



**HARVARD**  
MEDICAL SCHOOL

# NeuroRehabilitation

June 15-17 • Waltham, MA **2017**

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 15.00 *AMA PRA Category 1 Credits™*

15.5 hours of continuing education credit for PTs, OTs, SLPs

**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 Practitioners	Nurses	

**Register at [NeuroRehab.HMSCME.com](http://NeuroRehab.HMSCME.com)**





# HARVARD MEDICAL SCHOOL

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 are introducing this exciting new program: NeuroRehabilitation 2017. 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, integrative medicine, patient motivation, and caregiver assistance.

Clinicians who provide care for patients with CNS trauma and neurological diseases can rely on this new 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 Boston in June.



Ross Zafonte, DO



Mel Glenn, MD



Yelena Bodien, PhD

## Who Should Attend

### Physicians

- Psychiatrists
- Neurologists
- Psychiatrists
- Internists
- Geriatricians
- Family Practitioners

### Allied Health

#### Professionals

- Physical Therapists
- Occupational Therapists
- Speech-Language Pathologists
- Nurse Practitioners
- Physician Assistants
- Nurses

### Mental and Other Health

#### Professionals

- Neuropsychologists
- Clinical Psychologists
- Mental Health Counselors
- Clinical Social Workers
- Case Managers

# Course Faculty

## Course Directors

### Ross Zafonte, DO

Vice President of Medical Affairs, Research and Education, Spaulding Rehabilitation Network  
Chief, Physical Medicine and Rehabilitation, Massachusetts General Hospital  
Chief, Physical Medicine and Rehabilitation, Brigham and Women's Hospital  
Earle P. and Ida S. Charlton Professor and Chair, Department of Physical Medicine and Rehabilitation, Harvard Medical School

### Mel Glenn, MD

Chief, Brain Injury Division, Department of Physical Medicine and Rehabilitation, Spaulding Rehabilitation Network  
Medical Director, NeuroRestorative (Massachusetts)  
Medical Director, Community Rehab Care  
Associate Professor, Department of Physical Medicine and Rehabilitation, Harvard Medical School

### Yelena Bodien, PhD

Instructor, Department of Physical Medicine and Rehabilitation, Harvard Medical School and Spaulding Rehabilitation Hospital

## 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

#### Marcalee Sipski Alexander, MD

Research Associate in Physical Medicine and Rehabilitation

#### Joseph Giacino, PhD

Associate Professor of Physical Medicine and Rehabilitation

#### Mel Glenn, MD

Associate Professor of Physical Medicine and Rehabilitation

#### Marilyn Spivack

Neurotrauma Outreach Coordinator at Spaulding Rehabilitation Hospital  
Co-founder of the Brain Injury Association of America

#### Felipe Fregni, MD, PhD

Associate Professor of Physical Medicine and Rehabilitation

#### Leigh Hochberg, MD, PhD

Senior Lecturer in Neurology, Part-time

#### Randie Black-Schaffer, MD

Assistant Professor of Physical Medicine and Rehabilitation

#### Elizabeth P. Frates, MD

Assistant Professor of Physical Medicine and Rehabilitation, Part-time

#### Brad Dickerson, MD

Associate Professor of Neurology

#### Christopher Carter, PsyD

Instructor in Psychology in the Department of Psychiatry

#### Sunil Sabharwal, MD

Assistant Professor of Physical Medicine and Rehabilitation

#### Paolo Bonato, PhD

Associate Professor of Physical Medicine and Rehabilitation

#### J. Andrew Taylor, PhD

Associate Professor of Physical Medicine and Rehabilitation

#### Cheri Blauwet, MD

Instructor in Physical Medicine and Rehabilitation

#### Chaitanya Mudgal, MCh, MBBS

Associate Professor of Orthopedic Surgery

#### Yelena Guller Bodien, PhD

Instructor in Physical Medicine and Rehabilitation

#### Rajiv Gupta, MD, PhD

Associate Professor of Radiology

#### Brian Harris, MA, MT-BC, NMT/F

Neurologic Music Therapist, Spaulding Rehabilitation Network

#### Seth Herman, MD

Instructor in Physical Medicine and Rehabilitation

#### Ronald Hirschberg, MD

Assistant Professor of Physical Medicine and Rehabilitation

#### Kevin Houston, OD

Instructor in Ophthalmology

#### M. Alexis Iaccarino, MD

Instructor in Physical Medicine and Rehabilitation

#### Jonathan Jackson, PhD

Instructor in Neurology

#### Yong-Tae Lee, MD

Instructor in Physical Medicine and Rehabilitation

#### Kathryn MacDonald, PT, DPT

Lecturer, MGH Institute of Health Professionals

#### Nicole Mazwi, MD

Instructor in Physical Medicine and Rehabilitation

#### Leon Morales-Quezada, MD, PhD

Research Fellow in Physical Medicine and Rehabilitation

#### Marianne Savastano, MS, CCC-SLP

Speech/Language Pathology Practice Leader, Stroke and Spinal Cord Injury Programs, Spaulding Rehabilitation Hospital

#### Yang (Ted) Teng, MD, PhD

Associate Professor of Physical Medicine and Rehabilitation

#### Ariana Vora, MD

Instructor in Physical Medicine and Rehabilitation

#### Nevena Zubcevik, DO

Instructor in Physical Medicine and Rehabilitation

## Guest Faculty

#### John Chae, MD

Professor and Chair of Physical Medicine and Rehabilitation, Case Western Reserve University  
Director, MetroHealth Rehabilitation Institute, MetroHealth System

#### Jonathan Wolpaw, MD

Director, National Center for Adaptive Neurotechnologies  
Professor, Biomedical Sciences, School of Public Health, University at Albany

#### Shanker Nesathurai, MD

Professor, Division of Physical Medicine and Rehabilitation, Department of Medicine, McMaster University

Register at [NeuroRehab.HMSCME.com](http://NeuroRehab.HMSCME.com)

# NeuroRehabilitation 2017

Expanded pharmacologic interventions  
Advances in concussion management  
Early mobilization in the ICU  
Wellness interventions  
Functional neuroimaging  
Neuroendocrine treatment  
Sports and exercise  
Functional electrical stimulation  
Stem cells for SCI  
Motivational interviewing  
Integrative medicine approaches  
Music therapy  
Novel and evolving treatment options



## Course Description

As neurorehabilitation evolves, it is more 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.

## Accreditation

### PHYSICIANS

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

The Harvard Medical School designates this live activity for a maximum of 15.00 *AMA PRA Category 1 Credits*<sup>™</sup>. 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 approved for continuing education credits (CEUs). Please visit the course website for details.

### 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*<sup>™</sup> to an equivalent number of European CME Credits<sup>®</sup> (ECMECs<sup>®</sup>). Information on the process of converting *AMA PRA Category 1 Credits*<sup>™</sup> to ECMECs<sup>®</sup> can be found at: [www.eaccme.eu](http://www.eaccme.eu).

### ABMS/ACGME COMPETENCIES

This course is designed to meet one or more of the following American Board of Medical Specialties and Accreditation Council of Graduate Medical Education competencies: patient care and procedural skills, medical knowledge, and practice-based learning and improvement.

### IOM COMPETENCIES

This course is designed to meet one or more of the following Institute of Medicine competencies: provide patient-centered care, and employ evidence-based practice.

Register at [NeuroRehab.HMSCME.com](http://NeuroRehab.HMSCME.com)

Thursday • June 15	
7:30 am	Registration and Continental Breakfast
8:30 am	<b>Welcome and Announcements</b> Mel Glenn, MD
8:50 am	<b>Wellness Groups and Motivational Interviewing in the Continuum of Neurorehabilitation</b> Elizabeth P. Frates, MD
9:30 am	<b>Q&amp;A with Dr. Frates</b>
9:40 am	Transition to Breakouts
9:45 am	<b>Case-Based and Interactive Breakout Sessions 1A-1C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
1A	<b>The Etiology of Post-Concussion Symptoms after Mild TBI: A Biopsychosocial Model</b> Grant Iverson, PhD
1B	<b>Electrical Stimulation for Function and Restoration after Stroke</b> John Chae, MD
1C	<b>Stem Cell Approaches to Investigating and Treating SCI</b> Yang (Ted) Teng, MD, PhD
10:35 am	Break (refreshments provided)
11:05 am	<b>Case-Based and Interactive Breakout Sessions 2A-2C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
2A	<b>Advances in the Management of Post-Concussion Symptoms after Mild TBI</b> Grant Iverson, PhD
2B	<b>Post-Stroke Shoulder Pain</b> John Chae, MD
2C	<b>Aging with SCI</b> Sunil Sabharwal, MD
11:55 am	Transition to General Session Room
12:00 pm	<b>Harnessing the Placebo Effect for Improved Outcomes</b> M. Alexis Iaccarino, MD
12:40 pm	<b>Q&amp;A with Dr. Iaccarino</b>
12:50 pm	Lunch Buffet (provided)
2:00 pm	<b>Case-Based and Interactive Breakout Sessions 3A-3C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
3A	<b>Chronic Traumatic Encephalopathy</b> Ross Zafonte, DO
3B	<b>Addressing the Challenges of Early Mobilization of the Stroke Patient in the ICU</b> Nicole Mazwi, MD
3C	<b>Cardiopulmonary Issues after SCI: 2017 Update</b> Sunil Sabharwal, MD
2:55 pm	<b>Case-Based and Interactive Breakout Sessions 4A-4C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
4A	<b>Are You Accounting for Neuroendocrine Disorders after TBI?</b> Seth Herman, MD
4B	<b>Exercise for Patients with Parkinson's Disease</b> Ronald Hirschberg, MD
4C	<b>Brain-Computer Interfaces</b> Leigh Hochberg, MD, PhD
3:45 pm	Break (refreshments provided)
4:15 pm	<b>Case-Based and Interactive Breakout Sessions 5A-5C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
5A	<b>Vestibular Rehabilitation following TBI</b> Kathryn MacDonald, PT, DPT
5B	<b>Constraint-Induced Language Therapy</b> Marianne Savastano, MS, CCC-SLP
5C	<b>Recovery Trials in SCI</b> Shanker Nesathurai, MD
5:05 pm	Daily Program Ends

Friday • June 16	
7:30 am	Continental Breakfast
8:30 am	<b>TMS and tDCS to Facilitate Recovery in Disorders of the Central Nervous System</b> Felipe Fregni, MD, PhD and Leon Morales-Quezada, MD, PhD
9:10 am	<b>Q&amp;A with Dr. Fregni and Dr. Morales-Quezada</b>
9:20 am	Transition to Breakouts
9:25 am	<b>Case-Based and Interactive Breakout Sessions 6A-6C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
6A	<b>The Benefits of Music Therapy in Neurorehabilitation</b> Brian Harris, MA, MT-BC, NMT/F
6B	<b>Phenol and Botulinum Toxin after Stroke and Neurodegenerative Disease</b> Mel Glenn, MD
6C	<b>Functional Electrical Stimulation for Exercise after SCI</b> J. Andrew Taylor, PhD
10:15 am	Break (refreshments provided)
10:45 am	<b>Case-Based and Interactive Breakout Sessions 7A-7C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
7A	<b>Helping Survivors to Build Their "New Normal" after TBI</b> Christopher Carter, PsyD
7B	<b>Robotics in Rehabilitation following Stroke</b> Paolo Bonato, PhD
7C	<b>Sports and Exercise for People with SCI</b> Cheri Blauwet, MD
11:35 am	Transition to General Session Room
11:40 am	<b>Meeting the Evolving Needs of the Caregiver</b> Marilyn Spivack and Christopher Carter, PsyD
12:20 pm	<b>Q&amp;A with Ms. Spivack and Dr. Carter</b>
12:40 pm	Lunch Buffet (provided)
2:00 pm	<b>Case-Based and Interactive Breakout Sessions 8A-8C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
8A	<b>Functional Neuroimaging in Disorders of Consciousness</b> Yelena Guller Bodien, PhD
8B	<b>Challenges in the Rehabilitation of the Young Patient with Stroke</b> Randie Black-Schaffer, MD
8C	<b>Upper Extremity Surgery in Tetraplegia</b> Chaitanya Mudgal, MD
2:55 pm	<b>Case-Based and Interactive Breakout Sessions 9A-9C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
9A	<b>Rehabilitation of Visual Disorders after Stroke</b> Kevin Houston, OD
9B	<b>Treating the Patient with CNS Lyme Disease and Other Tick-Borne Illness</b> Nevena Zubcevik, DO
9C	<b>Sexuality after SCI</b> Marcalee Sipski Alexander, MD
3:45 pm	Break (refreshments provided)
4:15 pm	<b>Case-Based and Interactive Breakout Sessions 10A-10C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
10A	<b>Evaluation and Management of Patients with Disorders of Consciousness: State of the Science</b> Joseph Giacino, PhD
10B	<b>Social Cognition and Affective Processing in Neurodegenerative Disease</b> Brad Dickerson, MD
10C	<b>Restoring Ambulation Post-SCI and the Impact of Technology</b> Marcalee Sipski Alexander, MD
5:05 pm	Daily Program Ends

7:30 am	Continental Breakfast
8:30 am	<b>Integrative Medicine Approaches in Neurorehabilitation</b> Ariana Vora, MD
9:10 am	<b>Q&amp;A with Dr. Vora</b>
9:20 am	Transition to Breakouts
9:25 am	<b>Case-Based and Interactive Breakout Sessions 11A-11C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
11A	<b>Psychopharmacologic Approaches to Attention, Alertness, and Initiation after Brain Injury</b> Mel Glenn, MD
11B	<b>Current and Future Treatment of Alzheimer's Disease</b> Jonathan Jackson, PhD
11C	<b>Bone Health after SCI: Monitoring, Management, and Potential Therapies</b> Rajiv Gupta, MD
10:15 am	Break (refreshments provided)
10:50 am	<b>Case-Based and Interactive Breakout Sessions 12A-12C</b> <i>Each of these sessions includes 10 minutes of Q&amp;A</i>
12A	<b>Psychopharmacologic Approaches to Affective Disorders and Executive Dysfunction after Brain Injury</b> Mel Glenn, MD
12B	<b>The Rehabilitation of Spatial Neglect following Stroke</b> Yong-Tae Lee, MD
12C	<b>Plasticity of Sensorimotor Systems after Incomplete SCI</b> Jonathan Wolpaw, MD
11:40 am	Transition to General Session Room
11:45 am	<b>The Postacute Continuum of Care: Where Are We Heading?</b> Randie Black-Schaffer, MD
12:25 pm	<b>Q&amp;A with Dr. Black-Schaffer</b>
12:35 pm	<b>Closing Remarks</b> Mel Glenn, MD
12:45 pm	Course Concludes

*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.*

#### DISCLAIMER

CME activities sponsored by Harvard Medical School are offered solely for educational purposes and do not constitute any form of certification of competency. Practitioners should always consult additional sources of information and exercise their best professional judgment before making clinical decisions of any kind.

#### DISCLOSURE POLICY

Harvard Medical School (HMS) adheres to all ACCME Essential Areas, Standards, and Policies. It is HMS's policy that those who have influenced the content of a CME activity (e.g., planners, faculty, reviewers, and others) disclose all relevant financial relationships with commercial entities so that HMS may identify and resolve any conflicts of interest prior to the activity. These disclosures will be provided in the activity materials along with disclosure of any commercial support received for the activity. Additionally, faculty members have been instructed to disclose any limitations of data and unlabeled or investigational uses of products during their presentations.

### How to enhance and accelerate recovery with:

- Pharmacologic interventions
- Transcranial magnetic and direct current stimulation
- Early mobilization in the ICU
- Approaches to bone health after SCI
- Chemical denervation procedures
- Neuroendocrine treatment
- Functional electrical stimulation
- Neuromuscular electrical stimulation
- Upper extremity muscle-tendon transfers
- Approaches to ambulation after SCI
- Vestibular rehabilitation
- Visual rehabilitation
- Treatment of hemispatial neglect
- Constraint-induced language therapy
- Treatment of adjustment issues
- Music therapy
- Exercise for people with Parkinson's disease

### New strategies to improve quality of life

- Wellness interventions
- Motivational interviewing
- Alternative medicine approaches
- Adjustment of the caregiver
- Sports and exercise
- Treatment of the post-stroke shoulder
- Addressing sexuality after SCI

### Education on 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:

- Stem cells
- Brain-computer interface
- Functional neuroimaging to communicate with patients with disorders of consciousness
- Changes in the continuum of care
- Harnessing the placebo effect
- Alzheimer's disease therapies
- Acute SCI treatments

### Updates and insights to guide clinical decisions for common, rare, and challenging neurological conditions

- The patient with post-concussion symptoms
- Chronic traumatic encephalopathy
- CNS plasticity
- Aging with SCI
- The young stroke patient
- Social cognition and affective processing in neurodegenerative diseases
- The patient with CNS Lyme disease



## Register at [NeuroRehab.HMSCME.com](http://NeuroRehab.HMSCME.com)

### NeuroRehabilitation 2017

(Course #734714-1702)

	Tuition
<b>Course Tuition</b>	\$895
<b>Residents, Fellows, and Students</b>	\$745

Your tuition includes breakfast each day, morning and afternoon refreshments, buffet lunch on Thursday and Friday, and the course syllabus both online and on flash drive. Parking is free of charge, and free Wi-Fi 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 the end of the registration process, a \$5 non-refundable processing fee will be added to your registration, and you will have the choice of paying by check or credit card (Visa, MasterCard, or American Express). If you are paying by check, the online registration system will provide you with instructions and a printable form for remitting your course fees by check. Postal, telephone, fax, and cash-payment registrations are not accepted. Fees shown in USD.

Upon receipt of your paid registration, an email confirmation from the HMS DCE office 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. 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 postal mail, email, or fax. 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 conference has started.

### ACCOMMODATIONS

#### The Westin Waltham Boston

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

A limited number of rooms have been reserved at the Westin Waltham Boston until May 12, 2017 for the discounted rate of \$199 per night. Please call (781) 290-5600 when making reservations, and be sure to specify that you are enrolled in the course NeuroRehabilitation 2017 to receive the reduced room rate.

#### Embassy Suites by Hilton Boston Waltham

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

A limited number of rooms have been reserved at the Embassy Suites by Hilton Boston Waltham until May 15, 2017 for the discounted rate of \$199 per night. Please call (781) 890-6767 when making reservations, and be sure to specify that you are enrolled in the course NeuroRehabilitation 2017 to receive the reduced room rate.

**Please do not make non-refundable travel arrangements until you have received an email from our office confirming your paid registration.**



### VENUE

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

[www.conferencecenteratwalthamwoods.com](http://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.

### INQUIRIES

Call 617-384-8600 Mon-Fri 9am – 5pm EST or e-mail [CEPrograms@hms.harvard.edu](mailto:CEPrograms@hms.harvard.edu)