**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