



HARVARD
MEDICAL SCHOOL

NeuroRehabilitation

June 18-20 • Waltham, MA **2020**

This course sold out the last three years. Early registration is strongly advised.

Stroke • Concussion • TBI • SCI • Degenerative Neurological Diseases



State-of-the-Art Rehabilitation Strategies and Practices to:

- Accelerate recovery
- Improve clinical skills
- Reduce symptoms
- Advance patient well-being
- Elevate patients to their maximum level of function

Earn up to
17.75 AMA PRA Category 1 Credits™
17.75 CNE contact hours

This educational activity has been submitted for continuing education credits (CEUs)

Updates, Innovations, and Best Practices for

Physiatrists	PTs	Neuropsychologists
Neurologists	OTs	Clinical Psychologists
Psychiatrists	SLPs	Mental Health Counselors
Internists	NPs	Clinical Social Workers
Geriatricians	PAs	Case Managers
Family Physicians	Nurses	

Register at NeuroRehab.HMSCME.com





HARVARD MEDICAL SCHOOL

COURSE DIRECTORS



Ross Zafonte, DO



Mel Glenn, MD

Dear Colleague,

Patients with stroke, TBI, SCI, and degenerative neurological diseases face significant disruption to so many facets of their lives, and clinicians are left with so many treatment dimensions to consider, that rehabilitation is never simple. These challenges are compounded by the fact that rehabilitation approaches are now in a period of rapid expansion. It's difficult to stay current with, choose, and use the best options for neurorehabilitation—yet this is key to optimizing patient outcomes.

It's with these challenges in mind that we provide this annual program: NeuroRehabilitation 2020. Many of the country's most experienced and committed neurorehabilitation experts will present practical, cutting-edge clinical interventions to further your expertise in guiding patients to their maximum level of function. Participants will learn of state-of-the-art research and its application to clinical practice in such diverse topics as exercise, pharmacology, technology, wellness, patient motivation, and caregiver assistance.

Clinicians who provide care for patients with CNS trauma and neurological diseases can rely on this update for proven practices and take-home tools to heighten your success in effectively and efficiently helping your patients gain the skills that will improve their health and quality of life.

Our goal is to provide an experience that inspires you, advances your knowledge and skills, and arms you with new approaches and ideas to accelerate and enhance your patient outcomes.

We look forward to seeing you in June.

ASSISTANT COURSE DIRECTORS



Yelena G. Bodien, PhD



Chloe S. Slocum, MD, MPH

Harvard Medical School Faculty

Ross Zafonte, DO
Earle P. and Ida S. Charlton
Professor and Chair of Physical
Medicine and Rehabilitation

Grant Iverson, PhD
Professor of Physical Medicine
and Rehabilitation

Joseph Giacino, PhD
Professor of Physical Medicine
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Felipe Fregni, MD, PhD
Associate Professor of Physical
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Mel Glenn, MD
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Paolo Bonato, PhD
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Rehabilitation and Neurology

Justin Brown, MD
Associate Professor of
Neurosurgery

Christopher Carter, PsyD
Instructor in Psychology in the
Department of Psychiatry

Brad Dickerson, MD
Associate Professor of Neurology

Mary Dubon, MD
Instructor in Physical Medicine and
Rehabilitation

Elizabeth Frates, MD
Assistant Professor of Physical
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Part-time

Leigh Hochberg, MD, PhD
Senior Lecturer in Neurology,
Part-time

Kevin Houston, OD
Instructor in Ophthalmology

M. Alexis Iaccarino, MD
Instructor in Physical Medicine
and Rehabilitation

Jonathan Jackson, PhD
Instructor in Neurology

Sasha Knowlton, MD
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Randy Trumbower, PT, PhD
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Massachusetts General Hospital

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Harvard Medical School and
Spaulding Rehabilitation Hospital

Guest Faculty

James Malec, PhD
Professor Emeritus of Physical Medicine and Rehabilitation,
Indiana University

Marilyn Spivack
Neurotrauma Outreach Coordinator, Spaulding
Rehabilitation Hospital; Co-founder of the Brain Injury
Association of America

Marcallee Sipski Alexander, MD
Research Associate in Physical Medicine and Rehabilitation,
Harvard Medical School

Michelle Gannan, MS, CCC-SLP
Speech Pathologist, Assistive Technology Clinic,
Spaulding Rehabilitation Hospital

Megan Gill, PT, DPT, NCS
Physical Therapist, Rehabilitation Medicine Research
Center, Spinal Cord Injury, Mayo Clinic

Brian Harris, MA, MT-BC, NMT/F
Neurologic Music Therapist, Spaulding Rehabilitation
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Clinical Lab Instructor, MGH Institute of Health Professionals

Leon Morales-Quezada, MD, PhD
Research Fellow in Physical Medicine and Rehabilitation,
Harvard Medical School

Ronald Triolo, PhD
Professor, Orthopaedics and Biomedical Engineering, Case
Western Reserve University; Executive Director, Advanced
Platform Technology Center, Department of Veterans Affairs

Register at NeuroRehab.HMSCME.com

NeuroRehabilitation 2020

Course Description

As neurorehabilitation evolves, it becomes increasingly challenging for clinicians to maintain state-of-the-art care of their patients. This course will use plenary lectures and smaller breakout sessions, including interactive case-based workshops, to update the audience on medical, psychological, physical, and cognitive approaches to neurorehabilitation. Based on their participation in the course, participants will be able to expand their clinical knowledge and enhance those skills needed to maximize the physical, cognitive, and social function of patients with traumatic brain injury, spinal cord injury, stroke, and neurodegenerative disease. Participants will learn of state-of-the-art research and its application to clinical practice in such diverse topics as exercise, pharmacology, technology, wellness, integrative medicine, patient motivation, and caregiver assistance.

Learning Objectives

Upon completion of this course, participants will be able to:

- Summarize the research evidence base for neurorehabilitation practice.
- Integrate state-of-the-art, evidence-based approaches to neurorehabilitation into their care of patients.
- Evaluate advances in research that will lead to future approaches to neurorehabilitation.
- Relate what extremes of recovery tell us about neurorehabilitation.
- Explain the benefits of using motivational interviewing and the coach approach to empower people to change behavior.
- Describe the human placebo and nocebo effects and recognize the environmental factors that influence these processes.
- Evaluate surgical options for musculotendinous and neural transfers in the upper limb of patients with CNS disorders.
- Recall benefits of music therapy to neurorehabilitation.
- List treatments for substance abuse in neurorehabilitation patients.
- Give examples of factors that will help to shape the future of post-acute care in the U.S.
- Discuss appropriate vestibular treatments following TBI
- Describe methods to assess social behavior in patients with neurodegenerative disease
- Report on emergent diagnostic criteria for Alzheimer's disease

Accreditation

PHYSICIANS

The Harvard Medical School is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

The Harvard Medical School designates this live activity for a maximum of 17.75 *AMA PRA Category 1 Credits*[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

PHYSICAL THERAPISTS, SPEECH-LANGUAGE PATHOLOGISTS, and OCCUPATIONAL THERAPISTS

This educational program has been submitted for continuing education credits (CEUs). Please check the course website for updates.

NURSES

Harvard Medical School is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation. This activity is approved for 17.75 contact hours. *Contact hours are awarded commensurate with participation and completion of the online evaluation and attendance attestation. We suggest claiming your hours within 30 days of the activity date; after this time, the attendance attestation will still be required to claim your hours.*

PHYSICIAN ASSISTANTS

The National Commission on Certification of Physician Assistants (NCCPA) states that *AMA PRA Category 1 Credits*[™] are acceptable for continuing medical education requirements for recertification. We would also suggest that learners check with their state licensing board to ensure they accept reciprocity with *AMA PRA Category 1 Credit*[™] for re-licensure.

CANADIAN ACCREDITATION

The Royal College of Physicians and Surgeons of Canada recognizes conferences and workshops held outside of Canada that are developed by a university, academy, hospital, specialty society or college as accredited group learning activities.

EUROPEAN ACCREDITATION

Through an agreement between the American Medical Association and the European Union of Medical Specialists, physicians may convert *AMA PRA Category 1 Credit*[™] to an equivalent number of European CME Credits[®] (ECMECs[®]). Information on the process of converting *AMA PRA Category 1 Credits*[™] to ECMECs[®] can be found at: www.eaccme.eu.

Thursday • June 18

Friday • June 19

7:15am	Registration and Continental Breakfast
8:15am	Welcome and Announcements Mel Glenn, MD
8:25am	KEYNOTE ADDRESS: What Extremes of Recovery Tell Us about Neurorehabilitation Ross Zafonte, DO
9:05am	Q&A with Dr. Zafonte
9:15am	Transition to Breakouts
9:20am	Case-Based and Interactive Breakout Sessions 1A-1C <i>Each of these sessions includes 10 minutes of Q&A</i>
1A	Chronic TBI/Aging with TBI Mel Glenn, MD
1B	The Course of Recovery after Stroke Shirley Shih, MD
1C	The Use of Advanced Technology for SCI Neurorehabilitation Clinical Practice Megan Gill, PT, DPT, NCS
10:10am	Break (refreshments provided)
10:30am	Case-Based and Interactive Breakout Sessions 2A-2C <i>Each of these sessions includes 10 minutes of Q&A</i>
2A	Vestibular Rehabilitation following TBI Kathryn MacDonald, PT, DPT
2B	Rehabilitation Approaches to Caring for Patients with Brain Tumors Shirley Shih, MD and Sasha Knowlton, MD
2C	Acute Intermittent Hypoxia: A Breathtaking Approach Randy Trumbower, PT, PhD
11:20am	Transition
11:25am	Case-Based and Interactive Breakout Sessions 3A-3C <i>Each of these sessions includes 10 minutes of Q&A</i>
3A	The Postacute Confusional State after TBI Yelena Bodien, PhD
3B	Social Cognition and Affective Processing in Neurodegenerative Disease Brad Dickerson, MD
3C	Aging after SCI Sunil Sabharwal, MD
12:15pm	Lunch Buffet (Provided)
1:15pm	Surgical Approaches to Neuro-Orthopedic Disorders of the Upper Limb: Case Studies Chaitanya Mudgal, MD and Justin Brown, MD
2:15pm	Q&A with Drs. Brown and Mudgal
2:25pm	Transition to Breakouts
2:30pm	Case-Based and Interactive Breakout Sessions 4A-4C <i>Each of these sessions includes 10 minutes of Q&A</i>
4A/4B	Advances in Cognitive Rehabilitation in TBI and Stroke, Part 1 James Malec, PhD
4C	Epidural Electrical Stimulation for Recovery after SCI Megan Gill, PT, DPT, NCS
3:30pm	Break (refreshments provided)
3:40pm	Case-Based and Interactive Breakout Sessions 5A-5C <i>Each of these sessions includes 10 minutes of Q&A</i>
5A/5B	Advances in Cognitive Rehabilitation in TBI and Stroke, Part 2 James Malec, PhD
5C	Neural Stimulation for Ambulation after SCI Ronald Triolo, PhD
4:40pm	Transition to Plenary
4:45pm	The Benefits of Music Therapy in Neurorehabilitation Brian Harris, MA, MT-BC, NMT/F
5:30pm	Q&A with Mr. Harris
5:40pm	Daily Program Ends

7:15am	Continental Breakfast
8:15am	Substance Abuse in Neurorehabilitation Christopher Carter, PsyD
8:55am	Q&A with Dr. Carter
9:05am	Transition to Breakouts
9:10am	Case-Based and Interactive Breakout Sessions 6A-6C <i>Each of these sessions includes 10 minutes of Q&A</i>
6A	Evaluation of Patients with Disorders of Consciousness Joseph Giacino, PhD
6B	Models of Monitoring Stroke Recovery David Lin, MD
6C	Sexuality after SCI Marcalee Sipski Alexander, MD
10:00am	Break (refreshments provided)
10:20am	Case-Based and Interactive Breakout Sessions 7A-7C <i>Each of these sessions includes 10 minutes of Q&A</i>
7A	Management of Patients with Disorders of Consciousness: State of the Science Joseph Giacino, PhD
7B	Addressing the Challenges of Early Mobilization of the Stroke Patient in the ICU Nicole Mazwi, MD
7C	Autonomic Dysfunction after SCI Chloe Slocum, MD, MPH
11:10am	Transition to Plenary
11:15am	KEYNOTE ADDRESS: Harnessing the Placebo Effect for Improved Outcomes M. Alexis Iaccarino, MD
11:55am	Q&A with Dr. Iaccarino
12:05pm	Lunch Buffet (Provided)
1:05pm	Case-Based and Interactive Breakout Sessions 8A-8C <i>Each of these sessions includes 10 minutes of Q&A</i>
8A	The Etiology of Post-Concussion Symptoms after Mild TBI: A Biopsychosocial Model Grant Iverson, PhD
8B	Optimizing the Intensity of Aphasia Therapy Swathi Kiran, PhD, CCC-SLP
8C	Brain-Computer Interfaces Leigh Hochberg, MD, PhD
1:55pm	Transition
2:00pm	Case-Based and Interactive Breakout Sessions 9A-9C <i>Each of these sessions includes 10 minutes of Q&A</i>
9A	Active Rehabilitation for Post-Concussion Symptoms after Mild TBI M. Alexis Iaccarino, MD
9B	Current and Future Treatment of Alzheimer's Disease Jonathan Jackson, PhD
9C	Neuromuscular Electrical Stimulation for Exercise after SCI J. Andrew Taylor, PhD
2:50pm	Break (refreshments provided)
3:10pm	Case-Based and Interactive Breakout Sessions 10A-10C <i>Each of these sessions includes 10 minutes of Q&A</i>
10A	Rehabilitation of Visual Disorders after TBI Kevin Houston, OD
10B	Exercise for Neurodegenerative Disease Chloe Slocum, MD, MPH
10C	Trajectories of Participation and Psychosocial Well-Being after SCI Hannah Mercier, PhD, OTR/L
4:00pm	Transition to Breakouts

Program changes/substitutions may be made without notice. To view the most up-to-date version of the course program, please visit the course website.

4:05pm	Case-Based and Interactive Breakout Sessions 11A-11C <i>Each of these sessions includes 10 minutes of Q&A</i>
11A	Functional Neuroimaging in Disorders of Consciousness Yelena Bodien, PhD
11B	Wearable Technology for ADLs, Mobility, Exercise, and Physiological Monitoring in Stroke Rehabilitation Paolo Bonato, PhD
11C	Sleep Apnea after SCI Chloe Slocum, MD, MPH
4:55pm	Daily Program Ends

Saturday • June 20

7:30am	Continental Breakfast
8:30am	KEYNOTE ADDRESS: Wellness Groups and Motivational Interviewing in the Continuum of Neurorehabilitation Elizabeth Frates, MD
9:20am	Q&A with Dr. Frates
9:30am	Transition to Breakouts
9:35am	Case-Based and Interactive Breakout Sessions 12A-12C <i>Each of these sessions includes 10 minutes of Q&A</i>
12A	Psychopharmacologic Approaches to Affective and Executive Disorders after TBI Mel Glenn, MD
12B	TMS and tDCS to Facilitate Recovery after Stroke Felipe Fregni, MD, PhD and Leon Morales-Quezada, MD, PhD
12C	Sports and Exercise for People with SCI Mary Dubon, MD
10:25am	Break (refreshments provided)
10:45am	Case-Based and Interactive Breakout Sessions 13A-13C <i>Each of these sessions includes 10 minutes of Q&A</i>
13A	Chronic Traumatic Encephalopathy Ross Zafonte, DO
13B	Augmentative and Alternative Communication after Stroke Michelle Gannan, MS, CCC-SLP
13C	The Shoulder after SCI Mary Dubon, MD
11:35am	Transition to Plenary
11:40am	KEYNOTE ADDRESS: The Postacute Continuum of Care: Where Are We Heading? Ross Zafonte, DO and Marilyn Spivack
12:20pm	Q&A with Dr. Zafonte and Ms. Spivack
12:30pm	Closing Remarks Mel Glenn, MD
12:35pm	Course Concludes

How to enhance and accelerate recovery with:

- Pharmacologic interventions
- Transcranial magnetic and direct current stimulation
- Spinal stimulation after SCI
- Early mobilization in the ICU
- Functional electrical stimulation
- Upper extremity muscle-tendon-nerve transfers
- Approaches to ambulation after SCI: advanced technology
- Vestibular rehabilitation
- Visual rehabilitation
- Augmentative and alternative communication
- Intensive language therapy
- Treatment of substance abuse
- Music therapy

New strategies to improve quality of life

- Wellness interventions
- Motivational interviewing
- Sports and exercise
- Addressing sexuality after SCI

Evolving treatment options

This program offers attendees the opportunity to learn about the future of treatment options and how and when they will impact patient outcomes:

- Spinal stimulation after SCI
- Brain-computer interface
- Functional neuroimaging in disorders of consciousness
- Hypoxia for recovery after SCI
- Changes in the continuum of care
- Harnessing the placebo effect
- Alzheimer's disease therapies

Updates for a wide range of neurological conditions

- Post-concussion symptoms
- Chronic traumatic encephalopathy
- Aging with TBI and SCI
- Social cognition and affective processing
- Autonomic dysfunction after SCI

Stroke • Concussion • TBI • SCI • Degenerative Neurological Diseases



State-of-the-Art Rehabilitation Strategies and Practices to:

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Stroke • Concussion • TBI • Degenerative Neurological Diseases



- Extremes of recovery
- Surgical interventions for upper limb function
- Expanded pharmacologic interventions
- Advances in concussion management
- State of the science in disorders of consciousness
- Early mobilization in the ICU
- Wellness interventions
- Functional neuroimaging
- Advanced technology in clinical practice: gait, augmentative communication
- Spinal cord stimulation to enhance recovery from SCI
- Functional electrical stimulation for people with SCI
- Neural stimulation for ambulation after SCI
- Hypoxia to enhance recovery after SCI
- Music therapy
- Update on autonomic dysfunction after SCI
- Exercise in neurodegenerative disease
- Novel and evolving treatment options

Course Directors
Ross Zafonte, DO
Mel Glenn, MD

Register at NeuroRehab.HMSCME.com



HARVARD MEDICAL SCHOOL

Register at NeuroRehab.HMSCME.com

NeuroRehabilitation 2020

(Course #734714-2002)

	Register after April 30, 2020	Register on or before April 30, 2020
Course Tuition	\$1,095	\$995 (SAVE \$100)
Residents, Fellows, and Students	\$995	\$895 (SAVE \$100)

Your tuition includes continental breakfast and morning refreshment breaks each day, buffet lunch and afternoon refreshments on Thursday and Friday, and the course syllabus online. Parking is free of charge, and complimentary internet access is provided in the meeting rooms.

REGISTRATION, PAYMENT, CONFIRMATION, and REFUND POLICY

Registrations for Harvard Medical School CME programs are made via our secure online registration system. To register for this course, please visit the course website at NeuroRehab.HMSCME.com.

At the end of the registration process, a \$10 non-refundable processing fee will be added to your registration, and you will have the choice of paying by check, credit card (Visa, MasterCard, or American Express), or wire transfer in USD. If you are paying by check (draft on a United States bank) or by wire transfer, the online registration system will provide you with instructions for remitting your course fees. Postal, telephone, fax, and cash-payment registrations are not accepted. Fees shown in USD.

Upon receipt of your paid registration, an email confirmation will be sent to you. Be sure to include an email address that you check frequently. Your email address is used for critical information, including registration confirmation, evaluation, and certificate. **Please do not make non-refundable travel arrangements until you have received an email confirming your paid registration.** Refunds, less an administrative fee of \$75, will be issued for all cancellations received two weeks prior to the start of the course. Refund requests must be received by email. No refund will be issued should cancellation occur less than two weeks prior. "No shows" are subject to the full course fee and no refunds will be issued once the course has started.

INQUIRIES

Call 617-384-8600 Mon-Fri 9am – 5pm (ET) or e-mail CEPrograms@hms.harvard.edu

ACCOMMODATIONS

The following hotels have reserved blocks of discounted rooms for course participants. For details on how to make your reservation, please visit the Venue page of the course website at NeuroRehab.HMSCME.com/Venue. Please note:

- The number of discounted rooms is limited.
- Discounted rooms are available on a first-come, first-served basis.
- The discounted room rate is only available until the cutoff date listed, or until the block sells out.

Embassy Suites by Hilton Boston Waltham

550 Winter Street, Waltham, MA 02451
781-890-6767

(Special rate expires 5/17/20)

Holiday Inn Express Boston-Waltham

385 Winter Street, Waltham, MA 02451
781-890-2800

(Special rate expires 4/16/20)

The Westin Waltham Boston

70 Third Avenue, Waltham, MA 02451
781-290-5600

(Special rate expires 5/28/20)



VENUE

The Conference Center at Waltham Woods
860 Winter Street • Waltham, MA 02451
781-434-7499

www.conferencecenteratwalthamwoods.com

Situated on the award-winning campus of the Massachusetts Medical Society, Waltham Woods offers excellent and abundant food, ample free parking, and complimentary internet access.