I. PURPOSE:
Falls are the leading cause of injury in adults age 65 years and older, and one third of older adults fall each year. Falls go without clinical attention for many reasons: the patient doesn’t report the fall to a health care provider, there is no injury at the time of the fall, the provider fails to ask about falls, or either the provider or patient erroneously believes that falls are a part of the aging process. Many times, treatment of injuries as a result of a fall does not include an assessment about the cause of the fall. A number of physical conditions and environmental stimuli that predispose older individuals to falls are modifiable. Providers need to routinely ask about falls, assess for fall risk, and address modifiable underlying risk factors. The incidence of falls increases with age and varies according to living status. 30-40% of community-dwelling people over age 65 fall each year. For those over age 80 that number increases to 50%. Fall related injuries are associated with a decline in functional status, increased likelihood of nursing home placement, greater use of medical services, and is the 5th leading cause of death in older adults. Source: www.uptodate.com

II. POPULATION:
Older adult’s ≥65 years with an encounter with a health care provider. This is designed to be used in the clinical setting for assessment and intervention to reduce falls.

III. GUIDELINE:
A. Screening:
Fall risk screening is a required element of the annual visit. It is one of the topics members are asked about for Medicare Star Rating assessment of plan performance.
1. Screening should occur at least once a year. Information can be obtained from the individual member or caregiver necessary. All older adult members (≥65years) should be asked:
   • Have you fallen in the past year?
   • Do you have any difficulties with walking or balance?
2. If the member reports a fall they should be asked about the frequency and circumstances of the fall(s.)
3. If the member presents for medical attention because of a fall, reports recurrent falls in the past year, or reports difficulties in walking or balance a multifactorial fall risk assessment should be completed. (See below)
4. Gait and balance should be evaluated for members who have fallen. Deficits in gait and balance are the most predictive risk factors for falls. If the member performs poorly, has difficulty, demonstrates unsteadiness in gait and balance evaluation, or is unable to perform the standardized gait and balance test, they should receive a multifactorial fall risk assessment. Gait and balance can be evaluated using one of the available assessment tools such as:
   • Timed up and go test
   • Berg balance scale
   • Performance-oriented mobility assessment
5. Members 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.

B. Multi-factorial Fall Risk Assessment:

NOTE:
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition.
The multifactorial fall risk assessment is to be performed by a clinician (or clinicians) with appropriate skills and training. The assessment should include the following:

1. Focused History:
   - History of falls: detailed description of the circumstances of the fall(s), frequency, symptoms at time of fall, injuries, other complications
   - Medication review: all prescribed and over-the-counter medications with dosages
   - History of relevant risk factors: acute or chronic medical problems, risk factors

2. Physical Examination:
   - Detailed assessment of gait, balance, mobility levels, and lower extremity joint function
   - Neurological function: cognitive evaluation, lower extremity peripheral nerves, proprioception, reflexes, tests of cortical, extrapyramidal and cerebellar function
   - Muscle strength (lower extremities)
   - Cardiovascular status: heart rate and rhythm, postural pulse and blood pressure, and if appropriate, heart rate and blood pressure responses to carotid sinus stimulation
   - Assessment of visual acuity
   - Examination of the feet and footwear

3. Environmental Assessment:
   - Environmental assessment including home safety

4. Functional Assessment:
   - Assessment of activities of daily living (ADL) skills including use of adaptive equipment and mobility aids, as appropriate
   - Assessment of the individuals 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 or contributing to deconditioning and/or compromised quality of life.

C. Identification of Risk Factors:
If identified as high risk for falls, the patient should be assessed for known risk factors. The purpose of the assessment is to allow the provider to develop an intervention plan and follow-up to the individual risk. Risk factors can be extrinsic or intrinsic.

1. Known risk factors include (can be intrinsic or extrinsic):
   - Past history of a fall, taking multiple medications, psychotropic drug use, problems with gait/balance/mobility, lower-extremity weakness, age, female gender, history of stroke, orthostatic hypotension, anemia, impaired vision, neurologic impairment, functional/cognitive impairment, reduced muscle strength, problems with heart rate or rhythm, foot problems, depression, dizziness, low body mass, urinary incontinence, >80 years of age, environmental hazards, lack of safety equipment, vitamin D deficiency

2. Factors associated with increased risk for falls with major injuries:
   - Fall associated with syncope, history of previous fall with injury, decreased executive function
   - Osteoporosis

**NOTE:**
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3. The risk assessment should be followed by interventions to modify any identified risks. An appropriate physical activity program should also be included in the plan of care.

4. Many risk factors can be changed or modified to help prevent falls. Falls are typically caused by a combination of risk factors. Higher risk for falls is associated with more risk factors present.

D. Interventions:
1. The multifactorial fall risk assessment should be followed by direct interventions tailored to the identified risk factors, coupled with an appropriate exercise program.
2. Effective interventions include:
   - Adaptation or modification of home environment: mitigation of hazards in the home, evaluation and intervention to promote safe performance of daily activities
     - Home Safety evaluations can be ordered and accessed through a home health referral
     - Referral for/use of appropriate DME in the home (may vary depending on member coverage)
   - Medication review/poly-pharmacy: withdrawal or minimization of psychoactive medications and other medications
   - Management of postural hypotension
   - Evaluation and management of cardiovascular status and risk/presence of recurrent unexplained falls
   - Management of foot problems and footwear
   - Exercise: particularly balance, strength, and gait training
   - Education: not as a single intervention, but as an additional tool to address issues specific to the intervention provided and tailored to the needs of the individual (cognitive function and language).

3. Fitness: exercise has been shown to reduce the risk for fall. All members at risk of falling should be offered resources to coordinate an exercise program incorporating balance, gait, and strength training. Flexibility and endurance should also be emphasized, but not as sole components of the program.
   - Fitness Programs:
     - Silver Sneakers: provides access to participating gyms (specifically through the City of Denver)
     - Denver Parks and Recreation provides free gym memberships for Denver residents ages 60 and up
     - Health Coaching: educational classes; learn & burn, etc.
     - Physical Therapy
     - Other resources/information can be accessed through member services, patient navigators, provider office or DHMP website
     - Can be either group or individual
     - Tailored to the physical capabilities/health of the member
     - Completed by a qualified professional
     - Re-evaluated for effectiveness, progression, and adjustment

4. Vitamin D: All adults aged 65 and older should receive an adequate daily intake of vitamin D (800-2000 IU per day), which has been associated with a reduced risk of falls. There is no need to screen healthy older adults for vitamin D deficiency; supplementation is the most cost-effective strategy.

NOTE:
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinicians judgment or to establish a protocol for all patients with a particular condition.
5. Bone Density Test: Women aged 65 years and older and members of other high risk populations should receive a bone density test at least once. (Refer to the HEDIS Osteoporosis Specifications)

IV. ATTACHMENTS:
Preventing Falls in Older Patients: Provider Pocket Guide
STEADI algorithm
Fall Risk Checklist
Talking about Fall Prevention with Your Patients

V. REFERENCES:

NOTE:
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition.
Preventing Falls in Older Patients
Provider Pocket Guide

Key Facts about Falls:
• One in four older adults (age 65+) fall each year.
• Many patients who have fallen do not talk about it.

This is What You Can Do:
RITUAL:
Review self-assessment brochure
Identify risk factors
Test gait & balance
 Undertake multifactorial assessment
Apply interventions
Later, follow-up

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

For more information, go to:
www.cdc.gov/steadi

2016
Key Steps for Fall Prevention

1. Be proactive—ask all patients 65+ if they’ve fallen in the past year.
2. Identify & address fall risk factors:
   - Lower body weakness
   - Gait and balance problems
   - Psychoactive medications
   - Postural dizziness
   - Poor vision
   - Problems with feet and/or shoes
   - Home safety
3. Refer as needed to specialists or community programs.
4. Follow-up with patient within 30 days.

Key Fall Interventions

- Educate patient
- Enhance strength & balance
- Modify medications
- Manage hypotension
- Supplement vitamin D +/- calcium
- Address foot problems
- Optimize vision
- Optimize home safety
Algorithm for Fall Risk Assessment & Interventions

Patient completes Stay Independent brochure

Screen for falls and/or fall risk
Patient answers YES to any key question:
• Fell in past year? If YES ask,  
  - How many times? and,  
  - Were you injured?  
• Feels unsteady when standing or walking?  
• Worries about falling?

YES to any key question

Evaluate gait, strength & balance
• Timed Up & Go (recommended)  
• 30 Second Chair Stand (optional)  
• 4 Stage Balance Test (optional)

Gait, strength or balance problem

Conduct multifactorial risk assessment
• Review Stay Independent brochure  
• Falls history  
• Physical exam including:  
  - Postural dizziness/postural hypotension  
  - Medication review  
  - Cognitive screen  
  - Feet & footwear  
  - Use of mobility aids  
  - Visual acuity check

HIGH RISK Individualized fall interventions
• Educate patient  
• Vitamin D +/- calcium  
• Refer to PT to enhance functional mobility & improve strength & balance  
• Manage & monitor hypotension  
• Modify medications  
• Address foot problems  
• Optimize vision  
• Optimize home safety

Follow up with HIGH RISK patient within 30 days
• Review care plan  
• Assess & encourage fall risk reduction behaviors  
• Discuss & address barriers to adherence  
  Transition to maintenance exercise program when patient is ready

LOW RISK Individualized fall interventions
• Educate patient  
• Vitamin D +/- calcium  
• Refer for strength & balance exercise (community exercise or fall prevention program)

MODERATE RISK Individualized fall interventions
• Educate patient  
• Review & modify medications  
• Vitamin D +/- calcium  
• Refer to PT to improve gait, strength & balance  
  or  
• refer to a community fall prevention program

≥ 2 falls
Injury

1 fall
No injury

0 falls

NO to all key questions

No gait, strength or balance problems*

*For these patients, consider additional risk assessment (e.g., medication review, cognitive screen, syncope)
# Fall Risk Checklist

<table>
<thead>
<tr>
<th>Fall Risk Factor Identified</th>
<th>Factor Present?</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Falls History</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any falls in past year?</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>Worries about falling or feels unsteady when standing or walking?</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td><strong>Medical Conditions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problems with heart rate and/or rhythm</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>Cognitive impairment</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>Incontinence</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>Foot problems</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>Other medical conditions (Specify)</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td><strong>Medications (Prescriptions, OTCs, supplements)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CNS or psychoactive medications</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>Medications that can cause sedation or confusion</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>Medications that can cause hypotension</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td><strong>Gait, Strength &amp; Balance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timed Up and Go (TUG) Test ≥12 seconds</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>30-Second Chair Stand Test Below average score based on age and gender</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td>4-Stage Balance Test Full tandem stance &lt;10 seconds</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td><strong>Vision</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acuity &lt;20/40 OR no eye exam in &gt;1 year</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td><strong>Postural Hypotension</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A decrease in systolic BP ≥20 mm Hg or a diastolic bp of ≥10 mm Hg or lightheadedness or dizziness from lying to standing?</td>
<td>☐ Yes ☐ No</td>
<td></td>
</tr>
<tr>
<td><strong>Other Risk Factors (Specify)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Yes □ No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

2015

STEADI: Stopping Elderly Accidents, Deaths & Injuries

CS259944J
Talking about Fall Prevention with Your Patients

Many fall prevention strategies call for patients to change their behaviors by:

• Attending a fall prevention program
• Doing prescribed exercises at home
• Changing their home environment

We know that behavior change is difficult. Traditional advice and patient education often does not work.

The Stages of Change model is used to assess an individual’s readiness to act on a new, healthier behavior. Research on the change process depicts patients as always being in one of the five “stages” of change.

Behavior change is seen as a dynamic process involving both cognition and behavior, that moves a patient from being uninterested, unaware, or unwilling to make a change (precontemplation); to considering a change (contemplation); to deciding and preparing to make a change (preparation); to changing behavior in the short term (action); and to continuing the new behavior for at least 6 months (maintenance).

The Stages of Change model has been validated and applied to a variety of behaviors including:

• Exercise behavior
• Smoking cessation
• Contraceptive use
• Dietary behavior

<table>
<thead>
<tr>
<th>Stage of change</th>
<th>Patient cognition and behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precontemplation</td>
<td>Does not think about change, is resigned or fatalistic</td>
</tr>
<tr>
<td></td>
<td>Does not believe in or downplays personal susceptibility</td>
</tr>
<tr>
<td>Contemplation</td>
<td>Weighs benefits vs. costs of proposed behavior change</td>
</tr>
<tr>
<td>Preparation</td>
<td>Experiments with small changes</td>
</tr>
<tr>
<td>Action</td>
<td>Takes definitive action to change</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Maintains new behavior over time</td>
</tr>
</tbody>
</table>

When talking with a patient, applying the Stages of Change model can help you match your advice about fall prevention to your patient’s stage of readiness.

The following sections give examples of patient-provider exchanges for each of the first four stages and offer possible responses to help move the patient from one stage to another. The maintenance stage is not included because older adults are most often in the early stages of behavior change for fall prevention.

**Examples of Conversations about Fall Prevention**

<table>
<thead>
<tr>
<th>Precontemplation stage</th>
<th>Patient says:</th>
<th>Provider says:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The patient doesn’t view him or herself as being at risk of falling.</td>
<td>Falls just happen when you get old.</td>
<td>It’s true that falling is very common. About a third of all seniors fall each year. But you don’t have to fall. There are specific things you can do to reduce your chances of falling.</td>
</tr>
<tr>
<td>Goal: The patient will begin thinking about change.</td>
<td>Falling is just a matter of bad luck. I just slipped. That could have happened to anybody.</td>
<td>As we age, falls are more likely for many reasons, including changes in our balance and how we walk.</td>
</tr>
<tr>
<td>To move the patient to the contemplation stage, provide information and explain the reasons for making changes.</td>
<td>My 92 year-old mother is the one I’m worried about, not myself.</td>
<td>Taking steps to prevent yourself from falling sooner rather than later can help you stay independent.</td>
</tr>
<tr>
<td></td>
<td>It was an accident. It won’t happen again because I’m being more careful.</td>
<td>Being careful is always a good idea but it’s usually not enough to keep you from falling. There are many things that you can do to reduce your risk of falling.</td>
</tr>
<tr>
<td></td>
<td>I took a Tai Chi class but it was too hard to remember the forms.</td>
<td>Maybe you’d enjoy taking a balance class instead.</td>
</tr>
<tr>
<td>Contemplation stage</td>
<td>Patient says:</td>
<td>Provider says:</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------</td>
<td>----------------</td>
</tr>
<tr>
<td>The patient is considering the possibility that he or she may be at risk of falling.</td>
<td>I’d like to exercise but I don’t because I’m afraid I’ll get too tired.</td>
<td>You can reduce your chances of falling by doing strength and balance exercises as little as 3 times a week. And you don’t have to overexert yourself to benefit.</td>
</tr>
<tr>
<td>Goal: Patient will examine benefits and barriers to change.</td>
<td></td>
<td>You can do these exercises at home or I can recommend some exercise classes near you.</td>
</tr>
<tr>
<td><strong>To move the patient to the preparation stage, make specific suggestions, be encouraging, and enlist support from the family.</strong></td>
<td>My friend down the street fell and ended up in a nursing home.</td>
<td>Preventing falls can prevent broken hips and help you stay independent.</td>
</tr>
<tr>
<td></td>
<td>I have so many other medical appointments already.</td>
<td>I have patients very much like you who do these exercises to prevent falls. These types of exercises only take a few minutes a day.</td>
</tr>
<tr>
<td></td>
<td>I already walk for exercise.</td>
<td>Walking is terrific exercise for keeping your heart and lungs in good condition, but it may not prevent you from falling.</td>
</tr>
<tr>
<td></td>
<td>I don’t want to ask my daughter to drive me to the exercise class.</td>
<td>There are quite a few simple exercises you can do to keep yourself from falling.</td>
</tr>
<tr>
<td></td>
<td>Getting to the senior center is so hard now that I don’t drive.</td>
<td>They don’t take a lot of time and you don’t have to rely on other people. You don’t even have to leave your own home.</td>
</tr>
<tr>
<td></td>
<td>I have to take care of my husband. I don’t have time for this.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preparation stage</th>
<th>Patient says:</th>
<th>Provider says:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The patient considers him or herself to be at risk of falling and is thinking about doing something about it.</td>
<td>I’m worried about falling. Do you think there’s anything I can do to keep from falling?</td>
<td>Let’s look at some factors that may make you likely to fall and talk about what you could do about one or two of them.</td>
</tr>
<tr>
<td><strong>Goal:</strong> Patient will begin to consider specific changes.</td>
<td></td>
<td>Here’s a brochure from the CDC about preventing falls. Why don’t you go over it with your spouse?</td>
</tr>
<tr>
<td><strong>To move the patient to the action stage, help the patient set specific goals and create an action plan. Reinforce the progress the patient has made.</strong></td>
<td>I read that some medicines can make you dizzy. Do you think any of mine might be a problem?</td>
<td>Many seniors say they’d prefer to take fewer medicines.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Let’s go over yours and see if we can reduce or eliminate any of them.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Action stage</th>
<th>Patient says:</th>
<th>Provider says:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The patient considers him or herself to be at risk of falling and is ready to do something about it.</td>
<td>I know a fall can be serious. What can I do to keep from falling and stay independent?</td>
<td>I’m going to fill out a referral form for a specialist who can help you [increase your balance; improve your vision; find shoes that make walking easier].</td>
</tr>
<tr>
<td><strong>Goal:</strong> Patient will take definite action to change.</td>
<td>I want to take a fall prevention class. What do you recommend?</td>
<td>Someone from the office will call you in about a month to see how you’re doing.</td>
</tr>
<tr>
<td><strong>Facilitate change. Provide specific resources, support, and encouragement to help the patient to adopt new behaviors.</strong></td>
<td>I know I’d feel safer if I had grab bars put in my shower.</td>
<td>I’m glad that you’re interested in taking a class. Please see the nurse before you leave. She’ll give you a list of recommended programs near you.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Here’s the CDC home safety checklist. It can help you identify home hazards and suggest ways to make other changes to prevent falls.</td>
</tr>
</tbody>
</table>