ENSIGN SERVICES

POSTette: Fall Reduction Part 1: Preventative & Intervention

References: State Practice Acts; MAC LCD's; CMS; APTA, AOTA, ASHA

The percentage of annual falls of those 65 or older by setting is: Institutionalized – 60 to 66%, Hospitalized– 33 to 67%, Community dwelling – 25 to 35%

Falls are the 6th leading cause of death in those older than 65 and 1st for those older than 80

Therapists have two primary responsibilities for Fall Reduction:

1. **Identify Risk Factors (Standardized Testing)**
2. **Address Risk Factors (Skilled Intervention)**

Standardized/ Evidence-Based Testing

Strength and Muscle Performance

- Chair Rise Test
- Getting up from Lying on the Floor Test
- Aerobic Capacity
- 6 Minute Walk Test
- Seated Step Test

Gait, Locomotion, Balance & Vestibular

- Berg
- Timed Up and Go (TUG)
- Functional & Modified Functional Reach Test
- Range of Motion Test
- Chair, Sit and Reach Test
- Dizziness Handicap Inventory (DHI)
- Sensory Interaction – Foam & Dome
- Falls Efficacy Scale / Confidence Index
- Dynamic Gait Index
- Physical Performance Test

Activities of Daily Living

- Kohlman Evaluation of Living Skills (Kels)

Cognitive

- Allen Cognitive Levels
- Montreal Cognitive Assessment (MoCA) Cognitive Performance Test (CPT)
- St. Louis University Mental Status Exam (SLUMS)
- Cognitive Linguistic Quick Test

Other Assessments:

Assessment of Positioning and Support Surfaces

- How long are residents sitting? Do they have the right cushion? Are they comfortable? Is their skin protected?

Did You Know….
Older adults with balance impairments have twice as large trunk positioning errors and more hip flexion contractures? Strength, coordination, ROM and position sensation can play a greater role in trunk repositioning than vision or LE somatosensation.

Assessment of Sensory Integration

- What is the patient's current footwear? Are they Diabetic?
- Complete sensory test(s) (Ten, Two-point, Semmes-Weinstein Monofilament Testing, Tuning Fork)
- Assess for visual acuity, depth perception, color contrast, visual tracking. Conduct Low Vision Assessments.

Skilled Intervention

- Strength/Resistance and muscle performance specific to identified deficit
- Agility Training
- Aerobic Capacity
- Gait & Mobility
- Balance & Vestibular
- Sensory Impairments
- Vision impairments
- Range of Motion
- Modalities
- Activities of Daily Living
- Toileting / Incontinence
- Positioning/ support surfaces
- Core Stabilizing exercises
- Addressing any pain
- Cognitive/ Communication Impairments
- Patient Education
- Home Modification
- Adaptive and Assistive Equipment

Potential Factors	Intervention(s) Examples
Perceived Fall or Mobility Risk	Item Specific training on fear-related tasks
Sensory Impairment	Modalities, Orthotics, shoe modifications, MD consultations, vision correction, visual tracking, depth perception rehabilitation.
Thoracic Kyphosis	ROM, Resistive Training for scapular/ trunk.

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Potential Factors	Intervention(s) Examples
LE Weakness	Resistance Training: Hip AB/AD, knee extension/ flexion, ankle PF/DF, Modalities
LE Power Loss	Resistance Training: Hip AB/AD, knee ex/flex, ankle PF
Balance Loss	Resistance Training, Balance activities, Gait and agility training, assistive device training, Romberg, Static exercise ball, Core Strengthening
Vestibular	Assess for BPPV, Static and Dynamic with eyes open/closed, balance pad with head movements or closed eyes to isolate vestibular reactions
Mobility Impairment	Resistance Training, transfer training, gait and agility training, assistive device training
Positioning Impairments	W/C modifications, cushion/seating system, contracture management, anti-lock brakes, anti-tippers. Provide training to integrate rest or movement periods out of chairs to avoid "slumping" and fatigue.
Cognitive Impairments	Safety awareness, cognitive training, environmental adaptations & modifications, reducing behaviors
Communication	Improving ability to express wants/needs, reducing behaviors
Environment Modifications	Establishing visual contrast; rearrangement of furniture; removal of clutter; modification of the closet; lighting; temperature

Did you know?

- Community ambulation expectations are a minimum of 600 ft. (Journal of Geriatric Physical Therapy Vol. 33. Num. 2. April-June 2010)
- A large cross sectional study of community dwelling older adults found that those in the lowest quartile of lower extremity strength had a 75% risk of falls?

Examples of Exercise Selection	
Lower Extremity	• Bridge • Mini Squat • Mini Lunge • Chair Rise • Step up
Hip Abduction	• Supine hip AB • Standing hip AB • Side-lying hip AB • 2" pelvic rise
Knee Extension	• Seated knee extension • Supine straight leg rise
Knee Flexion	• Heel slide • Standing knee flexion
Balance	• Static: Romberg, Static Exercise Ball, Semi tandem, Tandem • Dynamic: Side step, braiding, tandem, retro tandem, step ups, Lift & Reach, Ball skills, dynamic exercise ball

Referral to Restorative:

- Functional ambulation programs
- Transfer training/ Sit to Stand programs
- Strengthening/ROM/Flexibility programs

When implementing facility ambulation programs consider:

- Take the Dine OUT of Walk to Dine and simply walk to walk. Designed around the individuals' motivation to move.
- Anticipate their needs and walk them MORE throughout the day and every shift.
- Most people will want to rest after exercise regardless of fitness level.