Neuroplasticity: Combining Assesments and a Multi-Sensory Treatment Approach to Motor Learning



DATE
September 26, 2020

TIME
8:00 AM - 5:00 PM

TARGET AUDIENCE
PT, PTA, OT, COTA

LOCATION
Upstate AHEC Training Room
104 South Venture Drive
Greenville, SC 29615

COURSE DESCRIPTION

Researchers estimate that 15%, or 49 million, Americans are formally diagnosed with some type of delay annually (2017, Macias et al) … and these patients are coming to us with increasingly complex issues. In the fast-paced systems we operate within, it is imperative that the clinician be able to prioritize treatments for optimal outcomes. In addition, a large body of research is emerging that promotes using a multi-sensory approach to modulate the nervous system's response to create change. This course combines the latest concepts of motor learning with manual therapy and modalities to promote change at the cellular level. The essential role of functional nutrition/hydration and its impact on reducing chronic health conditions in pediatric patients will be explored. Kofyman et al estimate that 30 million children are dehydrated in the US; it is the leading cause of pediatric morbidity and mortality worldwide, resulting in over 300 deaths annually (2018; Powers, 2015). Relevant parental instructional strategies to increase follow through of recommendations will be discussed to improve upon practice within the context of daily life. Promoting a holistic treatment approach that encourages healing from the inside out is a must for every relevant healthcare professional!

A review of basic neuroanatomy and physiology will occur, including focused attention to the integumentary system, or the "diffuse brain", as a key component of the nervous system (Chapman and Moynihan, 2009). Participants will be guided through a user-friendly framework to screen across body structures and systems. The screen directs clinicians through a multisystem assessment, recommended by the APTA, resulting in the ability to identify the primary physiology/system(s) impacting function. Therapists will use that information to guide interventions/stimulus options to promote improved, meaningful participation in life activities. Participants will engage in labs to exercise the use of assessment and somatic cues to rewire the body-brain connection. You will leave knowing how to prioritize and strategically employ interventions across body systems to improve patient outcomes!

Instructional Method: Live-Lecture & Hands-On Lab
Lab Notice: Participants must dress in lab appropriate clothing. Participants must also wear a mask. Disposable gloves will be provided during the course (to be worn when touching other participants in lab).
Level of Course: Intermediate // Advanced

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BENEFITS OF ATTENDING

- Immediately hone your evaluation skills using multi-system framework you can put into practice on Monday
- Practice pertinent tests and measures to assess for underlying conditions and co-morbidities of the integumentary, postural, sensory and respiratory systems
- Practical treatment strategies to incorporate current principles of motor learning through a multi-sensory, dynamic approach to promote functional participation
- Effective, evidence-based parent involvement strategies to increase caregiver engagement and follow through of therapist recommendations
- Hands on labs to engage in postural and scar assessment, joint mobilizations, and sensory strategies
- Engage in functional nutritional education for clients for daily intake as well as pre/post op recommendations to promote healing from within

LEARNING OBJECTIVES

At the conclusion of this program, each participant will be able to:

1. Be able to identify the components of the central and peripheral nervous system (foundational)
2. Understand key concepts of the integumentary system and its relationship to motor learning, as well as employ reliable assessment tools for scars
3. Apply contemporary concepts of motor learning and neuroplasticity to treatment strategies (application)
4. Know how to integrate parents/caregivers into the process of rehabilitation at home, including nutrition (integration/human dimension)
5. Employ an evaluation framework as a multi-system screening tool to identify key components impairing function, which will be prioritized and targeted for intervention and goal setting. (integration)
6. Describe the components of the core and how each impact postural control, as well as treatment strategies to improve function (foundational and integration)
7. Exercise clinical judgement in the use of focal or whole-body vibration

ABOUT THE INSTRUCTOR

Dr. Elizabeth G Harvey, PT, DPT, PSC, MSR, CKTI, CEIM brings over 18 years of clinical expertise to the table. She specializes in the treatment of pediatric patients with complex neurologic and orthopedic challenges, including oral motor/facial dysfunction. She has experience across various settings and patient populations including early intervention, outpatient orthopedics, school-based and sub-acute rehabilitation settings. Dr. Harvey employs manual and multi-sensory techniques via therapeutic tapings, NMES, focal and whole-body vibration, nutritional consultation and infant/sensory massage to promote neural plasticity. She serves Kinesio University as a Certified Instructor, Curriculum Design Specialist and a member of the International Research Committee.

Dr. Harvey is the owner and director of ABC Therapies LLC in South Carolina where she is sought after due to her holistic approach to treatment. She holds specialty certifications as an instructor for infant massage, trismus, IASTM and NMES for orofacial treatment. In addition, she is a Level I Certified Clinical Instructor. She actively participates in international humanitarian efforts through medical camps across the world: Hawaii, Haiti, Kenya, and Honduras. She is known for being enthusiastic in her approach to education, offering practical feedback and making sense of difficult patient scenerios. She has authored multiple publications and interdisciplinary curriculum. She is a member of the American Physical Therapy Association (APTA) and Pediatrics Section Member, Neurodevelopmental Treatment Association (NDTA) and Infant Massage USA.

Dr. Harvey earned a Bachelor of Science in Biology from Newberry College, a Master of Rehabilitation Science from the Medical University of SC, and a Doctor of Physical Therapy from AT Still University.

COURSE AGENDA

TIME	ACTIVITY
7:30-8:00	**Participant Sign In**
8:00-8:20	Introduction of instructor and have paired participants introduce one another (setting, general caseload), Learning Objective Review/Suggestions
8:20-8:30	WHO ICF and Guide to PT Practice Evaluation Guidelines Review; Introduce RPMS Screen
8:30-9:15	Lecture on Anatomy/Physiology of Nervous System
9:15-9:35	INTEGUMENTARY LAB in pairs to assess scars via standardized parameters (POSAS, ect)
9:35-10:00	Respiratory System: Rib cage development, postural control
10:00-10:10	**BREAK**
10:10-10:30	Breathing pattern and Rib cage mobility assessment review, treatment (rib mobilizations)
10:30-11:00	Respiratory Lab
11:00-11:30	Posture Lecture (tonic/phasic muscle groups, chronic positioning, evaluation
11:30-12:00	Postural Assessment/treatment Lab
12:00-1:00	**LUNCH on your own**
1:00-1:30	Movement Systems: Motor Learning Theories Lecture, movement assessments (TUG), identifying strengths/weaknesses
1:30-1:50	Movement Lab
1:50-2:20	Nutrition: impact on function, chronic disease, gut health, hydration (pre op recommendations)
2:20-2:30	Parent Engagement
2:30-3:00	CASE STUDIES: RPMS screen
3:00-3:10	**BREAK**
3:10-3:40	Focal Vibration Lecture
3:30-3:50	LAB
3:50-4:20	Whole Body Vibration Lecture
4:20-4:40	LAB
4:40-5:00	**Q&A** Post Test, Course Evals and Wrap Up

Learning Strategy: (Group Based and Problem Based Learning Activities) As participants enter, they will be given a section of the nervous system (paper) – there will be a pair to form lab groups. Four participants will group together for case studies at the end of the course.

REGISTRATION

To register: visit www.upstateahec.org, click on the CE Tab > Live Courses > September
For registration issues, please call 86.349.1160.

Program Fee:
$0 for Upstate AHEC Consortium Member
$120 for non-Upstate AHEC Consortium Members

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Registrants canceling between 2 weeks and 48 hours prior to the program will receive a 75 percent refund. No refunds or credits will be given for cancellations received less than 48 hours prior to the program. No refunds or credits will be given for no-shows. Participant substitutions are welcome (please notify us in advance of the program). Cancellations must be made in writing (mail or email – registration@upstateahec.org).

CONTINUING EDUCATION CREDIT

Physical Therapists: This course has been submitted to the South Carolina Physical Therapy Association (SCAPTA) for CEU credit. Credit statements will be updated as approvals are received.

Occupational Therapists: The course is under review by a consultant with the South Carolina Occupational Therapy Association (SCOTA) for CEU credit. Credit statements will be updated as approvals are received.

Successful completion of the program requires attendance for 100 percent of the program and a completed online evaluation by the participant within 10 calendar days of the program date. A certificate of completion will not be made available for you if the evaluation is not completed within this timeframe. No partial credit available.