



KCMPA Quality Improvement Clinical Guideline: Prevention of Falls in Community-Dwelling Older Adults

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Guidelines are systematically developed statements to assist patients and providers in choosing appropriate health care for specific clinical conditions. While guidelines are useful aids to assist providers in determining appropriate practices for many patients with specific clinical problems or prevention issues, guidelines are not meant to replace the clinical judgment of the individual provider or establish a standard of care. The recommendations contained in the guidelines may not be appropriate for use in all circumstances. A decision to adopt any particular recommendation must be made by the provider in light of the circumstances presented by the individual patient.

Background

A *fall* is defined as an unexpected event in which a person comes down suddenly to rest on the ground, floor, or lower level. Falls are the leading cause of injury-related visits to emergency departments and the primary cause of accidental deaths in individuals aged 65 years or older. Between 30% and 40% of community-dwelling people 65 or over fall at least once per year, and two-thirds of those who fall will fall again within 6 months. One fall in five may require medical attention, but fewer than one fall in ten results in a fracture. Recurrent falls lead to more injuries, hospitalizations, and nursing home admissions. Women are more likely to sustain a nonfatal fall than men; however, the age-adjusted rate of fatalities due to falls is 49% higher for men than for women, which could be attributed to differences in the causes or severity of the falls.

While it may not be possible to prevent community falls completely, it is possible to reduce their incidence, recurrence, and consequences through appropriate assessment and intervention. The multifactorial nature of fall prevention means that the care must be coordinated among physicians, nurses, physical therapists, and occupational therapists.

Primary Prevention of Falls and Related Injuries

An exercise program that targets balance, gait, and coordination is recommended for all adults aged 65 or older, regardless of prior falls.

County	Name	Description	Contact	Link	Location	Cost
Clay	1.) PEPPI: Peer Exercise Program Promotes Impendence	Exercise program for seniors by trained peer-leader. Meets 1-3 times/week for 45-60min	816-595-4241	http://www.seniorfallsprevention.org/exercise.html	Various sites in Clay County	Free to Clay County Residents
	2.) Matter of Balance	Program that helps participants learn to control fears of falling, set activity goals, make environment changes to reduce fall risk, & promotes exercise to increase strength & balance.	816-595-4241	http://www.seniorfallsprevention.org/exercise.html	Various sites in Clay or Platte Counties	Free
Platte	1.) Matter of Balance	Program that helps participants learn to control fears of falling, set activity goals, make environment changes to reduce fall risk, & promotes exercise to increase strength & balance.	816-595-4241	http://www.seniorfallsprevention.org/exercise.html	Various sites in Clay or Platte Counties	Free
All KC Area Counties	1.) Gentiva Safe Strides	Home-based, customized care targeted to improving balance and increasing independence.	1-888-GENTIVA	http://www.gentiva.com/patients_caregivers/gentiva_safe_strides/	Throughout Kansas City, KS & MO	Billable through insurance

	2.) SERC – Balance Therapy	Focused physical therapy targeted at improving gait and balance.	913-384-1642 or 816-554-9559.	http://www.secrtherapy.com/services_balanceTherapy	Locations in Clay, Jackson, Johnson, Platte & Wyandotte Counties	Billable through insurance
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To encourage your patients to enroll in one or both of these programs, you may:

- Include a reminder in the after visit summary.
- Send a secure message, letter or phone message reminder.
- Provide a brochure or contact information.
- Provide educational materials regarding fall prevention, such as the Krames teaching resource.
- Advise them to contact their KCMPA-ACO Care Coordinator.

Other recommendations for primary prevention of falls include:

- All adults aged 65 or older should receive an adequate daily intake of vitamin D (800–2,000 IU per day), which has been associated with a reduced risk of falls.
- To prevent fractures from falls, a bone density test (dual-energy absorptiometry, or DEXA) should be provided at least once to all women over age 65 and men over age 70 and to members of other high-risk populations; see the 2013 CLINICIAN'S GUIDE TO PREVENTION AND TREATMENT OF OSTEOPOROSIS from the National Osteoporosis Foundation:
<http://nof.org/files/nof/public/content/resource/913/files/580.pdf>

Initial Fall Risk Screening

Fall risk screening is a routine part of the Medicare Annual Wellness Visit Figure 1 on the following page presents the initial fall risk screening process as a flowchart.

Clinical staff should observe patients for the following:

- Excessive time to get to the treatment room
- Shuffled or unsteady gait while ambulating to the treatment room
- Usage of non-medically dedicated assistive devices to steady the patient
 - i.e.-walk walking; walking holding the arm of the caregiver; etc.

An individual aged 65 years or older presenting with an acute fall, coming in for a Medicare Wellness Visit or at any age (or time) that is deemed at risk for falls, should be asked three screening questions:

1. Have you had **two** or more falls in the prior 12 months?
2. Are you here because of a recent fall?
3. Do you have difficulty with walking or balance?

A person who answers “**no**” to **all three screening questions** should be reassessed annually at the Medicare Annual Well Visit.

A person who answers “**yes**” to **any of the three screening questions** is at higher risk of falling, and should be further evaluated for gait and balance using the Timed Get Up and Go (TUG) test (see below).

- If the TUG test is positive for any abnormality in gait or unsteadiness, conduct a complete fall risk assessment (below).
- If the TUG test is negative but the person answered “yes” to question 1 or 2, conduct a complete fall risk assessment (below).
- If the TUG test is negative and the person answered “no” to questions 1 and 2, reassess fall risk annually at the Senior Well Visit.

Timed Get Up & Go (TUG) test

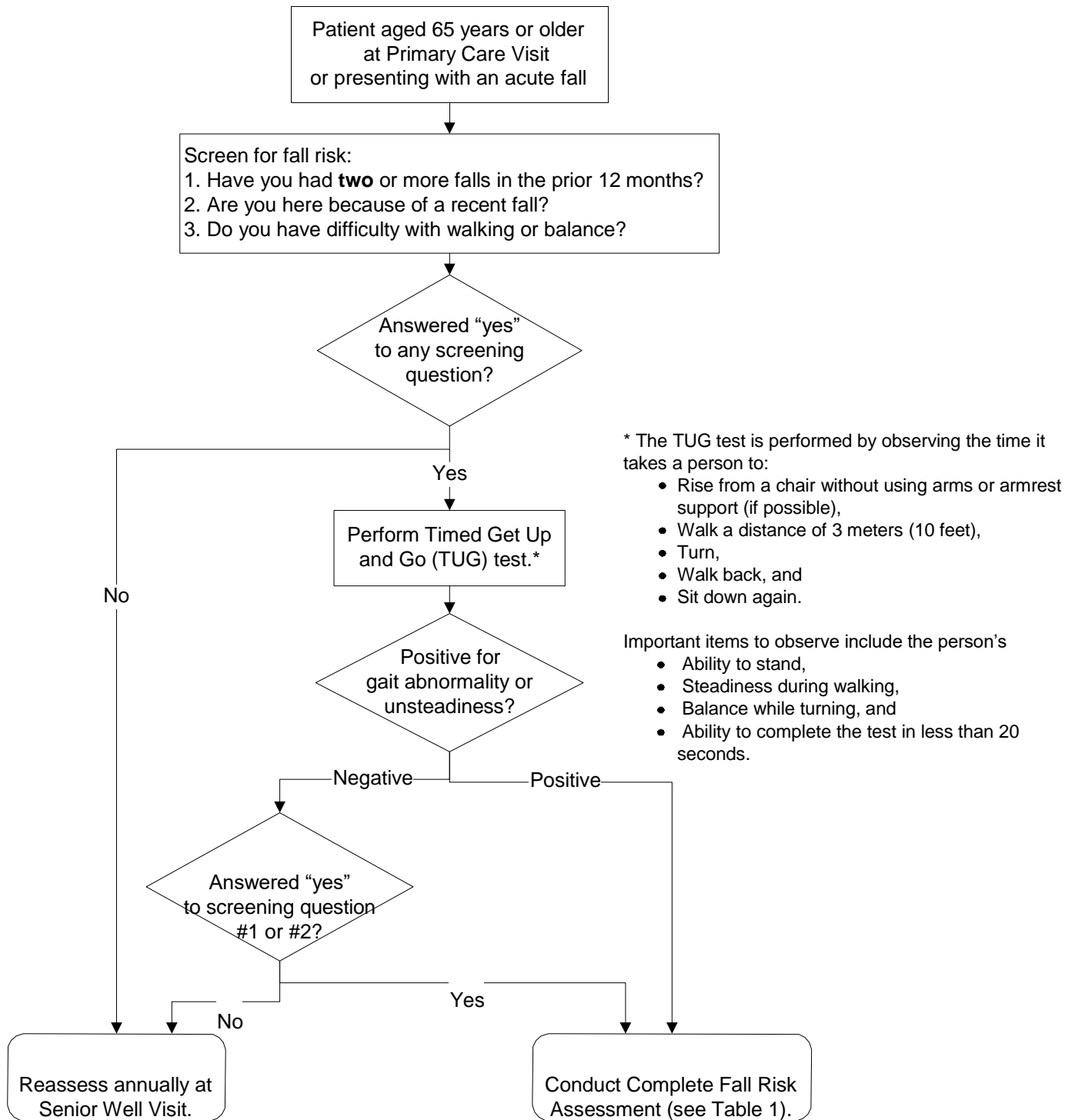
The TUG test is performed by observing the time it takes a person to:

- Rise from a chair without using arms or armrest support (if possible),
- Walk a distance of 3 meters (10 feet),
- Turn,
- Walk back, and
- Sit down again.

Important items to observe include the person’s

- Ability to stand,
- Steadiness during walking,
- Balance while turning, and
- Ability to complete the test in less than 20 seconds.

Figure 1. Initial Fall Risk Screening



Complete Fall Risk Assessment and Interventions for Fall Prevention

The goal of the complete fall risk assessment is to prevent or reduce falls through individualized, targeted interventions that address the patient's risks and deficiencies as identified in the assessment. The complete assessment should be conducted on any individual 65 years or older who had a positive fall risk screening test. (See "Initial Fall Risk Screening," above.)

Table 1. Complete risk assessment and interventions for patients screening positive for risk of falls

Assessment	Intervention	
Relevant medical history	Detailed history of falls: circumstances, frequency, injuries	<ul style="list-style-type: none"> • Manage according to circumstances. See interventions for gait, balance, and mobility, below.
	Medication review	<ul style="list-style-type: none"> • Minimize or discontinue as many psychoactive medications as possible. • Reduce polypharmacy.(see Beers Pocket Card attached) • Consider patient consultation with a clinical pharmacist See Tria Referral Form
Physical examination	Gait, balance, and mobility	<ul style="list-style-type: none"> • Advise all patients to follow a community-based exercise program that includes balance, gait, coordination, and strength training. • Consider referring patients with a positive Timed Get Up and Go (TUG) Test to Physical Therapy (PT) for a detailed evaluation, as well as a group therapy program to improve gait, balance, and mobility, such as • For patients with a negative TUG test who have had more than one fall in the past 12 months, use clinical judgment to determine the need for PT referral. ¹
	Neurological function: cognitive and functional assessment, neuropathy	<ul style="list-style-type: none"> • Manage the underlying condition.
	Cardiovascular evaluation: heart rate, rhythm, blood pressure	<ul style="list-style-type: none"> • Medication management as indicated. Refer to Cardiology for consideration of pacemaker, if indicated.
	Postural hypotension	<ul style="list-style-type: none"> • Reduce or eliminate medications likely to contribute to the condition. (see Beers Pocket Card)
	Urinary incontinence	<ul style="list-style-type: none"> • Manage the underlying condition.
	Screen for visual acuity	<ul style="list-style-type: none"> • Consider referral to Eye Care for those with impaired vision.
	Examination of footwear	<ul style="list-style-type: none"> • Advise all patients to wear well-fitting shoes with broad low heels, firm soles, and high surface contact area.
Functional assessment	Daily living skills, including use of adaptive equipment and mobility aids	<ul style="list-style-type: none"> • Canes or walkers may increase stability, but the wrong equipment or incorrect fitting will increase the risk of falling. ²
	Patient's fear of falling and perception of own functional ability	<ul style="list-style-type: none"> • Educate patients about strategies for maximizing functional ability while maintaining safety. • Refer to counseling or PT, if appropriate. ¹

Table 1 continued on following page.

Table 1. Complete risk assessment and interventions, *continued from previous page.*

Assessment	Intervention
Environmental assessment Patient's ability to self-manage home hazard reduction	<ul style="list-style-type: none"> • Educate/provide patient education materials about eliminating or reducing safety hazards in the home. • Suggest installing hand rails on stairs and grab bars in the bathtub, removing tripping hazards such as area rugs, wiring, and clutter, and ensuring adequate lighting. • Provide checklist for self-assessment of home hazards. (see CDC Checklist below) • For patients meeting Medicare Home Care Services Criteria, consider a referral to Home Health PT for in-home safety assessment.
<p>¹ Before referring a patient to PT, complete and document the TUG test, including details of gait difficulties and devices used. Also document the number and reasons for any falls within the past year. Specify: PT referral is for assessment only or assessment and intervention and if home or outpatient.</p> <p>² There is insufficient evidence to make specific recommendations for or against the use of hip protectors, assistive devices, or alarms to reduce fall risk or fractures. Hip protectors deflect the force of impact during a hip landing on the soft tissues around the joint. The evidence on their benefit in preventing hip fracture is conflicting, and the rate of compliance with their use is low.</p>	

Monitoring

For patients who report only a single fall **and** report or demonstrate no difficulty or unsteadiness of gait and balance, reassess fall risk during their Annual Well Visit Exam.

Regularly review and adjust the patient's recommended exercise program, if applicable.

For all patients aged 65 or over, medication review is recommended at every visit.

Evidence Summary

KCMPA-ACO has adapted the recommendations of:

- The American Geriatric Society/British Geriatric Society (AGS/BGS)
http://www.americangeriatrics.org/health_care_professionals/clinical_practice/clinical_guidelines_recommendations/2010/

Also reviewed:

- Evidence prepared by AHRQ for the U.S. Preventive Services Task Force (USPSTF), at <http://www.annals.org/content/153/12/815.full.pdf+html>
- Australian Commission on Safety and Quality in Health Care. *Preventing Falls and Harm From Falls in Older People: Best Practice Guidelines for Australian Community Care 2009*. Canberra: Commonwealth of Australia, 2009.

References

Coleman AL, Cummings SR, Yu F, et al. Binocular visual-field loss increases the risk of future falls in older white women. *J Am Geriatr Soc*. 2007 Mar;55(3):357-364.

Coleman AL, Stone K, Ewing SK, et al. Higher risk of multiple falls among elderly women who lose visual acuity. *Ophthalmology*. 2004 May;111(5):857-862.

Fabre JM, Ellis R, Kosma M, Wood RH. Falls risk factors and a compendium of falls risk screening instruments. *J Geriatr Phys Ther*. 2010 Oct-Dec;33(4):184-197.

Gates S, Fisher JD, Cooke MW, Carter YH, Lamb SE. Multifactorial assessment and targeted intervention for preventing falls and injuries among older people in community and emergency care settings: systematic review and meta-analysis. *BMJ*. 2008 Jan 19;336(7636):130-133.

Gillespie LD, Robertson MC, Gillespie WJ, et al. Interventions for preventing falls in older people living in the community. *Cochrane Database Syst Rev*. 2009 Apr 15;(2):CD007146.

Russell MA, Hill KD, Blackberry I, Day LM, Dharmage SC. The reliability and predictive accuracy of the falls risk for older people in the community assessment (FROP-Com) tool. *Age Ageing*. 2008 Nov;37(6):634-639.

Thiamwong L, Thamarpirat J, Maneesriwongul W, Jitapunkul S. Thai falls risk assessment test (Thai-FRAT) developed for community-dwelling Thai elderly. *J Med Assoc Thai*. 2008 Dec;91(12):1823-1831.

Check for Safety: A Home Fall Prevention Checklist for Older Adults

FALLS AT HOME

Each year, thousands of older Americans fall at home. Many of them are seriously injured, and some are disabled. In 2002, more than 12,800 people over age 65 died and 1.6 million were treated in emergency departments because of falls.

Falls are often due to hazards that are easy to overlook but easy to fix. This checklist will help you find and fix those hazards in your home.

The checklist asks about hazards found in each room of your home. For each hazard, the checklist tells you how to fix the problem. At the end of the checklist, you'll find other tips for preventing falls.

FLOORS: Look at the floor in each room.

Q: When you walk through a room, do you have to walk around furniture?
Ask someone to move the furniture so your path is clear.

Q: Do you have throw rugs on the floor?
Remove the rugs or use double-sided tape or a non-slip backing so the rugs won't slip.

Q: Are there papers, books, towels, shoes, magazines, boxes, blankets, or other objects on the floor?
Pick up things that are on the floor. Always keep objects off the floor.

Q: Do you have to walk over or around wires or cords (like lamp, telephone, or extension cords)?
Coil or tape cords and wires next to the wall so you can't trip over them. If needed, have an electrician put in another outlet.

STAIRS AND STEPS: Look at the stairs you use both inside and outside your home.

Q: Are there papers, shoes, books, or other objects on the stairs?
Pick up things on the stairs. Always keep objects off stairs.

Q: Are some steps broken or uneven?
Fix loose or uneven steps.

Q: Are you missing a light over the stairway?
Have an electrician put in an overhead light at the top and bottom of the stairs.

Q: Do you have only one light switch for your stairs (only at the top or at the bottom of the stairs)?
Have an electrician put in a light switch at the top and bottom of the stairs. You can get light switches that glow.

Q: Has the stairway light bulb burned out?
Have a friend or family member change the light bulb.

Q: Is the carpet on the steps loose or torn?
Make sure the carpet is firmly attached to every step, or remove the carpet and attach non-slip rubber treads to the stairs.

Q: Are the handrails loose or broken? Is there a handrail on only one side of the stairs?
Fix loose handrails or put in new ones. Make sure handrails are on both sides of the stairs and are as long as the stairs.

KITCHEN: Look at your kitchen and eating area.

Q: Are the things you use often on high shelves?

Move items in your cabinets. Keep things you use often on the lower shelves (about waist level).

Q: Is your step stool unsteady?

If you must use a step stool, get one with a bar to hold on to. Never use a chair as a step stool.

BATHROOMS: Look at all your bathrooms.

Q: Is the tub or shower floor slippery?

Put a non-slip rubber mat or self-stick strips on the floor of the tub or shower.

Q: Do you need some support when you get in and out of the tub or up from the toilet?

Have a carpenter put grab bars inside the tub and next to the toilet.

BEDROOMS: Look at all your bedrooms.

Q: Is the light near the bed hard to reach?

Place a lamp close to the bed where it's easy to reach.

Q: Is the path from your bed to the bathroom dark?

Put in a night-light so you can see where you're walking. Some night-lights go on by themselves after dark.

Other Things You Can Do to Prevent Falls

Exercise regularly. Exercise makes you stronger and improves your balance and coordination.

Have your doctor or pharmacist look at all the medicines you take, even over-the-counter medicines. Some medicines can make you sleepy or dizzy.

Have your vision checked at least once a year by an eye doctor. Poor vision can increase your risk of falling.

Get up slowly after you sit or lie down.

Wear shoes both inside and outside the house. Avoid going barefoot or wearing slippers.

Improve the lighting in your home. Put in brighter light bulbs. Florescent bulbs are bright and cost less to use.

It's safest to have uniform lighting in a room. Add lighting to dark areas. Hang lightweight curtains or shades to reduce glare.

Paint a contrasting color on the top edge of all steps so you can see the stairs better. For example, use a light color paint on dark wood.

Other Safety Tips

Keep emergency numbers in large print near each phone.

Put a phone near the floor in case you fall and can't get up.

Think about wearing an alarm device that will bring help in case you fall and can't get up.