

# 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. Wernicke's areas
- Function of the arcuate fasciculus upon communication

### 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

EAST HARTFORD, CT  
Monday, September 9, 2019

SHELTON, CT  
Tuesday, September 10, 2019

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# Addressing Patient Behavior by Brain Lesion Site



Clinical Tools & Strategies Specific to Patient Deficits

- 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

### 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

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Addressing Patient Behavior  
by Brain Lesion Site

Clinical Tools &  
Strategies Specific  
to Patients Deficits

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

**STEPHANIE HENIGIN, MA, CCC-SLP**, specializes in diagnosis and treatment of cognitive-linguistic deficits, neurodegenerative diseases, dysphagia, motor speech disorders, and brain injury. An experienced instructor with a dynamic, hands-on teaching style, she is highly regarded for her lectures and presentations at universities and professional associations.

Ms. Henigin works with adult and geriatric populations at a Level 1 Trauma Hospital in Saint Paul, MN. In addition, she serves as a community support group facilitator for individuals with aphasia and traumatic brain injury (TBI), provides clinical supervision to graduate students, and writes health literacy materials. She earned her bachelor’s and master’s degrees in communication sciences and disorders from the University of Minnesota Duluth.

Speaker Disclosures:  
Financial: Stephanie Henigin has an employment relationship with Regions Hospital. She receives a consulting fee from Minnesota Connect Aphasia Now; SLP Insights; and Benedictine Health Systems/Cerenity Senior Care. Ms. Henigin receives a speaking honorarium from PESI, Inc.  
Non-financial: Stephanie Henigin is a member of the American Speech-Language-Hearing Association; and the Minnesota 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.

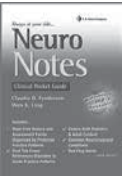
6. Recommend simple neuroanatomy-based techniques to rapidly de-escalate stress for patients and caretakers.

7. Assess neuro-behavioral barriers that impact new learning.



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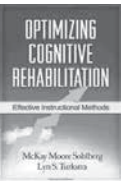


**Neuro Notes: Clinical Pocket Guide**

By Claudia Fenderson, PT, ED.D., PCS &Wen Ling, PT, PH.D.

- 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

**12:00-1:00** 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.



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If your profession is not listed, please contact your licensing board to determine 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](mailto:cepesi@pesi.com) or 800-844-8260 before the event.

Materials that are included in this course may include interventions and modalities 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.

PESI, Inc. offers continuing education programs and products under the brand names PESI, PESI Healthcare, PESI Rehab and Psychotherapy Networker.

**NURSES/NURSE PRACTITIONER/CLINICAL NURSE SPECIALISTS:** PESI, Inc. is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center’s Commission on Accreditation.

Nurses in full attendance will earn 6.0 contact hours. Partial contact hours will be awarded for partial attendance.

**OCCUPATIONAL THERAPISTS & OCCUPATIONAL THERAPY ASSISTANTS:** PESI, Inc. is an AOTA Approved Provider of continuing education. Provider #: 3322. Full attendance at this course qualifies for 6.0 contact hours or .6 CEUs in the Category of Domain of OT and Occupational Therapy Process. Partial credit will be issued for partial attendance. The assignment of AOTA CEUs does not imply endorsement of specific course content, products, or clinical procedures by AOTA. Course Level: Intermediate.

**PHYSICAL THERAPISTS & PHYSICAL THERAPIST ASSISTANTS:** This activity consists of 6.0 clock hours of instruction that is applicable for physical therapists. CE requirements for physical therapists vary per state/jurisdiction. Please retain the certificate of completion that you receive and use as proof of completion when required.



**information for number of ASHA CEUs, instructional level and content area.** ASHA CE Provider approval does not imply endorsement of course content, specific products or clinical procedures.

PESI, Inc. is approved by the Continuing Education Board of the American Speech-Language-Hearing Association (ASHA) to provide continuing education activities in speech-language pathology and audiology. See course

**SPEECH-LANGUAGE PATHOLOGISTS:** This course is offered for 6 ASHA CEUs (Intermediate level, Professional area).

**SPEECH-LANGUAGE PATHOLOGISTS ONLY:** To be reported to ASHA, while completing the online post-test/evaluation, please answer YES to the question: “Are you a Speech-Language Pathologists and/or Audiologist requesting to have your CEUs reported to the ASHA CE Registry?” and include your ASHA number. After completing and passing the online post-test/evaluation, your information will automatically be sent to [cepesi@pesi.com](mailto:cepesi@pesi.com) to be reported. If you forget to answer yes, please send an email to [cepesi@pesi.com](mailto:cepesi@pesi.com) with the following information: full title of the activity, speaker name, date of live broadcast, date you completed the post-test, and your name and your license number.

**SOCIAL WORKERS:** PESI, Inc., #1062, is approved to offer social work continuing education by the Association of Social Work Boards (ASWB) Approved Continuing Education (ACE) program. Organizations, not individual courses, are approved as ACE providers. State and provincial regulatory boards have the final authority to determine whether an individual course may be accepted for continuing education credit. PESI, Inc. maintains responsibility for the course. ACE provider approval period: January 27, 2017 - January 27, 2020. Social Workers completing this course receive 6.0 Clinical Practice continuing education credits for completing this course. Course Level: Intermediate. A certificate of attendance will be awarded at the end of the program to social workers who complete the program evaluation. Full attendance is required; no partial credits will be offered for partial attendance.

**OTHER PROFESSIONS:** This activity qualifies for 360 minutes of instructional content as required by many national, state and local licensing boards and professional organizations. Save your course outline and certificate of completion, and contact your own board or organization for specific requirements.



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• **\$30 Tuition:** If you are interested in being our registration coordinator for the day, go to: [www.pesirehab.com/coord](http://www.pesirehab.com/coord) for availability and job description, or call our Customer Service Dept. at 800-844-8260.

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