**BALANCE DISORDERS AND FALLS: ASSESSMENT AND INTERVENTION**

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**Objectives**

After this course attendees will be able to:

1. Identify an adult at risk of falls using valid and reliable tests for the specific population
2. Describe risk factors for falls
3. Select and administer patient-specific tests of balance and fall risk
4. Design a treatment plan and goals based on test results
5. Carry out treatment for balance disorders and increased fall risk in a range of clinical settings
6. Document assessment and intervention for balance disorders and increased fall risk

**Course Description**

This 2-day interactive program is a practical, evidence-based course focusing on assessment and intervention for rehabilitation of patients with imbalance and increased fall risk. The instructors are a neurologist and physical therapist with extensive clinical, educational and research experience and a physical therapist clinician whose clinical practice focuses on treatment of geriatric patients. The program includes didactic sessions, group-based problem solving of clinical cases across the continuum of care, and hands-on labs to learn and practice acquired skills.

**Agenda**

**Day 1 - Assessment**

8am Welcome and Introductions

8:15am Pre-test

8:30am Background

Definitions

Static balance, dynamic balance and falls

Balance and Falls

 How they are measured:

 For research and in the clinic

Why Balance and Fall Prevention are important

 Safety

Function/Independence

 Cost

Components of Balance

 Sensation/Proprioception

 Vestibular

 Vision

 Strength

 Range of Motion

 Reaction time

Fall Risk Factors

 Age

 Medications

 Comorbidities

Safety Awareness/Cognition

9:30am Introduction to Clinical Fall Risk and Balance Tests

Selecting the right test

Validity and reliability in the appropriate population

Floor and ceiling effects

Time and equipment

Goals – screening vs treatment planning

What do they test?

Fall risk? Balance? Vestibular, proprioceptive or vision function?

Available norms

10:30am BREAK

11am Selected Clinical Fall Risk and Balance Tests

Screening tests

Functional reach test

Timed Up and Go (TUG)

 Treatment planning tests requiring minimal equipment

Timed Up and Go (TUG)

Dual task TUG

Push and release

Chair stand

Romberg and sharpened/tandem Romberg

Single Limb Balance

4 Square Step Test

Dynamic Gait Index (DGI)

POMA/Tinetti

Berg balance scale

Falls Efficacy Scale-International (FES-i)

 Treatment planning tests requiring more equipment

Foam and Doam/Clinical Test of Sensory Organization and Balance (CTSIB/mCTSIB with foam only)

BESTest

Physiological profile assessment (PPA)/FallScreen

Dynamic posturography

Noon LUNCH

1pm Selecting the appropriate test(s) for specific patients

Case studies through the continuum of care: in-patient hospital, care-home/nursing facility, outpatient, home health

 Case presentations by instructors

 Status-post total hip replacement

 Status-post stroke with hemi-paresis

 Diabetic neuropathy

 Multiple sclerosis

 Parkinson’s disease

 Older adult with deconditioning

 Patient with history of multiple falls

 Case discussions in small groups

 Case solutions by students

2:30pm BREAK

2:45pm Hands-on lab

 Practice performing tests for cases through the continuum of care

Documentation

4:30pm – 5pm Q & A

**Day 2 - Intervention**

8:30am Using test results to develop functional and measurable goals

 Practice with case studies from day 1

 Small group discussion

 Small group presentations

9:30am Specific Interventions

 Gait training – varied surfaces and environments

 Level

 Stairs/curbs

 Home and community

 Dual tasking

Assistive devices (which, when, why, fitting)

Cane, walking stick(s), forearm crutches, pick up walker, 2 wheeled walker, 4 wheeled walker, 3 wheeled walker

 Assistive Device Training – ADSTEP program

 Task-oriented progressive gait training

Exercise

Balance practice and facilitation

Lower extremity strengthening

Core strengthening

10:30am BREAK

10:45am Multi-component and high-tech programs

11:15am Using test results and goals to select interventions and comprehensive treatment plan across the continuum of care

 Small group discussion

 Small group presentations

Noon LUNCH

1:00pm Completing the picture

 Cognition

Footwear

Home assessment and modification (lighting, seat height, clutter, surfaces, safety equipment, rails, grab bars, ramps)

 Community Resources

 Family support

 Caregiver training

 Are they safe in their current living situation?

Getting up from a fall

2:00pm Review of assessment and intervention

Small group activity

Choose one of your patients with imbalance or increased fall risk

Select appropriate tests

Set goals

Select interventions

Document care

Each group demonstrate one intervention to the class and describe progression

3:15pm Course summary and conclusions

Q&A

4:00pm Post-test

 Course evaluation

4:30pm End of program