low levels of physical activity. Compared with those who are cognitively intact, persons with dementia spend significantly more of their waking hours in a sedentary state and significantly less time in light-to-moderate and moderate-to-vigorous intensity activities. A decline in executive functioning, which is necessary for goal-directed behavior, may explain the higher level of sedentary time. Inactivity leads to muscle weakness, thereby contributing to fall risk.

Autonomic Dysfunction and Orthostatic Hypotension

Autonomic dysfunction can occur as part of normal aging and result in orthostatic hypotension and syncopal episodes, affecting nearly 30% of community-dwelling older adults. ³⁰ Persons with dementia are more likely to have orthostatic hypotension and autonomic neuropathy, with DLB and PDD having the highest prevalence. ¹² An orthostatic syncopal mechanism underlies nearly half of initially unexplained falls among persons with dementia. ³¹ Medications that contribute to orthostatic hypotension-induced syncope among persons with dementia include nitrates, alpha-blockers, and combinations of ace-inhibitors and diuretics and ace-inhibitors and nitrates. ³²

Central Nervous System-Active Medications

For both the general older population and persons with dementia, CNS-active medications (eg, benzodiazepines, antidepressants, antipsychotics) contribute to fall risk and are widely used, including by persons with dementia. Evidence suggests that older adults with dementia may be more sensitive to the effects of CNS-active medications. Current use of centrally acting agents increases the risk of fall-related injuries among persons with dementia, even with use of low dosages. Anticholinergic drugs increase both falls and fall-related injuries among persons with dementia, with even low-potency agents increasing fall risk when more than one is taken. An another than the effect of dementia medications on falls are mixed, with a meta-analysis concluding that cholinesterase inhibitors, such as donepezil, increase the risk of syncope but not falls, whereas a recent single study found a significant association of these agents with falls.

Visuospatial Changes

In addition to aging-related vision changes (eg, decreased acuity, color sensitivity, depth perception), persons with cognitive deficits may experience additional oculovisual changes including diminished contrast sensitivity, motion detection, visual fields, and visuospatial function, all of which may contribute to falls. ⁴⁰ Visuospatial changes have been detected as early as 3 years before the identification of any cognitive changes. ⁴¹

Severity of Dementia, Behavioral Disturbance, and Functional Decline

Fall risk increases with increasing dementia severity, either as determined by white matter cortical changes on CNS imaging¹⁸ or by scores used to characterize the severity of neuropsychiatric symptoms of dementia.⁴² Behavioral disturbances, including wandering,⁴³ verbally disruptive and attention-seeking behaviors, and impulsivity contribute to fall risk in those with dementia.¹⁸ There is also evidence

that wandering may stem, in part, from unmet needs, which are highly prevalent among persons with dementia.⁴⁴

As dementia progresses, function typically declines. Greater dependence in basic activities of daily living (ADL) has been identified as an independent risk factor for falling among persons with and without dementia. 14,16,17

Reduced Safety Awareness and Fear of Falling

As part of the dementia disease process, cognitive processing slows; attention and executive function decline; ability to multi-task declines; judgment worsens; and deficits in motor planning prevent a person from adapting their gait appropriately to changes in the environment. These changes lead to reduced safety awareness, with declines in cognitive flexibility diminishing a person's ability to quickly respond to changes in the external environment, such as adjustments for an oncoming car, a slippery walkway, new or unexpected curb cuts, or construction.⁴⁵

Fear of falling is a known risk factor in the general older adult population. Older adults with mild cognitive impairment more often reported a fear of falling and scored higher in their concern for falling than their counterparts with AD, likely reflecting a gradual loss of insight and judgment following dementia onset.⁴⁶

Comorbidities

Certain comorbidities have been found to increase the risk of falls for those with and without cognitive impairment, which include diabetes and depression. Persons with dementia who have comorbid diabetes may be more susceptible to hypoglycemia and subsequent adverse events such as falls and fractures. ^{17,47} Several studies have found depression to be an independent risk factor for falls in persons with mild-to-moderate dementia, ^{12,16,18,48} even after adjustment for antidepressant use. ⁴⁸

Home Safety Risks

Persons with dementia who live at home have been found to have significantly more home safety hazards than their counterparts who live in an institutional setting. Home hazards for community dwellers with dementia include low chairs, lack of grab bars around the toilet, toilets that are too low, loose rugs, lack of night lights, and missing railings on stairs. 49

Caregiver Burden

Caregiver burden has been identified as a fall risk factor for community-dwelling persons with dementia. Higher caregiver burden scores are associated with falls and fracture, suggesting that caregiver distress may contribute to fall risk. 50,51 Caregiver anxiety was the measure most closely tied to patient fracture risk and represents a potentially modifiable fall risk factor. 51

FALL RISK ASSESSMENT IN THE GENERAL OLDER ADULT POPULATION

The basics of a comprehensive fall risk assessment are well documented and include taking a thorough falls history; conducting a medication review to identify CNS-active medications; performing a falls-focused physical examination; and discussing functional and environment risk factors. Using a standardized screening tool, such as the STEADI Stay Independent questionnaire (available at https://www.cdc.gov/steadi/pdf/STEADI-Brochure-StayIndependent-508.pdf), helps to identify particular risk factors and direct interventions. Key components of the physical examination include orthostatic vital signs to screen for postural hypotension; visual acuity and

peripheral vision; a cardiac examination; evaluation of gait and balance; functional lower extremity strength and sensation; and a foot examination.

Cognitive screening is also an important part of a fall-related evaluation, particularly after someone has fallen. Among almost 350 community-dwelling adults, aged 75 years and older, receiving care through a large health care system, cognitive screening done as part of routine care after a single fall-related emergency room visit identified cognitive impairment in nearly half (48%) of the sample. This, combined with the understanding that changes in gait often precede onset of MCI and dementia, supports completion of a brief cognitive screen, such as the Mini-Cog, as part of the falls-focused examination.

FALL RISK ASSESSMENT UNIQUE TO PERSONS WITH DEMENTIA

The standard approach for fall risk assessment serves as the foundation for any fall risk assessment in older adults with dementia. To the authors' knowledge, there is no validated fall risk screening tool specifically tailored for persons with dementia living in the community. Because three-quarters of persons with dementia live with someone in their home, 55 the authors recommend enlisting the primary caregiver of the person with dementia or someone who knows the person well to help complete the STEADI Stay Independent questionnaire. The caregiver can also provide a history of the person's exercise habits and daily routines as well as their functional status.

The falls-focused physical examination remains an important assessment, especially for persons with dementia. Particular attention should be given to the cardiac evaluation and assessment for orthostasis, given the increased risk of autonomic dysfunction and syncope in persons with dementia.³¹ A thorough review of medications, including over-the-counter medications, identifying those that are CNS-active and/or might contribute to orthostatic hypotension is also critical. Updating the eye examination to ensure that preventable causes of vision loss (eg, cataract, glaucoma) are identified and managed is important, because a person with dementia may not spontaneously report vision changes.

The assessment of gait, strength, and balance using standardized tests with individuals with cognitive limitations may be challenging. However, gait speed holds promise for fall risk screening in people with dementia and requires little instruction. ⁵⁶ Simple tests of strength and balance that are part of the STEADI approach (ie, chair stand and 4-stage balance test, at https://www.cdc.gov/steadi/materials.html) are still feasible to assess, even with persons with advanced dementia, by demonstrating each test first and asking the patient to mimic the demonstration. A foot examination not only provides meaningful information about structural deformities and neuropathy that may adversely affect balance but can also help with assessing self-care (ADL) ability by observing whether a person is able to don and doff their shoes independently.

REDUCING FALL RISK THROUGH INTERVENTIONS IN THE GENERAL OLDER ADULT POPULATION

Evidence has consistently supported exercise and the targeted use of multifactorial interventions to reduce fall risk in cognitively intact older adults. ^{5,57} A recent network meta-analysis ⁶ found exercise alone, and exercise combined with other interventions such as vision, with or without environmental modification, to be effective in preventing injurious falls.

A systematic review of the effect of exercise on fall risk found that high-dosage exercise (\geq 50 hours accumulated over a minimum of 25 weeks), with a focus on balance training, and no walking program, reduced fall risk by an average of 17%. ⁵⁸ These

findings are consistent with those of a randomized trial showing that walking alone, absent any balance or strengthening program, was not effective in reducing falls.⁵⁹ Tai Chi participation has been shown to decrease falls by as much as 50% when practiced twice weekly for 24 weeks.⁶⁰

Data on vitamin D supplementation have been more mixed, with some studies suggesting a high dose being associated with more fall-related outcomes. The United States Preventive Services Task Force recently adopted formal recommendations, based on a separate review, supporting exercise but not vitamin D supplementation to prevent falls in at-risk community-dwelling adults aged 65 years or older. However, these recommendations do not apply to those with osteoporosis, at increased risk of falls, or vitamin D deficiency. Given that many community-dwelling older adults have or are at risk for osteoporosis, vitamin D3 intake of at least 4000 IU daily across all sources is still appropriate for many older adults on this basis, without the need for first checking vitamin D levels.

Other modifiable risk factors that can be prioritized with community-dwelling older adults at fall risk include dose reduction and/or elimination of CNS-active medications (also see STEADI-Rx at https://www.cdc.gov/steadi/steadi-rx.html), 64 single lens glasses for distance wear with those who routinely exercise outdoors, 65 addressing home safety hazards through home modification, 66 and podiatric interventions for those with foot pain. 67

THE ROLE OF REHABILITATION IN PREVENTION OF FALLS Older Adults with Normal Cognition

For older adults at increased risk of falling who have gait, strength, and balance impairments, rehabilitation services (physical therapy and/or occupational therapy) are recommended to help address modifiable fall risk factors and improve physical performance to enable successful participation in home- or community-based exercise on a long-term basis. 68 Physical therapists (PTs) can focus therapy on balance retraining; evaluating and managing dizziness; assessing appropriateness of an assistive device; and designing an individualized progressive and sustainable long-term exercise regimen that includes balance and strength exercises. Occupational therapists (OTs) can attend to functional deficits affecting mobility, ADL modification to reduce fall risk-taking behaviors, home safety modifications, and adaptive device provision and training. 69 Home safety assessments with follow-up modifications have been demonstrated to decrease fall risk from 19% to 34%^{5,66} and are particularly effective for those at high risk of falls. 5 Whether through regular multimodal exercise, such as Tai Chi, or from exercises prescribed by rehabilitation specialists, it is important to remember that the benefits of these activities persist only as long as the person continues with the program.

Despite a clear role for PTs and OTs in fall prevention, rehabilitation specific to falls and fall-related injuries may be underutilized. Only 50% of patients identified at high risk of falls receive fall-related rehabilitation services.⁶⁸ Even for at-risk patients seen by PTs or OTs, only a minority had falls explicitly addressed during rehabilitation.⁶⁸

Because gait impairments can precede cognitive deficits and any diagnosis of MCI or dementia, PTs and OTs can play an important role in alerting the health care team of any concerning changes in gait. In fact, an estimated 11% to 18% of patients in rehabilitation services with moderate-to-high fall risk were determined to have possible or probable dementia, suggesting that therapists are already seeing these patients in their practices.⁶⁸

Older Adults with Cognitive Impairment

Systematic reviews have also confirmed the benefit of exercise for fall risk reduction among community-dwelling persons with mild-to-moderate dementia. 37,70-72 Exercise programs are generally multimodal (strength, balance, and aerobic components), designed or supervised by a PT, and performed at least 2 to 3 times per week for a minimum of at least 25 weeks. Many involve the caregiver of the person living with dementia. Exercise interventions have been found to slow the rate of functional loss in the early stages of cognitive decline, with a protective effect against falls in advanced stages. Importantly, home-based physical activity programs may also reduce caregiver burden, a risk factor for falls in this population.

A limited number of studies of Tai Chi are underway with persons with dementia. Tai Chi is feasible, especially when a caregiver is involved. And Caregivers can play a key role in helping an older adult with dementia structure their day to include physical activity.

COGNITIVE TRAINING

Cognitive training, using specific exercises to increase neural plasticity, can target specific cognitive domains associated with fall risk, such as executive function, working memory, and alternating attention. Computerized training of executive function tasks has been found to limit decline in timed up-and-go performance among cognitively intact older adults. Studies in cognitively impaired older adults combining cognitive and physical interventions have also shown positive effects on balance, gait speed, and function as compared with controls but have not consistently demonstrated decreased fall rates, a finding thought to be related to heterogeneous study design.

FUNCTIONAL TRAINING

Less well studied has been the role of OTs or PTs in assisting persons with dementia to increase their independence with ADLs as a means to reduce fall risk. ^{14,16} OT-driven interventions increase function and independence, but fall risk reduction has not been specifically measured. ⁷⁹ A complete functional history of past activities and hobbies of persons with dementia may guide therapists in tailoring strategies that call on procedural memory, which is preserved even as dementia progresses. ⁸⁰ Examples of preserved procedural memory in relation to ADL function include standing up from a seated position, climbing stairs, tying a shoe, and brushing one's teeth.

ERRORLESS LEARNING

Persons with cognitive deficits may benefit from alternative training approaches. Errorless learning can be used by therapists and other clinicians when a person with cognitive impairment demonstrates an inability to learn using the traditional trial and error approach, a common learning strategy among cognitively intact individuals. Errorless learning, a teaching style used across therapeutic disciplines, has been shown to be effective in teaching skills to adults with cognitive impairment to increase independence, function, and safety. In errorless learning, the therapist sets up a task in order to reduce the opportunity for errors and guessing. The task (eg, standing up safely from a chair) is practiced with the same consistent structure each time until the learner excels at the task, at which point structured cues are

gradually removed. Errorless learning has been used in ADL training, mobility training, and in communication skills training. ⁸¹

PRESCRIPTION AND SAFE USE OF MOBILITY AIDS

PTs and OTs are trained to assess suitability of assistive devices for persons with and without cognitive impairment. The use of a walker, cane, or other mobility device can support trunk or lower limb weakness, unload painful joints, or offer a wider base of support, but the person must be able to operate the device safely. As executive function and attentional control decline with the progression of dementia, a person's energy "cost" to use these devices increases. In the case of new device users, a slower and more challenging gait may result.⁸² In some cases, an inappropriate device can actually increase a person's risk of falling.⁸³

It is clear that persons with dementia require different approaches in their exercise and rehabilitation, suggesting that identifying rehabilitation professionals experienced in working with these individuals will maximize the likelihood of reducing fall risk. Clinicians should be versed in the various types and stages of dementia, trained to apply alternative learning techniques, and experienced and willing to involve a caregiver in the rehabilitation process.

REDUCING FALL RISK THROUGH OTHER INTERVENTIONS IN PERSONS WITH DEMENTIA

Given the heightened risk of falling of persons with dementia, it is imperative that PCPs proactively assess and tailor fall risk interventions for known modifiable risk factors for their patients with cognitive impairment. In addition to the focus on strength, balance, and rehabilitation activities described earlier, management of orthostatic hypotension, early intervention for first cataract, ⁴⁰ tapering or eliminating use of CNS-active medications when safe and appropriate, preventing hypoglycemia, and treating comorbid depression are reasonable targets for intervention. ^{12,47,84} Although there is a dearth of trial evidence for interventions targeting fall risk factors specific to person with dementia (eg, behavioral disturbances; unmet needs such as thirst, hunger, pain), addressing these risk factors through evidence-based interventions ⁸⁵ may also help reduce falls and injuries (Fig. 2).

WHEN RESTORATIVE REHABILITATION IS NO LONGER THE GOAL

Rehabilitation therapists can help recognize when it might be appropriate to shift the focus from progressive improvement-based rehabilitation to a more palliative approach that focuses on preserving or improving functional capacity with an emphasis on quality of life. Along the spectrum of older adults with dementia who fall are those who have recurrent falls, fall-related hospitalizations, one or more injurious falls, or become increasingly frail. Once a person with dementia has progressed to a point of significantly diminished functional capacity and compromised quality of life, such as in stage 7 of the Functional Assessment Staging of Alzheimer's Disease scale, ⁸⁶ it is reasonable to frame management of fall risk in a different light. ⁸⁶ At this point, falls can represent an inflection point, an opportunity to evaluate falls in the context of the person's overall health, functional status, and disease process, with less focus on reversing fall risk factors. ⁸⁷ To date, this area is understudied. Based on their clinical experiences, for this stage of care, the authors recommend educating caregivers that falls are intrinsic to dementia's progression, as well as addressing functional needs, caregiving support, and deescalating medical management for chronic conditions. ⁴³

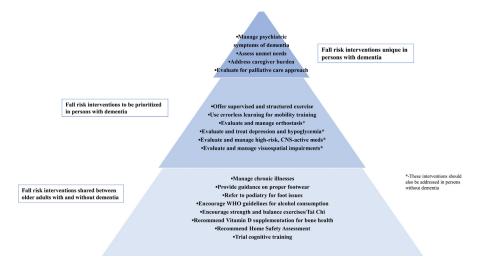


Fig. 2. Fall risk interventions in older adults with and without dementia. CNS, central nervous system; WHO, World Health Organization.^a These interventions should also be addressed in persons without dementia.

SUMMARY

The assessment and management of fall risk is a critical focus for preventive care in the primary care setting with all older adults, both those with and without cognitive impairment. The idea that falls and fall risk be regarded as a chronic condition that deserves longitudinal attention by PCPs and their care teams²² is particularly relevant for those with progressive neurodegenerative disorders. Although validated tools to assess fall risk in persons with cognitive impairment are currently lacking, the STEADI Stay Independent questionnaire is a presently available option and can be completed by caregivers of persons with dementia.

The evidence presented herein justifies PCPs in recommending exercise, with strength and balance components, for all their older adult patients, including those with cognitive deficits. Exercise seems to be an effective approach to fall prevention in those with dementia, even across the spectrum of disease severity. Balance and strength exercises, practiced with the support of a caregiver for a minimum of at least 25 weeks, 74,76 can reduce falls 70,72 and also improve overall functional status. For patients who need more targeted help, PCPs can recommend and refer their patients to PTs and OTs for rehabilitation and recommend optimizing the safety of the home environment. Early referral to rehabilitation, when a person is less cognitively impaired and at a lower fall risk, allows the individual to gain the most from rehabilitation services.

More limited evidence exists for addressing other fall risk factors in persons with cognitive impairment. Even so, it is imperative to avoid therapeutic nihilism by promulgating the idea that falls are universally part of "normal" aging, regardless of cognitive status. This view leads to the undertreatment of falls, just as it does the undertreatment of other diseases disproportionately experienced by older adults, such as cancer.⁸⁸

With the awareness that gait and visuospatial changes can precede any obvious signs of cognitive impairment, PCPs should remain alert when a patient has gait or

vision changes, especially when accompanied by a fall.⁸⁹ A fall event can serve as an opportunity to assess for cognitive impairment. Using a fall-related diagnostic code (eg, history of fall), along with a code to indicate the presence of cognitive impairment, can alert rehabilitation colleagues to focus on fall risk while taking into consideration a person's underlying cognitive deficits.

The authors suggest shifting to a more palliative approach to falls when patients reach the more advanced stages of dementia and are unable to participate in exercise and/or no longer seem to be deriving any benefit from fall risk reduction efforts. At this point, the PCP and team can work with the patient, family, and caregivers to reframe the conversation about falls to facilitate care that optimizes the safety, comfort, and well-being of the person with dementia.

CLINICS CARE POINTS

- There is strong evidence supporting assessment and management of modifiable fall risk factors for noncognitively impaired older adults who screen positive for fall risk based on validated screening tools.
- Evidence also suggests that patients with cognitive impairment may benefit from fall risk reduction interventions, in particular exercise aimed at optimizing strength and balance.
- Therapeutic nihilism should be avoided with all older adults, including those with cognitive impairment, who are very old, and those with prior falls, as they can still benefit from fall prevention exercise programs.
- Particular considerations in managing fall risk with older adults who have cognitive impairment include involvement of a caregiver and rehabilitation specialists who can use modified training techniques.
- A fall, changes in gait, and/or changes in visual function may be harbingers of cognitive decline and present an opportunity for early attention and intervention to target fall risk factors.
- In patients with advanced dementia who are unable to engage in fall risk reduction (eg, exercise), a shift in focus from risk factor reduction to a more palliative, supportive approach may be appropriate.

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