Translating the Science to Practice: Neuroplasticity and Motor Learning in Neurological Rehabilitation

Speaker: Jill Seale, PT, PhD, NCS

General Info

Open to: Physical Therapists (PT), Physical Therapy Assistants (PTA), Occupational Therapists (OT), Occupational Therapy Assistants (OTA), Speech Language Pathologists (SLP), Nurses, Case Managers (CM), Social Workers (SW)

Course date: Saturday, August 3, 2019
Time: Registration at 7:30 a.m., course 8 a.m. – 5 p.m.
Location: TIRR Memorial Hermann
1333 Moursund, Houston, TX 77030
Second-floor Research Conference Center
Parking: Garage 6
http://tirr.memorialhermann.org/locations/tirr-memorial-hermann-rehab-hospital/

Recommended pre-course activity:


Handouts
Electronic handouts will be shared with all attendees prior to the course via email. Please print or download the materials prior to the course for your use. Wi-Fi is available to all; however, we cannot ensure connectivity at all times.

Overview

Description
This course will provide a brief focused review of current literature of neuroplasticity and the clinical research demonstrating the occurrence of neuroplastic changes following injury. In this course, participants will review the models of motor learning, along with the supporting and contradictory evidence related to each model. Current treatment approaches will be discussed in the light of the motor control and motor learning models. Pertinent evidence related to feedback, practice, motivation, attentional focus and other contributors to motor learning will be discussed. This course will review the necessary ingredients to drive neuroplastic changes and offer practical examples of creating rehabilitation interventions to integrate these into a plan of care that is evidence based to maximize recovery. Participants will have an opportunity to apply this knowledge through written and video case studies.

Learning objectives
Upon completion of this course, participants will be able to:
1. Review the concepts of neuroplasticity and its relationship to motor learning and recovery of function.
2. Identify and understand historical and current motor learning theories/models.

(continued)
3. Examine supporting and contradictory evidence for each model.
4. Apply motor learning models to clinical examples in current treatment approaches.
5. Compare/contrast the motor learning approach to other past and current treatment approaches.
7. Identify the active ingredients necessary to drive neuroplasticity.
8. Compare and contrast the current standard of care with optimal rehabilitation as defined by literature.
9. Integrate motor learning concepts into treatment planning with actual patient cases.
10. Evaluate and revise treatment plans of care based on motor learning principles.
11. Formulate treatment activities and plans of care that incorporate the concepts identified as critical for neuroplasticity.

Assessment of learning objectives: Question and answer, course feedback form

Speaker

Jill Seale, PT, PhD, NCS

Jill has been a licensed physical therapist (PT) for 23 years. She received board certification in the area of neurologic physical therapy from the American Physical Therapy Association (APTA) Board of Clinical Specialties in 2004 and her Neurologic Clinical Specialist (NCS) recertification in 2014. She received her Doctor of Philosophy (PhD) in physical therapy in 2010 from Texas Woman’s University.

Jill has practiced almost exclusively in the field of Brain Injury and Stroke rehabilitation. She has a variety of teaching experiences in physical therapy academia as well as in the healthcare community at large. She is currently part of the faculty in the Doctorate of Physical Therapy (DPT) program at South College. She has served as core faculty in a neurological physical therapy residency program, guest lectures at the Baylor College of Medicine Master of Orthotics and Prosthetics program and teaches in several online and onsite continuing education programs. She has taught and presented in (continued)
the areas of neurological pathology, rehabilitation, gait, orthotics, mentoring and research, and is currently involved in clinical research in stroke rehabilitation, orthotic management, and gait analysis/rehabilitation.

**Financial:** Speaker engagement expenses

**Non-financial:** None reported

**Speaker disclosures and conflicts of interest:**
Policy and procedures exist whereby all speakers must disclose any relationships that may cause a conflict of interest. Any relevant financial and non-financial relationships will be disclosed via speaker agreement, written notification after agreement and prior to presentation.

## Program Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:30 – 8 a.m.</td>
<td>Registration and light refreshments</td>
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<tr>
<td>8 – 10 a.m.</td>
<td>Science of neuroplasticity and motor learning</td>
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<tr>
<td>10 – 10:15 a.m.</td>
<td>Break</td>
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<tr>
<td>10:15 a.m. - 12 p.m.</td>
<td>Current practice / compared with the science</td>
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<tr>
<td>12 – 1 p.m.</td>
<td>Lunch provided</td>
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<tr>
<td>1 – 3 p.m.</td>
<td>Applying the science to maximize recovery</td>
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<tr>
<td>3 – 3:15 p.m.</td>
<td>Break</td>
</tr>
<tr>
<td>3:15 – 4:45 p.m.</td>
<td>Tangible strategies for improving current practice</td>
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<tr>
<td>4:45 – 5 p.m.</td>
<td>Q/A, discussion, course evaluation</td>
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**Instructional methods used:** Lecture, discussion, PowerPoint presentations

## Education

### Attendance
Participants must attend the entire course in order to receive continuing education units/continuing competence units and course certificate.

No partial credits will be given.
Target audience
PTs, PTAs, OTs, OTAs, SLPs, nurses, SWs, CM clinicians looking to advance their clinical expertise in neurological rehabilitation related to neuroplasticity / motor control / motor learning.

Instructional level: Intermediate

OT: Memorial Hermann Health System is an American Occupational Therapy Association (AOTA) approved provider of CEU. The assignment of AOTA CEUs does not imply endorsement of specific course content, products or clinical procedures from AOTA. No partial credits will be given.
AOTA CEUs: 0.75
Contact hours: 7.5
AOTA classification code: Occupational Therapy Process - Intervention
AOTA instructional level: Intermediate
OT participants MUST ATTEND ENTIRE COURSE in order to receive CEUs/CCUs and course certificate. No partial credits will be given.

PT: Memorial Hermann Health System is a Texas Physical Therapy Association (TPTA) approved provider of continuing education. This course meets CCU requirements for physical therapist and physical therapist assistant licensure renewal in Texas. No partial credits will be given.
TPTA CCUs: 7.5
PT participants MUST ATTEND ENTIRE COURSE in order to receive CEUs/CCUs and course certificate. No partial credits will be given.
SLP: Memorial Hermann Health System is an American Speech and Hearing Association (ASHA) approved provider of continuing education, provider ID ABAF. The assignment of ASHA CEUs does not imply endorsement of specific course content, products or clinical procedures from ASHA.

ASHA CEUs: 0.75

SLP participants must attend entire course in order to received CEUs and course certificate. No partial credits will be given.

ASHA classification code: 1070

Nursing

Memorial Hermann Health System is an approved provider of continuing nursing education by the Texas Nurses Association, an accredited approver with distinction by the American Nurses Credentialing Center’s Commission on Accreditation.

Instructional level: Intermediate

Contact hours: 7.5

Social work: Texas State Board of Social Worker Examiners has approved Memorial Hermann Health System to provide continuing-education activities for social workers.

Instructional level: Intermediate

Contact hours: 7.5
Registration

Class size: Registration is open to 40; registration closes at capacity, or by July 29, 2019.

Cost/registration
Non-employee: $175; MHHS Rehab Service Line Employee: $75.

MHHS employees must register with their MHHS email addresses to receive the employee benefit.

Cancellation fee
Refunds, minus 25% administrative fee, will be granted if cancellation notice is received in writing according to the stated cancellation policy below.

Cancellation policy
If you register and do not attend or do not fulfill the requirements of the class, your course and all other associated fees will not be refunded. All cancellations must be in writing 14 days prior to the course start date to ContinuingEducationRegistration@memorialhermann.org. Refunds will not be granted past this date.

Cancellation of the event by TIRR Memorial Hermann will result in a full refund of monies received. Cancellation by the sponsor/instructor will result in a full refund of the tuition. Sponsor/instructor is not responsible for additional expenses incurred by registrants.

TIRR Memorial Hermann reserves the right to cancel or change any programs for due cause. Cancellation of the event by TIRR Memorial Hermann will result in a full registration refund of monies received. TIRR Memorial Hermann is not responsible for the refund of travel or hotel expenses under any circumstances. In the event of a course cancellation, participants will be notified via email and contact phone number on the registration form below. Please fill out all information in the registration form.

Assistance
All participants in Memorial Hermann continuing-education courses are entitled to an accessible, accommodating and supportive teaching and learning environment. Please email or note on the registration form any specific needs we can work to assist you with. (continued)
Complaints
Complaints of faculty and participants are handled with dignity and respect by the course coordinator and/or director of education, with resolution of the complaint communicated to all involved parties.

Questions
Call 713.797.7432, or email ContinuingEducationRegistration@memorialhermann.org.