

The Practical Neurological Toolkit: High Yield Updates for the Office and the Ward

Friday • June 4, 2021 • Virtual

WELCOME

On behalf of the entire Massachusetts General Hospital, we are proud to welcome you to our conference The Practical Neurological Toolkit: High Yield Updates for the Office and the Ward.

You have our full attention over the next day and we will do our very best to help you assess, treat and manage your patients using the latest evidence to inform your decisions.

Enjoy the program!

TARGET AUDIENCE

The target audience for this event is non-neurologists, from backgrounds of primary care, internal medicine, hospitalists, nurse practitioners, geriatric medicine, ophthalmologists, orthopedic practitioners, sports medicine, geneticists, emergency medicine, other advanced practice providers, and nurses.

EVALUATION FORMS/CME/CEU CERTIFICATES

Every participant needs to complete the activity evaluation online to claim CME/CEU credits for this course. Please refer to the **Evaluation and CME Information** document in this syllabus for more information. We strongly encourage you to complete the evaluation, even if you do not require a certificate. Your comments are important to us as we plan future programs. The link to claim credit is as follows: www.mghcme.org/neuro

COPYRIGHT

The course materials and PowerPoint presentations are copyright protected by Massachusetts General Hospital, Department of Psychiatry, Division of Postgraduate Education, the faculty members and the appropriate authors. Videotaping and audiotaping are not allowed. Thank you for your cooperation.

CONTACT INFORMATION

For questions or comments, please contact MGH Psychiatry Academy member services at 866-644-7792 or mghcme@mgh.harvard.edu.

LEARNING OBJECTIVES

At the end of this educational activity, participants should be able to:

1. Recognize the presentation, diagnosis, comorbidity, and pathophysiology of stroke along with the latest research in rapid recognition and delivery of stroke care.
2. Review the presentation of slowly evolving (i.e. stuttering) deficits across a variety of pathophysiologies including how to differentiate them from other etiologies.

3. Differentiate common and uncommon conditions presenting with headache.
4. Define effective inpatient approaches for seizures, ICU monitoring, intracerebral hemorrhage, and others.
5. Compare and contrast the differential for weakness, spells, and memory loss.
6. Learn about breakthroughs and exciting research on the delivery of neurologic care in all settings.

ACCREDITATION

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of McLean Hospital and Massachusetts General Hospital. McLean Hospital is accredited by the ACCME to provide continuing medical education for physicians.

McLean Hospital designates this live activity for a maximum of **5.25 AMA PRA Category 1 Credits™**. Physicians should only claim credit commensurate with the extent of their participation in the activity.

REGISTERED NURSES

This program meets the requirements of the Massachusetts Board of Registration in Nursing (244 CMR 5.00) for **5.25** contact hours of nursing continuing education credit. Advance practice nurses, please note: Educational activities which meet the requirements of the ACCME (such as this activity) count towards 50% of the nursing requirement for ANCC accreditation.

Other CE Licenses: Other Providers can claim a Participation Certificate upon successful completion of this course. Participation Certificates will specify the title, location, type of activity, date of activity, and number of *AMA PRA Category 1 Credits™* associated with the activity. Providers should check with their regulatory agencies to determine ways in which *AMA PRA Category 1 Credits™* may or may not fulfill continuing education requirements. Providers should also consider saving copies of brochures, agenda, and other supporting documents.

AGENDA

| | |
|------------------|---|
| 08:00 – 8:10 AM | Welcome and Opening Remarks MGH Neuroscience Chairs |
| 08:10 – 08:25 AM | The Commonest Neurological Diagnosis: Migraines Jennifer Cheng, N.P |
| 08:25 – 08:40 AM | Idiopathic Intracranial Hypertension: Not a Simple Headache Bart Chwalisz, MD |
| 08:40 – 08:55 AM | Fall and Headache: Is this a Chronic SDH? Christopher Stapleton, MD |
| 08:55 – 09:10 AM | Concussion and Other Concerns after Mild TBI Ross Zafonte, DO |

| | |
|-------------------------------|--|
| 09:10 – 09:25 AM | Glial Tumors: Light at the Tunnel’s End? Isabel Arrillaga-Romany, MD, PhD |
| 09:25 – 09:30 AM | Break |
| COVID-19 Special Focus | |
| 09:30 – 10:00 AM | Pirouette, Not Pivot: Tele-capability and Neurological Disease Lee Schwamm, MD |
| 10:00 – 10:30 AM | COVID-19 and Neurological Disease Shibani Mukerji, MD, PhD |
| 10:30 – 10:55 AM | Managing the Psychiatric Impact of a Health Crisis Scott Beach, MD, FACLP |
| 10:55- 11:00 AM | Break |
| 11:00 – 11:15 AM | Incidental Intracranial Aneurysms Reveal Their Secrets Aman Patel, MD |
| 11:15 – 11:30 AM | Carotid Disease: Follow that Bruit Erica Camargo-Faye, MD, MMSc |
| 11:30 – 11:45 AM | “Doctor, My Back Hurts!”: Who Needs What? Jean-Valery Coumans, M.D. |
| 11:45 – 12:00 PM | Alarm Bells for Patients with “ Spells” Sahar Zafar, MBBS |
| 12:00 – 12:30 PM | Break |
| 12:30 – 12:45 PM | Bringing Light to the Darkness of Dementia Alison McManus, NP |
| 12:45 – 01:00 PM | Brain Health: New Understanding, New Targets, New Metrics Jonathan Rosand, MD, MSc |
| 01:00 – 01:30 PM | Glow on the Horizon: Therapeutic Innovations to Come Mark Richardson, MD, PhD Leigh Hochberg, MD, PhD |
| 01:30 – 01:50 PM | Virtual Fireside Chat: Moderated Discussion with the Chairs Merit Cudkowicz MD, MSc Bob Carter MD, PhD Maurizio Fava, MD |

01:50-02:00 PM **Closing remarks**
MGH Neuroscience Chairs

02:00 PM **Adjourn**

FACULTY

PLANNERS & COURSE DIRECTORS

William T. Curry, Jr., MD (Course Director)

Co-Director Mass General Neuroscience
Director of Neurosurgical Oncology, Mass General Hospital
Adeline Rose Wydotis Professor of Neurosurgery, Harvard Medical School

Vijaya Ramesh, PhD (Course Director)

Professor, Neurology, Harvard Medical School; Co-Director, Mass General Neuroscience; Associate in Genetics, Center for Genomic Medicine, Mass General Hospital

Josh Roffman, MD (Course Director)

Co-Director, Mass General Neuroscience; Director, Mass General Early Brain Development Initiative; Associate Professor of Psychiatry, Harvard Medical School
Will- Neurosurgeon, Neurosurgical Oncologist, Pediatric Neurosurgeon; Co-Director, Mass General Neuroscience; Director of Neurosurgical Oncology
Vijaya- Professor, Neurology, Harvard Medical School; Co-Director, Mass General Neuroscience; Assistant in Genetics, Molecular Genetics Unit, Mass General Hospital

Jane Pimental, MPH

Managing Director
Massachusetts General Hospital Psychiatry Academy

John Herman, MD (*Reviewer*)

SPEAKERS

Scott R. Beach, MD, FACLP

Program Director, MGH/McLean Adult Psychiatry Residency
Associate Professor of Psychiatry, Harvard Medical School

Bob Carter MD, PhD

Chairman, Department of Neurosurgery
Massachusetts General Hospital
William and Elizabeth Sweet Professor of Neurosurgery
Harvard Medical School

Jennifer Cheng, CNP

Nurse Practitioner

Headache and Neuropathic Pain Unit, Department of Neurology

Clinical Program Lead, Multidisciplinary Facial Pain Clinic (Neurosurgery, Neurology, and OMFS)

Mass General Hospital

Bart Chwalisz, MD

Neuro-ophthalmology, Headache Unit, and Inflammatory Neuro-Ophthalmology/Skull Base Disorders

Clinic. Division of Comprehensive Neurology, Massachusetts General Hospital

Neuro-ophthalmology, Massachusetts Eye & Ear Infirmary

Jean-Valery Coumans, MD

Director of Neurosurgery Education

Massachusetts General Hospital

Merit Cudkowicz MD, MSc

Chief of Neurology Massachusetts General Hospital

Julieanne Dorn Professor of Neurology Harvard Medical School

Director Sean M. Healey & AMG Center for ALS at Mass General Hospital

Maurizio Fava, MD

Psychiatrist-in-Chief

Director, Division of Clinical Research / MGH Research Institute

Executive Director, Clinical Trials Network & Institute (CTNI)

Massachusetts General Hospital

Associate Dean for Clinical & Translational Research

Slater Family Professor of Psychiatry

Harvard Medical School

Erica Camargo-Faye, MD, MMSc

Instructor in Neurology

Harvard Medical School

Department of Neurology, Massachusetts General Hospital

Leigh Hochberg, MD, PhD

Director, Center for Neurotechnology and Neurorecovery, MGH Neurology

Neurocritical Care and Stroke Divisions, Departments of Neurology, Massachusetts General Hospital and Spaulding Rehabilitation Hospital

Senior Lecturer on Neurology, Harvard Medical School

Professor of Engineering, Brown University

Director, Center for Neurorestoration and Neurotechnology, Rehabilitation Research & Development Service, Dept. of Veterans Affairs, Providence RI.

Alison McManus, NP

Clinical Research Nurse Manager

Alzheimer's Clinical & Translational Research Unit

Massachusetts General Hospital

Shibani S. Mukerji

Associate Director, MGH Neuro-Infectious Disease Unit and Assistant Professor, Harvard Medical School

Aman Patel, MD

Robert G. and Jean A. Ojemann Professorship

Vice-Chairman, Neurosurgery

Director, Neurosurgical Residency Training Program

Director of Cerebrovascular and Endovascular Neurosurgery

Massachusetts General Hospital

Harvard Medical School

Mark Richardson, MD, PhD

Charles A. Pappas Associate Professor of Neurosciences

Harvard Medical School

Director of Functional Neurosurgery

Department of Neurosurgery, Massachusetts General Hospital

Isabel Arrillaga-Romany, MD, PhD

Instructor in Neurology

Harvard Medical School

Associate Clinical Director, Neuro-Oncology

Cancer Center, Massachusetts General Hospital

Jonathan Rosand, MD, MSc

Co-Founder and Co-Director, Henry and Allison McCance Center for Brain Health

JP Kistler Neurologist and Former Chief of Neurocritical Care

Massachusetts General Hospital

Professor of Neurology

Harvard Medical School

Associate Member

Broad Institute of MIT and Harvard

Lee Schwamm, MD, FAHA, FANA

Vice President, Virtual Care Digital Health Mass General Brigham

Director, Center for TeleHealth Mass General Hospital

C Miller Fisher Chair in Vascular Neurology

Professor of Neurology Harvard Medical School

Christopher Stapleton, MD

Instructor in Neurosurgery

Massachusetts General Hospital

Harvard Medical School

Sahar F. Zafar, MD, MBBS

Assistant Professor of Neurology
Massachusetts General Hospital
Harvard Medical School

Ross Zafonte, DO

Earle P. and Ida S. Charlton Professor of Physical Medicine and Rehabilitation, Harvard Medical School
Senior Vice President for Research Education and Medical Affairs
Spaulding Rehabilitation Network
Chair of the Harvard Medical School Department of Physical Medicine and Rehabilitation
Spaulding Rehabilitation Hospital

FACULTY DISCLOSURE STATEMENTS

In accord with the disclosure policy of McLean Hospital as well as guidelines set forth by the Accreditation Council on Continuing Medical Education, all people in control of educational content, including speakers, course directors, planners, and reviewers, have been asked to disclose all relevant financial relationships with commercial interests of both themselves and their spouses/partners over the past 12 months, as defined below:

Commercial Interest

The ACCME defines a “commercial interest” as any entity producing, marketing, re-selling, or distributing health care goods or services, used on, or consumed by, patients. The ACCME does not consider providers of clinical service directly to patients to be commercial interests. For more information, visit www.accme.org.

Financial relationships

Financial relationships are those relationships in which the individual benefits by receiving a salary, royalty, intellectual property rights, consulting fee, honoraria, ownership interest (e.g., stocks, stock options or other ownership interest, excluding diversified mutual funds), or other financial benefit. Financial benefits are usually associated with roles such as employment, management position, independent contractor (including contracted research), consulting, speaking and teaching, membership on advisory committees or review panels, board membership, and other activities from which remuneration is received, or expected. ACCME considers relationships of the person involved in the CME activity to include financial relationships of a spouse or partner.

Relevant financial relationships

ACCME focuses on financial relationships with commercial interests in the 12-month period preceding the time that the individual is being asked to assume a role controlling content of the CME activity. ACCME has not set a minimal dollar amount for relationships to be significant. Inherent in any amount is the incentive to maintain or increase the value of the relationship. The ACCME defines “relevant” financial relationships” as financial relationships in any amount occurring within the past 12 months that create a conflict of interest.

Conflict of Interest

Circumstances create a conflict of interest when an individual has an opportunity to affect CME content about products or services of a commercial interest with which he/she has a financial relationship.

The following planners, speakers, and content reviewers, on behalf of themselves and their spouse or partner, have reported financial relationships with an entity producing, marketing, re-selling, or distributing health care goods or services (relevant to the content of this activity) consumed by, or used on, patients:

Speakers & Planners:

Name

William T. Curry, Jr., MD

Board of Directors: IMRIS

Bob Carter, MD

Consulting (design of interoperative neurosurgical robot): Koh Young

Merit Cudkowicz, MD

Personal Consulting: Disarm Als Pharma; Cytokinetics Biogen RRD; Sunovion Takeda Immunity; Pharm Helixsmith Denali; Wave Orion Quralis; Transposen; Faze Regeneron Absciences

Leigh Hochberg, MD

Consulting Input: Neurolink, Paradromics, Synchron

Shibani Mukerji, MD

Research Grant: James S. McDonnell Foundation

Stock (Investment Account): Gilead

Research Grant: NIMH

Amen Patel, MD

Fee (Proctor Consulting): Micovention

Fee (Proctor Consulting): Medtronic

Jonathan Rosand, MD

Fee (Consulting): Boeringer Ingelheim

Fee (Consulting-Data Safety Board): Pfizer

Mark Richardson, MD

Speaker Fee (Video abstract): Neurocrine Biosciences

Consulting Fee (Gene therapy clinical trial advisory board): Voyager Therapeutics

Speaker Fee (Presentation): Medtronic

Bio Stipend (Scientific Advisory Board): Brain Neurotherapy

Lee Schwamm, MD

Consulting Fees: Lifeimage

Salary Support (Federal Research Grants): NINDS & PCORI

Ross Zafonte, MD

Scientific Advisory Board: Myomo

Consultant: Biodirection; OneCare.ai; Elminda

Maurizo Fava, MD

Research Support:

Abbott Laboratories; Acadia Pharmaceuticals; Alkermes, Inc.; American Cyanamid; Aspect Medical Systems; AstraZeneca; Avanir Pharmaceuticals; AXSOME Therapeutics; Biohaven; BioResearch; BrainCells Inc.; Bristol-Myers Squibb; CeNeRx BioPharma; Cephalon; Cerecor; Clarus Funds; Clexio Biosciences; Clintara, LLC; Covance; Covidien; Eli Lilly and Company; EnVivo Pharmaceuticals, Inc.; Euthymics Bioscience, Inc.; Forest Pharmaceuticals, Inc.; FORUM Pharmaceuticals; Ganeden Biotech, Inc.; GlaxoSmithKline; Harvard Clinical Research Institute; Hoffman-LaRoche; Icon Clinical Research; Indivior; i3 Innovus/Ingenix; Janssen R&D, LLC; Jed Foundation; Johnson & Johnson Pharmaceutical Research & Development; Lichtwer Pharma GmbH; Lorex Pharmaceuticals; Lundbeck Inc.; Marinus Pharmaceuticals; MedAvante; Methylation Sciences Inc; National Alliance for Research on Schizophrenia & Depression (NARSAD); National Center for Complementary and Alternative Medicine (NCCAM); National Coordinating Center for Integrated Medicine (NiiCM); National Institute of Drug Abuse (NIDA); National Institute of Mental Health (NIMH); Neuralstem, Inc.; NeuroRx; Novartis AG; Organon Pharmaceuticals; Otsuka Pharmaceutical Development, Inc.; PamLab, LLC.; Pfizer Inc.; Pharmacia-Upjohn; Pharmaceutical Research Associates., Inc.; Pharmavite® LLC; PharmoRx Therapeutics; Photothera; Reckitt Benckiser; Roche Pharmaceuticals; RCT Logic, LLC (formerly Clinical Trials Solutions, LLC); Sanofi-Aventis US LLC; Shenox Pharmaceuticals, LLC; Shire; Solvay Pharmaceuticals, Inc.; Stanley Medical Research Institute (SMRI); Synthelabo; Taisho Pharmaceuticals; Takeda Pharmaceuticals; Tal Medical; VistaGen; Wyeth-Ayerst Laboratories

Advisory Board/ Consultant:

Abbott Laboratories; Acadia; Affectis Pharmaceuticals AG; Alkermes, Inc.; Amarin Pharma Inc.; Aspect Medical Systems; AstraZeneca; Auspex Pharmaceuticals; Avanir Pharmaceuticals; AXSOME Therapeutics; Bayer AG; Best Practice Project Management, Inc.; Biogen; BioMarin Pharmaceuticals, Inc.; BioXcel Therapeutics; Biovail Corporation; Boehringer Ingelheim; Boston Pharmaceuticals; BrainCells Inc; Bristol-Myers Squibb; CeNeRx BioPharma; Cephalon, Inc.; Cerecor; Clexio Biosciences; CNS Response, Inc.; Compellis Pharmaceuticals; Cypress Pharmaceutical, Inc.; DiagnoSearch Life Sciences (P) Ltd.; Dainippon Sumitomo Pharma Co. Inc.; Dov Pharmaceuticals, Inc.; Edgemont Pharmaceuticals, Inc.; Eisai Inc.; Eli Lilly and Company; EnVivo Pharmaceuticals, Inc.; ePharmaSolutions; EPIX Pharmaceuticals, Inc.; Euthymics Bioscience, Inc.; Fabre-Kramer Pharmaceuticals, Inc.; Forest Pharmaceuticals, Inc.; Forum Pharmaceuticals; GenOmind, LLC; GlaxoSmithKline; Grunenthal GmbH; Indivior; i3 Innovus/Ingenis; Intracellular; Janssen Pharmaceutica; Jazz Pharmaceuticals, Inc.; Johnson & Johnson Pharmaceutical Research & Development, LLC; Knoll Pharmaceuticals Corp.; Labopharm Inc.; Lorex Pharmaceuticals; Lundbeck Inc.; Marinus Pharmaceuticals; MedAvante, Inc.; Merck & Co., Inc.; MSI Methylation Sciences, Inc.; Naurex, Inc.; Navitor Pharmaceuticals, Inc.; Nestle Health Sciences; Neuralstem, Inc.; Neuronetics, Inc.; NextWave Pharmaceuticals; Novartis AG; Nutrition 21; Orexigen Therapeutics, Inc.; Organon Pharmaceuticals; Osmotica; Otsuka Pharmaceuticals; Pamlab, LLC.; Perception Neuroscience; Pfizer Inc.; PharmaStar; Pharmavite® LLC.; PharmoRx Therapeutics; Polaris Partners; Praxis Precision Medicines; Precision Human Biolaboratory; Prexa Pharmaceuticals, Inc.; PPD; PThera, LLC; Purdue Pharma; Puretech Ventures; PsychoGenics; Psylin Neurosciences, Inc.; RCT Logic, LLC (formerly Clinical Trials Solutions, LLC); Relmada Therapeutics, Inc.; Rexahn Pharmaceuticals, Inc.; Ridge Diagnostics, Inc.; Roche; Sanofi-Aventis US LLC.; Sepracor Inc.; Servier Laboratories; Schering-Plough Corporation; Shenox Pharmaceuticals, LLC; Solvay Pharmaceuticals, Inc.; Somaxon Pharmaceuticals, Inc.; Somerset Pharmaceuticals, Inc.; Sunovion Pharmaceuticals; Supernus Pharmaceuticals, Inc.; Synthelabo; Taisho Pharmaceuticals; Takeda Pharmaceutical Company Limited; Tal Medical, Inc.; Tetragenex; Teva Pharmaceuticals; TransForm Pharmaceuticals, Inc.; Trancept Pharmaceuticals, Inc.; Usona Institute, Inc.; Vanda Pharmaceuticals, Inc.; Versant Venture Management, LLC; VistaGen

Speaking/Publishing:

Adamed, Co; Advanced Meeting Partners; American Psychiatric Association; American Society of Clinical Psychopharmacology; AstraZeneca; Belvoir Media Group; Boehringer Ingelheim GmbH; Bristol-Myers Squibb; Cephalon, Inc.; CME Institute/Physicians Postgraduate Press, Inc.; Eli Lilly and Company; Forest Pharmaceuticals, Inc.; GlaxoSmithKline; Imedex, LLC; MGH Psychiatry Academy/Primedia; MGH Psychiatry Academy/Reed Elsevier; Novartis AG; Organon Pharmaceuticals; Pfizer Inc.; PharmaStar; United BioSource, Corp.; Wyeth-Ayerst Laboratories.

Equity Holdings:

Compellis; Psy Therapeutics

Royalty/patent, other income:

Patents for Sequential Parallel Comparison Design (SPCD), licensed by MGH to Pharmaceutical Product Development, LLC (PPD) (US_7840419, US_7647235, US_7983936, US_8145504, US_8145505); and patent application for a combination of Ketamine plus Scopolamine in Major Depressive Disorder (MDD), licensed by MGH to Biohaven. Patents for pharmacogenomics of Depression Treatment with Folate (US_9546401, US_9540691).

Copyright: for the MGH Cognitive & Physical Functioning Questionnaire (CPFQ), Sexual Functioning Inventory (SFI), Antidepressant Treatment Response Questionnaire (ATRQ), Discontinuation-Emergent Signs & Symptoms (DESS), Symptoms of Depression Questionnaire (SDQ), and SAFER; Lippincott, Williams & Wilkins; Wolkers Kluwer; World Scientific Publishing Co. Pte.Ltd.

All other individuals including course directors, planners, reviewers, faculty, staff, etc., who are in a position to control the content of this educational activity have, on behalf of themselves and their spouse or partner, reported no financial relationships related to the content of this activity.