Assessment of Balance and Gait in the Older Adult at Risk for Falls in the Clinical Setting
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Handouts:
- American Geriatric Society/British Geriatric Society: Clinical Practice Guideline: Screening and Assessment of Falls in Older Persons Prevention of Falls in Older Persons Living in the Community Algorithm
- Fall Prevention Fact Sheet: The Case for Action in Fall Prevention in California
SCREENING AND ASSESSMENT

1. All older individuals should be asked whether they have fallen (in the past year).

2. An older person who reports a fall should be asked about the frequency and circumstances of the fall(s).

3. Older individuals should be asked if they experience difficulties with walking or balance.

4. Older persons who present for medical attention because of a fall, report recurrent falls in the past year, or report difficulties in walking or balance (with or without activity curtailment) should have a multifactorial fall risk assessment.

5. Older persons presenting with a single fall should be evaluated for gait and balance.

6. Older persons who have fallen should have an assessment of gait and balance using one of the available evaluations.

7. Older persons who cannot perform or perform poorly on a standardized gait and balance test should be given a multifactorial fall risk assessment.

8. Older persons who have difficulty or demonstrate unsteadiness during the evaluation of gait and balance require a multifactorial fall risk assessment.

9. Older persons reporting only a single fall and reporting or demonstrating no difficulty or unsteadiness during the evaluation of gait and balance do not require a fall risk assessment.

10. The multifactorial fall risk assessment should be performed by a clinician (or clinicians) with appropriate skills and training.

11. The multifactorial fall risk assessment should include the following:

   **Focused History**

   a. History of falls: Detailed description of the circumstances of the fall(s), frequency, symptoms at time of fall, injuries, other consequences

   b. Medication review: All prescribed and over-the-counter medications with dosages

   c. History of relevant risk factors: Acute or chronic medical problems, (e.g., osteoporosis, urinary incontinence, cardiovascular disease)
**Physical Examinations**

d. Detailed assessment of gait, balance, and mobility levels and lower extremity joint function

e. Neurological function: Cognitive evaluation, lower extremity peripheral nerves, proprioception, reflexes, tests of cortical, extrapyramidal and cerebellar function

f. Muscle strength (lower extremities)

g. Cardiovascular status: Heart rate and rhythm, postural pulse, blood pressure, and, if appropriate, heart rate and blood pressure responses to carotid sinus stimulation

h. Assessment of visual acuity

i. Examination of the feet and footwear

**Functional Assessment**

j. Assessment of activities of daily living (ADL) skills including use of adaptive equipment and mobility aids, as appropriate

k. Assessment of the individual's perceived functional ability and fear related to falling
   (Assessment of current activity levels with attention to the extent to which concerns about falling are protective [i.e., appropriate given abilities] or contributing to deconditioning and/or compromised quality of life [i.e., individual is curtailing involvement in activities he or she is safely able to perform due to fear of falling])

**Environmental Assessment**

l. Environmental assessment including home safety
Selected References and Resources for Fall Assessment in Older Adults


Colon-Emeric CS. Falls in Older Adults: Assessment and intervention in Primary care. *JCOM* March 2001 Vol 8, no.3 ([www.turner-white.com](http://www.turner-white.com))


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Shumway-Cook, A., Brauer, S., & Woollacott, M. Predicting the probability for falls in community-dwelling older adults using the timed up & go test., *Physical Therapy*, 2000, 80 (9): 896-903.


Tinetti ME, Kumar C: The patient who falls “its always a trade-off” *JAMA* 2010; 303: 258-266


**Web Tools/Resources:**

AARP website  
http://www.aarp.org

American Geriatric Society (AGS) Clinical Practice Guideline  
http://www.americangeriatrics.org

Assessment and Intervention in Primary Care  
http://www.turner-white.com

Fall Prevention Center of Excellence *in California*  
http://www.stopfalls.org

Center for Disease Control  
http://www.cdc.gov

Elder Care (Arizona Aging)  
http://www.riskdom.com

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Health in Aging website
http://www.healthinaging.org

Home Modification Website
http://www.homemods.org

Management in Primary Care Practice
http://www.americangeriatrics.org/education/falls.shtml

National Association of Area Agencies on Aging
http://www.n4a.org

National Council on Aging
http://www.nationalcouncilonaging.org/

National Family Caregivers Association
http://www.nfcacares.org

National Osteoporosis Foundation
http://www.nof.org/aboutosteoporosis/preventingfalls/preventingfalls

National Resource Center Safe Aging
http://www.safeaging.org/

Public Health Agency Canada
http://www.publichealth.gc.ca

Updated Practice Guidelines for Prevention of Falls from the AGS and BGS at:
http://www.americangeriatrics.org
Prevention of Falls in Older Persons Living in the Community

1. Older person encounters healthcare provider
   [A]

2. Screen for fall(s) or risk for falling (See questions in sidebar) [B]

3. Answers positive to any of the screening questions? (See sidebar) [C]
   Yes
   No

4. Does the person report a single fall in the past 12 months? [D]
   Yes
   No

5. Evaluate gait and balance [E]

6. Are abnormalities in gait or unsteadiness identified? [F]
   Yes
   No

7. Obtain relevant medical history, physical examination, cognitive and functional assessment
   1. History of falls
   2. Medications
   3. Gait, balance, and mobility
   4. Visual acuity
   5. Other neurological impairments
   6. Muscle strength
   7. Heart rate and rhythm
   8. Postural hypotension
   9. Feet and footwear
   10. Environmental hazards

8. Any indication for additional intervention? [G]
   Yes
   No

9. Initiate multifactorial/multicomponent intervention to address identified risk(s) and prevent falls:
   1. Minimize medications
   2. Provide individually tailored exercise program
   3. Treat vision impairment (including cataract)
   4. Manage postural hypotension
   5. Manage heart rate and rhythm abnormalities
   6. Supplement vitamin D
   7. Manage foot and footwear problems
   8. Modify the home environment
   9. Provide education and information

10. Reassess periodically
CALIFORNIA HAS THE LARGEST SENIOR POPULATION OF ANY STATE IN THE USA

- In 2002 there were over 3.8 million Californians age 65 and over.
- Californians over age 85 are the fastest growing segment of the state population.

RISK OF FALLING INCREASES DRAMATICALLY WITH AGE

- The rate among Californians over age 85 is 57 times higher than Californians aged 20-55 years.

COSTS

- The estimated total cost of fall injuries per year in California is more than $3.5 billion.
- The average estimated medical cost of a senior fall-related hospitalization in California is $30,000.

FALL RELATED INJURIES AND HOSPITALIZATIONS

- Approximately one-third of older Californians fall each year, with many of the 1.3 million suffering serious injury, particularly hip fractures and head injuries.
- Fall related injuries lead to an estimated 213,000 visits to the emergency room and more than 60,000 hospitalizations.
- More than 40% of those hospitalized for hip fractures never return home or live independently again, and 25% usually die within one year.
- There are ten hospitalizations caused by falls for every hospitalization of a senior Californian caused by a traffic accident.

PROVEN FALL PREVENTION STRATEGIES

- Appropriate risk assessment and follow up by healthcare practitioners.
- Exercise and strength and flexibility training.
- Environmental modifications, such as removing clutter and installing grab bars.

The Fall Prevention Center of Excellence is generously supported by the Archstone Foundation. The Center Program Office is located at the University of Southern California Andrus Gerontology Center. Other members of the consortium are: the Center for Successful Aging at California State University, Fullerton; the Geriatric Research, Education and Clinical Center at the Veterans Administration Greater Los Angeles Healthcare System; the University of California, Los Angeles; and the State of California Department of Health Services.

For more information, contact the Program Office at (213)740-1364, email info@StopFalls.org or visit www.StopFalls.org