

Community Falls Prevention

Primary Care

2024

This care process model (CPM) was created by experts from multiple disciplines lead by Health Prevention and Wellness at Intermountain Health. Informed by current medical literature and evidence, it provides practical guidance and resources for primary care providers in diagnosis and treating patients who are at risk for falls.

Key Points

Falls are not an inevitable consequence of aging; they can be prevented.

Implementing prevention measures is highly effective and can save patients from injury, significant healthcare costs and even death.¹

For adults over 65, falls are the leading cause of injury and injury-related deaths.

Every year, 1 out of 4 adults will experience a fall, and approximately 20% of those falls will result in a serious injury.²

Early intervention impacts outcomes, promotes healthy aging and ability to maintain strength and balance.^{4,5} Effective screening tools include:

- STEADI questionnaire
- Timed up and go (TUG)
- Review of medications using AGS Beers Criteria
- See a more comprehensive list of validated screening tools on page 2

Referrals from a primary care provider are associated with higher participation rates in falls interventions.³

Key Supporting Evidence

- [Center for Disease Control and Prevention: National falls data, resources and publications for falls prevention \(e.g. STEADI program\)](#)
- [U.S. Preventative Services Task Force: Falls Prevention in Community-Dwelling Older Adults](#)

Healthy Aging Resources by State

- [Colorado State Unit on Aging](#)
- [Idaho Commission on Aging](#)
- [Montana Aging Services](#)
- [Nevada Aging Services](#)
- [Utah Department of Health and Human Services](#)

What's Inside?

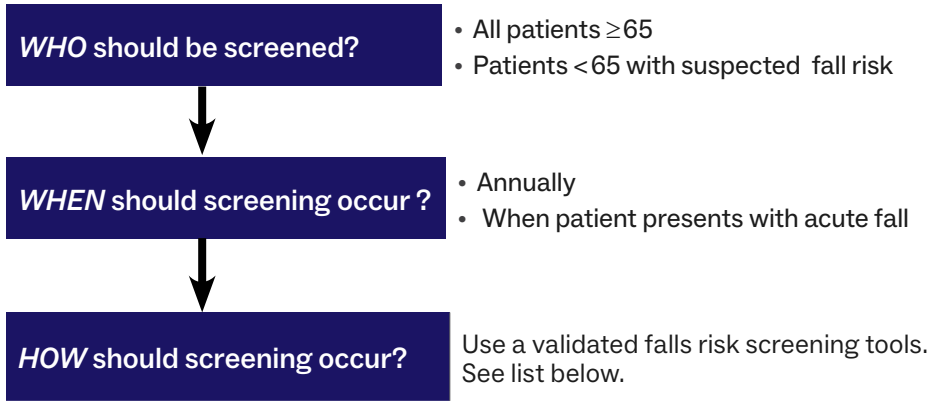
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Intermountain Measures

- Post- intervention fall rate in the next year.
- ED visits and hospital admissions for falls.
- Use of Timed Up and Go (TUG) and Stay Independent Questionnaire regularly in patients ≥65



Screening for Elevated Fall Risk

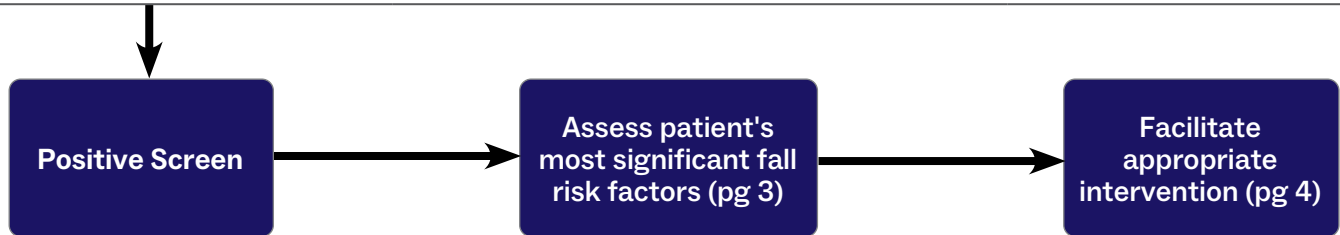


Introducing Falls Screening to Your Patients– Talking Points

- Falls are not an inevitable part of aging.
- There are many resources available, we can find what fits you best.
- Taking steps now to prevent a fall can help you stay independent.
- CDC Fact Sheet: [Talking about fall prevention with your patients.](#)

For further information see the CDC's [STEADI algorithm](#).

Intermountain Tools		Criteria for Elevated Fall Risk
Annual Wellness Visit Health Risk Assessment Questions	Screening questions sent to patient through notable. 1. Have you fallen in the past year? 2. Are you worried you might fall? 3. Do you use a cane or walker? 4. Do you need someone to help you get up in the morning?	Yes to any question
CDC's : Stopping Elderly Accidents, Deaths, and Injuries (STEADI) Tools STEADI algorithm / STEADI homepage .		
Stay independent questionnaire (STEADI questionnaire)	Validated fall risk self-assessment (12-question) ⁶ . Best used in tandem with the TUG test (see below).	A score ≥4 or fall in last year
Three key questions	1. Do you feel unsteady when standing or walking? 2. Do you worry about falling? 3. Have you fallen in the past year?	Yes to any question
Timed up and go (TUG) ^{9,10}	Time it takes a patient to stand up, walk 10 feet, return and sit down. See TUG details .	≥12 seconds
30 – Second Chair Stand	The number of times a patient can go from seated position to standing position without the use of their arms in 30 seconds. See 30-second chair stand .	A below average score. See Age and sex-based cut-off points .
Academy of Neurologic Physical Therapy: Core Outcome Measures CPG Tools		
Five Times Sit to Stand (5TSTS)	The amount of time a patient needs to go from a seated position to a standing position 5 times without using their arms for support. See 5TSTS details .	>15 seconds if ≥12 seconds, needs further assessment for falls.
Castell Tools		
Fall Risk Algorithm	Algorithm developed to identify patients at low, moderate, or high risk for falls in those 65 and older. Castell care coordinators initiate risk assessment and intervention pathway.	Contact Health Promotion and Wellness for more information regarding the Castell falls prevention program.




See [Falls Prevention Roles and Responsibilities Table](#) for an example of how roles may be defined and responsibilities assigned for falls screening/intervention in an ambulatory clinic or emergency department.

Assessment of Significant Risk Factors

Assessment of Most Significant Risk Factors for Falls	
Most significant risk factors	Consider following assessments
Low Fitness and Impaired Mobility	<ul style="list-style-type: none"> • TUG test • STEADI • Discuss patient's current fitness plan • Discuss daily activities that they find difficult • See guide in Fall Prevention (English)/(Spanish)
Dizziness and Balance Impairment	<ul style="list-style-type: none"> • Measure Orthostatic Blood Pressure (lying and standing). • Vestibular, balance, and neuro screening (e.g. BPPV)
Medications and Other Substances	<ul style="list-style-type: none"> • Review patients medications. See Medications to Use With Caution page 6 or American Geriatrics Society 2023 updated AGS Beers Criteria for potentially inappropriate medication use in older adults • Review alcohol, cannabinoids, and recreational drug use
Home environment risks ⁸	<ul style="list-style-type: none"> • Review home hazards; See checklist in Preventing Falls at Home: My action plan (English)/(Spanish)
Lack of Adequate Care Support Services	<ul style="list-style-type: none"> • Discuss with patient their home support system including family, community, or other caregivers
Sensory deprivation (neuropathy, vision, hearing)	<ul style="list-style-type: none"> • Evaluate proprioception • Monofilament test for sensory deficits • Vision and depth perception • Hearing
Poor nutritional status	<ul style="list-style-type: none"> • Obesity • Underweight • Vitamin D levels • Dehydration^{11,12}
Footwear and Feet	<ul style="list-style-type: none"> • Foot deformities • Foot drop • Inappropriate footwear
Compounding comorbid conditions	<ul style="list-style-type: none"> • Screen and address common comorbidities that can increase fall risk and worsen fall outcomes such as: <ul style="list-style-type: none"> – Depression. See Diagnosis and Management of Depression CPM – Osteoporosis See Bone Health and Bone Fragility CPM – Diabetes See Outpatient Management of Adult Diabetes CPM – Blood Pressure See Management of High Blood Pressure CPM and Obtaining an accurate Blood Pressure Measurement (Clinical Staff Education) – Obstructive Sleep Apnea See Management of Obstructive Sleep Apnea in the Primary Care Setting CPM – Urinary Incontinence See Urinary Incontinence (English)/(Spanish)

Interventions ¹³

Resources to Facilitate Interventions Based on Patient Risk Factors

Risk Factors	Consider following Interventions	Inclusion	Access
Low Fitness, Impaired Mobility, and Balance	Stepping-On classes Meets 2 hrs 1x/week for 7 weeks virtual and in-person program. Focus on strength/balance exercises, vision and balance, medications, safety in home and out, and footwear. (validated fall prevention class)	Free to those ≥65	<ul style="list-style-type: none"> Utah Department of Health and Human Services: Healthy Aging Program. healthyaging.utah.gov/find-workshop/#/ Utah Coalition on Aging ucoa.utah.edu/fpa/
	Tai Chi classes⁷ Meets 1–2x weekly for 9 weeks. Can be performed in a chair. Focus on balance, flexibility, posture, mindfulness, breathing, self-efficacy and mental wellness. (validated fall prevention classes)		
	Physical Therapy (Rehab Services) Individualized treatment for strength, endurance, balance and gait retraining, assistive device training, and vestibular rehabilitation.	Outpatient therapy covered with co-pay, prior authorization needed for more than 10-20 visits per year	<ul style="list-style-type: none"> Intermountain Rehabilitation Services locations
	Fall Prevention 101 videos Focus on basic fall prevention, strengthening, how to get up after a fall, social interactions, bathroom safety, home hazards, vision, medication, and footwear.	Free	<ul style="list-style-type: none"> https://patient.health-ce.wolterskluwer.com/imhfallprevention/programs
 Fall Prevention 101 Videos	Lifestyle Medicine and Wellness Centers Intermountain preventative medicine clinics with personal training, group exercise, exercise physiology, and nutrition therapy.	Free to Select Health Medicare Advantage plans	<ul style="list-style-type: none"> Patients can self-refer iCentra: Referral to Lifestyle Medicine Centers
Dizziness and Balance Impairment	Dizziness and Balance Rehab Specialized physical therapy	Outpatient PT covered with co-pay, prior authorization required for more than 10–20 visits per year	<ul style="list-style-type: none"> iCentra: Vestibular Rehabilitation Outpatient Evaluation and Treatment Intermountain Dizziness and Balance Locations
	Vestibular Diagnostic Testing	Select Health routine exams covered; additional depends on coverage level	<ul style="list-style-type: none"> iCentra: Audiology outpatient Evaluation Intermountain Audiology Locations
	Hydration education Dehydration is a major contributor in orthostatic hypotension, dizziness, and syncope which increase fall risk.	Free from National Council on Aging	<ul style="list-style-type: none"> https://www.ncoa.org/older-adults/health/diet-nutrition/hydration
Lack of Adequate Care Support Services	Care Management/Care Coordination	Free service provided through Castell; Use for high risk/complex patients	<ul style="list-style-type: none"> iCentra: Care Management Team

Interventions (continued)

Resources to Facilitate Interventions Based on Patient Risk Factors (continued)			
Risk Factors	Consider following Interventions	Inclusion	Access
Medications	<ul style="list-style-type: none"> • <i>Medications to Use With Caution (pg 6)</i> • American Geriatrics Society 2023 updated AGS Beers Criteria for potentially inappropriate medication use in older adults 		
Home Environment ⁸	Home Safety Evaluation In-home evaluation provided by Intermountain Homecare when other skilled services are requested. Other home health providers may also provide this service.	Available when patient is homebound	<ul style="list-style-type: none"> • Order by Email: Homecare@imail.org • iCentra: Home Health Consult
	Home Safety Checklist	Free to all at-risk patients	<ul style="list-style-type: none"> • Preventing Falls at Home: My action plan (English/Spanish) • Bathroom Safety (English/Spanish)
	Install Grab Bars Many Utah fire departments will install safety devices such as grab bars. The grab bars can be purchased with a patient's FlexCard	Most cities in Utah	<ul style="list-style-type: none"> • List of Utah Fire Departments
	In-home safety-Utah Commission on Aging Utah Falls Prevention alliance provides information and resources surrounding home safety, exercises, nutrition and other topics.	Most counties in Utah	<ul style="list-style-type: none"> • ucoa.utah.edu/fpa/
	In-home Safety - Assist Utah Non-profit design center. Their "Aging in place initiative" focuses on safety improvements to help elderly patients stay in their homes.	Salt Lake County, low-income and disabled households	<ul style="list-style-type: none"> • assistutah.org/
Sensory Deprivation (vision, hearing)	Vision Exam The American Academy of Ophthalmology recommends a full eye exam every 1-2 years for those ≥65	Select Health; most through in-network EyeMed for preventative eye exam	<ul style="list-style-type: none"> • iCentra: Referral to Ophthalmology • Intermountain Eye Care Locations
	Hearing Exam Research indicates that hearing loss in older adults is associated with a 2-3 fold increase in fall risk.	Select Health routine exams covered; additional depends on coverage level	<ul style="list-style-type: none"> • Centra: Audiology outpatient Evaluation • Intermountain Audiology Locations
Feet and Footwear	Podiatrist Exam Education on shoe fit, traction, insoles, and heel height. Supply needed ankle stabilizing braces, ankle-foot orthosis, etc.	Select Health Medicare: covered with routine foot care	<ul style="list-style-type: none"> • iCentra: Referral to Podiatry • Intermountain Podiatry Locations
Poor Nutritional Status	Registered Dietitian (Medical Nutrition Therapy)	Visit coverage varies by provider	<ul style="list-style-type: none"> • iCentra: Nutrition Individual Counseling Outpatient Dietitian Adult
General Resources	Senior Services / Senior Centers (Utah)	Services free for 65+	<ul style="list-style-type: none"> • https://daas.utah.gov/locations/
	Falls Alliance Utah Commission on Aging	Services free for 65+	<ul style="list-style-type: none"> • https://ucoa.utah.edu/fpa/

Medications to Use With Caution

Medications That Increase Fall Risks and Possible Alternatives				
Type	Specific examples		Side-effects that contribute to fall	Recommended Alternatives
Prescription Medications (generic/Brand)				
Anticholinergics	• hydroxyzine	• promethazine	Dry eyes, vision problems, drowsiness	• ondansetron
Anticonvulsants	• levetiracetam • oxcarbazepine • carbamazepine	• gabapentin • pregabalin • lamotrigine	Dizziness	• Use lowest appropriate dose. • Use only for seizures and mood disorders.
Antidepressants	• amitriptyline • nortriptyline	• paroxetine	Anticholinergic side effects, drowsiness, orthostatic hypotension	• Explore reducing dosage. • Slow titration for discontinuation (due to dizziness). • Use SSRI/SNRI therapies. • No current evidence exists that any antidepressants are less of a falls risk than others.
Antipsychotics	• aripiprazole • olanzapine	• quetiapine • risperidone	Anticholinergic side effects, orthostatic hypotension	Use lowest appropriate dose and schedule slow titration
Antihypertensives / BPH agents	• doxazosin • prazosin	• terazosin	Orthostatic hypotension	• Tamsulosin for BPH • Avoid use for antihypertensive therapy
Anti-diabetic Agents	• glimepiride • glipizide	• insulin • glyburide	Hypoglycemia	• SGLT2i • GLP1 • DPP4-i
Benzodiazepines	• alprazolam • temazepam • clonazepam	• diazepam • lorazepam	Cognitive impairment, drowsiness	• Use of SSRI/SNRI or alternative sedative agents
Diuretics	• furosemide • torsemide	• HCTZ	Increased urinary frequency/ urgency, orthostatic hypotension	• Use lowest appropriate dose • Consider timing of administration.
Opioids	• hydrocodone • oxycodone	• morphine • fentanyl	Cognitive impairment, drowsiness. Defecation syncope (constipation)	• Explore reducing dosage. • Avoid chronic use. • Address bowel regimen.
Muscle Relaxants	• cyclobenzaprine • methocarbamol	• carisoprodol • metaxalone	Anticholinergic side effects, cognitive impairment, sedation	• Tizanidine with caution. • Avoid chronic use.
Sedatives-hypnotics (Sleep)	• eszopiclone • zolpidem	• zaleplon	Cognitive impairment, drowsiness	• Doxepin ≤ 6 mg/day. • Magnesium for sleep.
Over-the-Counter Medications and Supplements				
Antihistamines	• diphenhydramine • chlorpheniramine	• meclizine • doxylamine	Dry eyes, vision problems, drowsiness	• fexofenadine • cetirizine • loratadine
Pain and Sleep Aid	• Tylenol PM	• Advil PM	Dry eyes, vision problems, drowsiness, cognitive impairment	Tylenol with Magnesium for sleep
Herbal Supplements	• Valerian Root • Passion Flower	• Hops • Chamomile	Use with high caution due to possible medication interactions/ undetermined side effects	Intentionally review
Cannabinoids (± THC)	• CBD Products • Marijuana		Anticholinergic, cognitive impairment, drowsiness.	Intentionally review

Patient Resources

Falls Prevention Patient Bundle

- [Falls Prevention for Adults Fact Sheet \(English\)/ \(Spanish\)](#)
- [Preventing Falls at Home: My action plan fact sheet \(English\)/\(Spanish\)](#)
- Falls prevention Resource Flyer
 - [Canyons \(English\)/\(Spanish\)](#)
 - [Peaks and Desert \(English\)/\(Spanish\)](#)
- [Urinary Incontinence Fact Sheet \(English\)/\(Spanish\)](#)

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This CPM presents a model of best care based on the best available scientific evidence at the time of publication. It is not a prescription for every physician or every patient, nor does it replace clinical judgment. All statements, protocols, and recommendations herein are viewed as transitory and iterative. Although physicians are encouraged to follow the CPM to help focus on and measure quality, deviations are a means for discovering improvements in patient care and expanding the knowledge base.

Send feedback to:
Sara Mathews, MS, RDN
Health Promotion and Wellness
sara.mathews@imail.com

