GeriPreceptor

Precepting Tips for Mobility Disability (Rehabilitation Professionals)

Overview

- **Prevalence:**

Impaired mobility is experienced by 46% of community-dwelling older adults 65+

1 in 3 older adults report difficulty walking 3 city blocks

- **Personal Risk Factors**: Older age, low physical activity, Medication side effects affecting balance, obesity, impaired strength and balance, cognitive impairment (Mentation), chronic diseases such as diabetes and arthritis, and progressive conditions.
- **One's** environment can also play a role in mobility disability and can inhibit individuals' ability to participate in their living and community space, for example: inaccessibility within the home (e.g. split level, poor lighting, narrow hallways) and community (i.e. poor sidewalks, no curb cutouts).
- **Associated** consequences of impaired mobility: Falls, hospitalizations, disability, poor quality of life, declining function, depression, social isolation, higher rates of mortality, and inability to do What Matters Most (e.g. mobility to attend social and recreational activities).
- **Costs**: Older adults with mobility limitations spend an additional $2,773 in total health care costs and an additional $274 in out-of-pocket expenditures annually.

Screening

Two-question Mobility Screen (University of Alabama)

(A **yes** response to either question indicates the need for further assessment to identify physical, social, or environmental factors leading to the limitations.)

1. For health or physical reasons, do you have difficulty climbing up 10 steps or walking one-quarter of a mile?
2. Because of underlying health or physical reasons, have you modified the way you climb 10 steps or walk a quarter of a mile?

CDC STEADI Screening Questions for Falls

(A **yes** response to one or more questions indicates need for further assessment.)

1. Do you feel unsteady when you stand or walk?
2. Do you worry about falling?
3. Have you fallen in the past year? If yes, how many times? Were you injured?

Functional Mobility Assessment

- Observation
  - Quality of sit-to-stand transfer (symmetry, effort to complete, biomechanics and motor patterns) and gait (pattern, symmetry, dual-task ability during gait)
  - Comprehensive OT/PT home assessment to assess accessibility of home environment OR CDC STEADI Check for Safety handout for patient or family
- Subjective Outcome Measures may capture fear of falling or activity restriction through self-report methods.
  - Individuals with higher levels of mobility: Falls Efficacy Scale (FES-I)—measures falls efficacy; Activities Balance Confidence scale (ABC)—measures balance confidence
  - Individuals with lower levels of mobility: Barthel Index—self report for amount of assistance required for activities of daily living and mobility
- Objective Outcome Measures
  - Valid and reliable outcome measures that assess physical function can be helpful in creating specific rehabilitation goals and assessing individuals' performance in comparison to age norms or risk-based cutoff scores.

Gait Speed (4-meter walk test)		
Red Light (Slow Walkers)	<0.6 m/sec	Associated with dependent care, greater disability, falls, hospitalization and death
Yellow Light (Intermediate Walkers)	0.6 m/sec to <1.0 m/sec	More commonly associated with limited community ambulation, cognitive decline in 5 years, and intervention needed to reduce falls
Green Light (Fast Walkers)	≥1.0 m/sec	More commonly associated with independent community mobility, independent self-care, independence in household tasks and light yard work, and greater fitness

Normal gait speed for healthy adults is 3–4 mph, or 1.34–1.79 m/sec

University of Minnesota
Driven to Discover®

- **Common Mobility/Fall Risk Outcome Measures and Psychometric Properties**
  Click for a table detailing: Timed Up and Go Test; 5 Times Sit-to-Stand Test; Functional Gait Assessment; Berg Balance Scale; Mini-BESTest; 6-Minute Walk Test

Therapy Interventions to Improve Mobility

Strength training

- 60-80% of 1 repetition maximum, 8-12 repetitions, 1-3 sets, ≥2 days/wk
- There is a chronic problem of underdosing strength training for older adults despite much research proving the safety of prescribing strength training according to the same guidelines as younger adults.

Aerobic activity

- 30 min per day, 5 days/wk moderate intensity (40-79% heart rate reserve), 5-6/10 rating of perceived exertion (RPE)

Balance training

- 2-3 days, 30-45 min/session or 2 hr/wk total
- Moderate to high balance challenge (i.e., use of perturbations, narrowed base of support, compliant surfaces, dual tasking)

Flexibility

- 2 days/wk for 10 minutes, focusing on major muscle groups

Prescribe assistive devices as needed to enhance stability and mobility during gait and functional tasks.

Encourage patients to increase overall physical activity by restructuring usual routines to force activity:

- Park further back in parking lots.
- Walk around store or shopping mall before completing shopping tasks.
- Make multiple trips up/down stairs vs. combining tasks.
- Get up and walk around during television commercial breaks.
- When getting up from your chair or couch, practice 5-10 sit to stands in a row.

Formal evidence-based fall prevention/exercise programs may be useful for referral once an individual is discharged from therapy or needs a supplemental program. Some examples include: Tai Ji Quan; Otago Exercise Program; A Matter of Balance; CAPABLE (Community Aging in Place - Advancing Better Living for Elders); SAIL (Stay Active and Independent for Life); Stepping On; Silver Sneakers; Fit and Strong!

Teaching Tips: Ask students to. . .

- Screen all older adults for falls regardless of evaluation diagnosis.
- Review local public transportation websites and find paperwork for filing applications for disability public transportation and a handicapped parking permit.
- Practice conducting a formal home assessment with a friend or family member. Consider how home modification recommendations would change if the person had a disability or an assistive device.
- Become familiar with patient resources for ordering durable medical equipment. Practice fitting various assistive devices.
- Research and refer a patient to an appropriate community-based exercise program according to post-discharge needs/goals and patient preferences.
- Research and attend two or three community-based exercise programs available in your area to see them in action and make an informed decision when referring patients.
- Find local clinics or hospitals that offer Driving Evaluations by an Occupational Therapist.

Preceptor Resources

- Key readings: Walking Speed: The Functional Vital Sign and Mobility Limitation in the Older Patient: A Clinical Review
- Psychometric properties and information for functional assessments Shirley Ryan Lab
- Mobility case studies: Mr. Trudeau (Instructor, Learner) Mrs. Gonzalez (Instructor, Learner)

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS), Geriatrics Workforce Enhancement Program. Additional funding for the Minnesota Northstar GWEP is provided by the Otto Bremer Trust and the University of Minnesota Office of Academic Clinical Affairs.

Content created September 2021 by Lizzie Choma, PT, DPT