## Outline

### Case Study

**NEUROANATOMY AND THE IMPACT ON** COGNITIVE PROCESSING

- Basic neuronal anatomy
- Brain wiring: Association, projection, and commissural fiber tracts
- Brain lobes locations and ties to cognitive processes
- Cerebellum and impact upon cognition
- Case Study 1: Jacob's anxiety and how pacing the halls became therapeutic

### Case Study

#### **OPTIC SYSTEM AND VISUAL PERCEPTION**

- Optic constructs, anterior-posterior fiber tracts
- Visual cortices and unique roles in visual processing
- Effect of tumors, shear injuries, CVA lesions upon visual perception
- Case study 2: Why can't my patient just see the whole worksheet like I do?
- Group Exercise: Review of vision diagnostics by discipline (PT/OT/SLP)

#### HOW NEUROTRANSMITTERS DRIVE THE BUS

- Internal communication systems within the brain
- Dopamine pathways and effects on cognition and reward systems
- Serotonin pathways and mood modulations

#### **EXECUTIVE FUNCTIONS OF THE FRONTAL LOBE**

- The Cognitive Pyramid and moving patients upward
- Skull anatomy and effects of shear injury - Shear injury as it affects anxiety and behavioral health
- Therapy implications for PT/OT/SLP
- Group Exercise: Review of executive function diagnostics by discipline (PT/OT/SLP)

#### **COMMUNICATION AND THE LEFT HEMISPHERIC FUNCTIONS**

- Broca's vs. Wernike's areas
- Function of the arcuate fasciculus upon communication

Hassle-Free Cancellation Policy: If you contact us before the event date, you can exchange for a self-study package on the subject (CE credits may be available), a certificate to attend another live webcast, or receive a tuition refund less a \$30 cancel fee. Substitutions are permitted at any time.

#### SPATIAL PROCESSING AND THE RIGHT **HEMISPHERIC FUNCTIONS**

- Neurophysiology vs neuropathology, understanding patients' nonverbal challenges
- Inferential language and social cognition • A sense of time and spatial organization revealed

#### THE HIDDEN PROCESSORS -THALAMIC INFLUENCES

- Auditory pathways and neuroanatomy
- Thalamic engagement on sensory information
- Modulation of sleep and vigilance

### Case Study

#### **MEMORY: HOW THE HIPPOCAMPUS AND** THE AMYGDALA PARTNER

- Memory processes Memory types: Right vs left hippocampal functions
- Hypoxia and anoxia upon memory function Sleep and memory consolidation, effect of
- exercise on memory structures Amygdala's influence upon fear-based
- learning and hijacking executive control Case study 3: Nile's hypoxia and long term rehab outcomes

#### **RECOVERY FROM ACCELERATION/ DECELERATION INJURIES: DIFFUSE AXONAL INJURY (DAI)**

- Microanatomical features of DAI CTE: Chronic Traumatic Encephalopathy
- Where medications have failed

### AGITATION MANAGEMENT STRATEGIES

- Review how working knowledge of the Rancho Los Amigos levels and practitioner tips can avoid confrontation
- Learn trick of the trade for avoiding escalation
- Confabulation and denial—addressing the elephant in the room

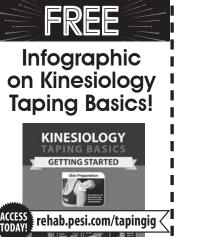
#### **ENRICHING PATIENT AND CLINICIAN** RELATIONSHIPS

- The science behind mediations and mindfulness
- Reigning in the runaway situation

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# Addressing Patient Behavior by **Brain Lesion Site**



### Clinical Tools & Strategies Specific to **Patient Deficits**

WINSTON-SALEM, NC Thursday, March 19, 2020

**RALEIGH**, NC Friday, March 20, 2020

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### TARGET AUDIENCE

Physical Therapists Physical Therapist Assistants Occupational Therapists Occupational Therapy Assistants Speech-Language Pathologists Certified Brain Injury Specialists **Recreational Therapists** Nurses Nurse Practitioners Social Workers Physician Assistants



**COLUMBIA, SC** Tuesday, March 17, 2020



Wednesday, March 18, 2020

CHARLOTTE, NC

# Addressing Patient Behavior by **Brain Lesion Site**



 Identify cognitive dysfunction to enhance neuroplasticity for decreased fall risk and improved mobility/transfers

• Link function and behavior to more strategically written patient-driven therapy goals

 Tools to connect neuroanatomy to patient behaviors to address difficult behaviors like defiance and confusion

 Improve intervention timing by choosing proper diagnostics based on level of brain lesion

 Anticipate proper discharge plan by determining patient response in structured vs. home environments

> **COLUMBIA, SC** Tuesday, March 17, 2020

CHARLOTTE, NC Wednesday, March 18, 2020

WINSTON-SALEM, NC Thursday, March 19, 2020

> **RALEIGH, NC** Friday, March 20, 2020

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## **Addressing Patient Behavior** by Brain Lesion Site

#### Clinical Tools & **Strategies Specific** to Patients Deficits

July 29–August 1, 2020

Neuroanatomy is admittedly complex and overwhelming. Clinicians working in rehabilitation are faced with growing caseloads, diminished resources/reimbursement, and increasingly medically complex patients with the expectation of improving outcomes and reducing length of stay. Honing knowledge of clinically-relevant neuroanatomy and neuropathology can predict dysfunction and intuitively create a scaffold for assessment and treatment even before meeting the patient. Predetermining potential deficits leads to a more tightly defined diagnostic battery and expedites treatment formulation. By deducing the patient's experience, the clinician can also prepare for behavioral barriers to engagement and understand the healing process with greater compassion.

In this one-day seminar, participants will learn intermediate level neurophysiology as it relates to cognitive-linguistic skills and behavioral control, as well as explore mindfulness techniques for stress reduction. The overlying foci of the course are to arm treating professionals with an improved clinical eye, predicting dysfunction, and expedite the pathway to treatment. Course content will also include patient-focused educational materials for stroke and traumatic brain injury ready to utilize by treating practitioners.

## Speaker \_\_\_\_\_

JEROME QUELLIER, MS, CCC-SLP, is a clinical specialist in traumatic brain injury and communication disorders at a 450+ bed Level 1 Trauma hospital in Saint Paul, MN with almost 25 years of acute, residential, and outpatient rehabilitation experience. During his tenure at the hospital he has focused on neuro-based diagnostics and intervention for dysphagia, cognitive-linguistic deficits, head and neck cancer management, patient advocacy, and curriculum development. Mr. Quellier has made a careerlong study of the intricacies of neurology, completed advanced training in brain dissection at Marquette University, actively engages in staff development training, and recently joined a surgery team in preserving language function during tumor resections.

In addition to his clinical practice, he has previously held a faculty position at the University of Minnesota Duluth teaching graduate level coursework, and taught undergraduate workshops as adjunct faculty at the University of Wisconsin Eau Claire. Mr. Quellier is excited to bring this topic to the forefront after working with the interdisciplinary team's challenges in understanding the "what and why" of traumatic brain injury, stroke, neurodegenerative diseases and tumor resections as they apply to behavioral changes. He graduated Cum Laude with his bachelor's degree and graduate degree from the University of Wisconsin Eau Claire.

#### **Speaker Disclosures:**

Financial: Jerome Quellier has an employment relationship with Regions Hospital. He receives a speaking honorarium from PESI, Inc. Non-financial: Jerome Quellier is a member of the American Speech-Language-Hearing Association.

## Objectives \_

- 1. Categorize the anatomy and function of lobes of the brain as they apply to behavioral control.
- 2. Characterize the neurophysiology of memory and effect of fear/anger upon new learning and memory.
- 3. Analyze the effect of traumatic and non-traumatic injuries upon cognitive centers.
- 4. Connect neurotransmitters with the communication system within the brain.
- 5. Evaluate the optic system and lesion locations that affect engagement and accuracy in therapy.
- 6. Recommend simple neuroanatomy-based techniques to rapidly de-escalate stress for patients and caretakers.
- 7. Assess neuro-behavioral barriers that impact new learning.

## **REHAB SUMMIT** LAS VEGAS

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#### *Neuro Notes:* Clinical Pocket Guide



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By Claudia Fenderson, PT, ED.D., PCS & Wen Ling, PT, PHD • Wipe-Free History and Assessment Forms • Organized by Preferred Practice Patterns • First Tab Cross-References Disorders to Guide Practice Patterns • Covers Both Pediatric & Adult Content

 Common Neuromuscular Conditions 
Red Flag Alerts Whatever the practice setting-acute care, rehabilitation, outpatient, extended care, or in a school-turn to

this handy pocket guide to the neurological examination. Small in size, but not in content, it covers all of the common neuromuscular conditions, disorders, and diseases you might encountered in patients throughout their lifespans. A spiral binding, thumb tabs and nearly 240 illustrations insure you can find just what you're looking for. Waterproof, reusable pages let you record clinical data and then wipe the pages clean with alcohol.



### **Optimizing Cognitive Rehabilitation:** Effective Instructional Methods

By McKay Moore Sohlberg, PHD, CCC-SLP, and Lyn S. Turkstra, PHD, CCC-SLP Unique in its focus, this book presents evidence-based instructional methods specifically designed to help this population learn more efficiently. The expert authors show how to develop, implement, and evaluate an individualized training plan. They provide practical guidelines for teaching multistep procedures, cognitive strategies, the use of external aids, and more.

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### Live Seminar Schedule

7:30 Registration/Morning Coffee & Tea 8:00 Program begins

1 Hour Lunch (on your own)

3:30 Program ends

There will be two 15-min breaks (mid-morning & mid-afternoon). Actual lunch and break start times are at the discretion of the speaker. A more detailed schedule is available upon request.

#### Live Seminar Continuing Education Credit Information

#### Credits listed below are for full attendance at the live event only. After

attendance has been verified, pre-registered attendees will receive an email from PESI Customer Service with the subject line, "Evaluation and Certificate" within one week. This email will contain a link to complete the seminar evaluation and allow attendees to print, email or download a certificate of completion if in full attendance. For those in partial attendance (arrived late or left early), a letter of attendance is available through that link and an adjusted certificate of completion reflecting partial credit will be issued within 30 days (if your board allows). Please see "LIVE SEMINAR SCHEDULE" on this brochure for full attendance start and end times. NOTE: Boards do not allow credit for breaks or lunch.

If your profession is not listed, please contact your licensing board to determin your continuing education requirements and check for reciprocal approval. For other credit inquiries not specified below, or questions on home study credit availability, please contact cepesi@pesi.com or 800-844-8260 before the event.

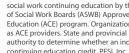
Materials that are included in this course may include interventions and modalitie that are beyond the authorized practice of mental health professionals. As a licensed professional, you are responsible for reviewing the scope of practice, including activities that are defined in law as beyond the boundaries of practice in accordance with and in compliance with your profession's standards.

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South Carolina Physical Therapists & Physical Therapist Assistants: This

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#### S37.95\* Neuro Notes: Clinical Pocket Guide (RNV020789) □ \$57.00\* Optimizing Cognitive Rehabilitation: Effective

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#### **4** Select Payment Method

#### All registrations must be prepaid.

Check enclosed payable to PESI, Inc.

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Walk-ins are welcome but admission cannot be guaranteed Contact us for space availability if registering within one week of seminar.

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