Evidence-based Falls Prevention Programs Risk Continuum

Guidance for Program Selection

Developed by the NCOA National Falls Prevention Resource Center

The risk continuum below represents the spectrum of falls risk based on self-reported and/or clinical outcomes. While all evidence-based falls prevention programs demonstrated a reduction in falls risk factors to become evidence-based, per the Administration for Community Living's Older Americans Act Title III-D criteria, not all falls prevention programs aim to achieve the same outcomes. For example, some programs focus primarily on exercise to improve balance and strength, whereas others may include educational and discussion-based components that help participants to reduce falls risks.

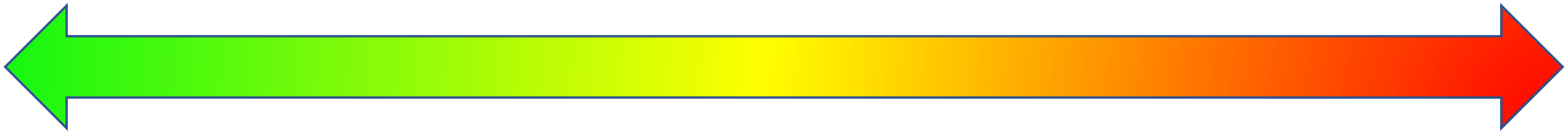
Offering multiple programs that address individuals across the risk continuum should be considered when identifying and proposing the implementation of evidence-based falls prevention programs in the community. For example, consider a combination of programs for lower risk individuals who are interested in strength and balance exercises to improve their functional stability and falls risk reducing movements, as well as programs for those at higher risk to address other falls mitigating strategies, such as education and self-efficacy to address other risk factors home hazards, medication management, fear of falling and practical problem-solving, such as assertiveness training.

Decisions on program adoption should be based on the following:

- The needs of the community and target population(s);
- A thorough review of the program costs and operation, as well as implementation site readiness; and
- Current programs being implemented and ability to build on what is being offered.
- Number and type of partners that can be leveraged.
- The likelihood of the program being sustained after the grant award period has ended through new funding sources and/or being embedded into routine operations and budget at host and implementation sites.

The figure below illustrates a falls risk continuum for Older Americans Act Title III-D approved evidence-based falls prevention programs. Based on published self-reported and clinically observed falls risk factors, the ACL-funded National Falls Prevention Resource Center at the National Council on Aging developed this falls risk continuum to assist applicants in selecting evidence-based falls prevention programs to include in proposals for ACL's FY2020 Falls Prevention Funding Opportunity Announcements.

Evidence-based Falls Prevention Programs Risk Continuum



Low Risk Moderate Risk High Risk

The indicators below represent a snapshot of the potential factors that may contribute to identifying level of risk based on both self-report and clinical indicators. These are not intended to be used in place of evidence-based falls prevention screening tools, such as STEADI. Falls screening should be conducted by a qualified healthcare professional.

Indicators of lower risk	
Self-Reported	**Clinical Indicators**

• Scored less than 4 points on the Stay Independent CDC brochure
• No history of falls in the past year
• No chronic conditions reported or chronic condition well managed
• No reported fear or concern about falling
	• Gait, strength, and balance*
	  ○ Timed Up and Go score at or better than 50th percentile normative data
	  ○ 4-Stage Balance Test score at or better than 50th percentile normative data
	  ○ 30-second Chair Stand score at or better than 50th percentile normative data
	• Orthostatic Blood Pressure**
	  ○ Normal orthostatic blood pressure from the lying prone position to standing position.
	• Medications***
	  ○ Taking no medications on the AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults ("AGS Beers Criteria") and are prescribed less than three medications

Indicators of increasing levels of risk	
Self-Reported	**Clinical Indicators**

• Scored more than 4 points on the Stay Independent CDC brochure
• One fall in the past year
• One or more chronic conditions and/or variable management of condition(s)
• Self-reported slight fear or concern about falling
	• Gait, strength, and balance*
	  ○ Timed Up and Go score below the 50th percentile of normative data
	  ○ 4-Stage Balance Test below the 50th percentile of normative data
	  ○ 30-second Chair Stand score at or better than 50th percentile normative data
	• Orthostatic Blood Pressure**
	  ○ Just below normal orthostatic blood pressure measures, such as a drop in blood pressure of ≥20 mm Hg, or in diastolic blood pressure of ≥10 mm HG, or experiencing lightheadedness or dizziness from the lying prone position to standing position.
	• Medications***
	  ○ Taking one or more medications on the AGS Beers Criteria and are prescribed three or more medications

Indicators of high risk	
Self-Reported	**Clinical Indicators**

• Scored more than 4 points on the Stay Independent CDC brochure
• More than 2 falls in the past year
• One or more chronic conditions and variable or poor management of condition(s)
• Self-reported significant fear or concern about falling
	• Gait, strength, and balance*
	  ○ Timed Up and Go score below the 50th percentile of normative data
	  ○ 4-Stage Balance Test score less than the 50th percentile of normative data
	  ○ 30-second Chair Stand score at or better than 50th percentile normative data
	• Orthostatic Blood Pressure**
	  ○ Below normal orthostatic blood pressure measures, including a drop in blood pressure of ≥20 mm Hg, or in diastolic blood pressure of ≥10 mm HG, or experiencing lightheadedness or dizziness from the lying prone position to standing position.
	• Medications***
	  ○ Taking one or more medications on the AGS Beers Criteria and are prescribed three or more medications

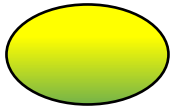
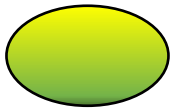
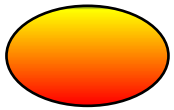
*Rikli RE, Jones CJ. *Senior Fitness Test Manual.* Human Kinetics; 2001.

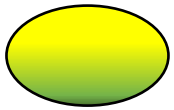
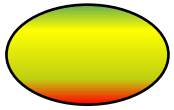
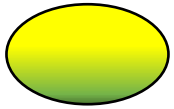
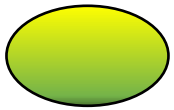
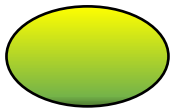
**Bradley JG, Davis KA. Orthostatic hypotension. *Am Fam Physician;* 2003;68(12):2393-2399.

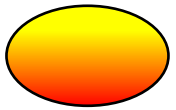
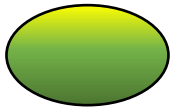
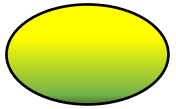
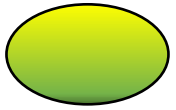
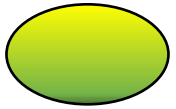
***2019 American Geriatrics Society Beers Criteria® Update Expert Panel. American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults. *J Am Geriatr Soc* 2019; 67(4):674-694.

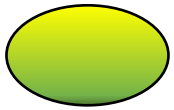
Evidence-Based Falls Prevention Programs

This table is a broad overview of the evidence-based falls prevention programs available. Grantee applicants should contact the program leads/developers to discuss programs that are most appropriate to community needs and fit and to obtain a letter of support.

Name of Program	Target Population	Not appropriate for people with these health conditions/traits	Risk Level
A Matter of Balance	60 or older, ambulatory, able to problem-solve • Concerned about falls • Interested in improving flexibility, balance, and strength.	Cognitive impairment, low fear of falling, highly active and engaged in the community	
Bingocize	Sedentary older adults at all ability levels in a variety of settings, including certified nursing facilities, assisted living, independent living, and community senior centers.	Cognitive impairment	
CAPABLE	Older adults who have at least one Activity of Daily Living (ADL) difficulty, such as difficulty bathing, dressing, walking across a small room or getting off/onto the toilet, who are cognitively able to identify goals.	Cognitive impairment, no ADL difficulty, little to no mobility impairment	

Name of Program	Target Population	Not appropriate for people with these health conditions/traits	Risk Level
EnhanceFitness	Older adults, from the frail to the fit. The class can be taken seated or standing, and instructors are trained in how to modify the exercises to suit the varying physical and cognitive abilities of participants.	Significant mobility impairment Limitations in multiple activities of daily living (ADLs)	
FallsTalk	Adults 50+ who have fallen or are experiencing regular loss of balance and are at risk for falls or are concerned about falling.	Access to multi-media, non-English learners, cognitive impairment, learning disability, history of vertigo, chronic ear infections, or motion sickness	
FallScape	Adults 50+ who have fallen or are experiencing regular loss of balance, and are at risk for falls or are concerned about falling.	Access to multi-media, non-English learners, cognitive impairment, learning disability, history of vertigo, chronic ear infections, or motion sickness	
Fit & Strong!	Sedentary older adults who have lower extremity joint pain and stiffness related to osteoarthritis.	Active older adults without lower extremity joint pain, cognitive impairment	
Healthy Steps for Older Adults	Adults aged 50+ years, individuals with low health literacy	Contact the program leader.	
Healthy Steps in Motion	Adults aged 50+ years, able to engage in exercise, i.e., no ADL impairments	Contact the program leader.	

Name of Program	Target Population	Not appropriate for people with these health conditions/traits	Risk Level
Otago Exercise Program	Adults age 65 and older with a history of falls or at high risk for falls.	Low risk for falls, adults who have the strength and endurance to participate in other more advanced exercise programs	
Stay Active and Independent for Life	Adults age 65 and older, community-dwelling, no or very little mobility impairment (such as occasional cane user)	Sedentary older adults, home-bound, non-community-dwelling, significant mobility impairment	
Stepping On	Community dwelling older adults who are at risk for falling, have a fear of falling, or who have fallen one or more times in a year, ability to stand to participate in exercises	Cognitive impairment, low risk of falling and no history of falls	
Tai Chi for Arthritis for Falls Prevention	Adults with or without arthritis, rheumatic diseases or related musculoskeletal conditions. The program is appropriate for people with mild, moderate and severe joint involvement and back pain. It is also appropriate for adults without arthritis who have a higher risk of falling.	Not able to commit to attending the 16-week program	
Tai Chi Prime	Community-dwelling older adults who can participate in class without assistive devices such as a walker, cane, or scoot, and are able to commit to an at home practice.	Cognitive impairment, mobility impairments that require assistive device use.	

Name of Program	Target Population	Not appropriate for people with these health conditions/traits	Risk Level
Tai ji Quan: Moving for Better Balance	The primary focus is on community-dwelling older adults and people with a history of falls, balance disorders, leg muscle weakness, abnormal gait or walking difficulty. The program can accommodate people with a mild level of mobility difficulty (e.g., people who are occasional cane users).	Moderate to high levels of mobility difficulty, not able to commit to attending the 24-week program.	
YMCA Moving for Better Balance	Individuals 65 years or older who are physically mobile with impaired stability and/or mobility, or individuals 45 years or older with a condition that may impact stability and/or mobility.	Individuals with no mobility impairment or no impaired stability.