2020 Foresight: Future Directions in Clinical Epilepsy and Neurophysiology

Thursday and Friday, June 9-10, 2011
Swedish Medical Center/Cherry Hill
Swedish Education and Conference Center
500 17th Avenue
Seattle, Washington

Pre-Conference Session: Swedish Neuroscience Institute Grand Rounds
Session I  Epilepsy-Related Neurophysiology I
Session II  Clinical Imaging Applied to Epilepsy
Session III  Epilepsy-Related Neurophysiology II
Session IV  Clinical Epilepsy
Intended Audience
This symposium is intended for general neurologists, mid-level providers, neurology residents and fellows, subspecialists in clinical epilepsy (adult and pediatric), neurosurgeons and neuro critical care unit (NCCU) staff.

Course Description
This course will present information on the latest developments in the treatment of epilepsy and clinical neurophysiology testing including diagnostic approaches, treatments and new technologies. This program is intended to provide health-care professionals with tools to provide appropriate, timely care to patients in order to decrease the consequences that can result from untreated epilepsy.

Needs Statement
Uncontrolled epilepsy can be debilitating and can severely affect the personal and professional aspects of an individual’s life. Health-care professionals who treat patients with epilepsy are faced with a rapidly changing field. Successful treatment of this patient population requires complex strategies. Rapid advances in technology require that clinicians in the field receive frequent updates on research findings and treatment options in order to provide the most informed and evidence-based care for patients. This course will provide attendees with new information about advances in clinical epilepsy and neurophysiology for diagnosing and treating adult and pediatric patients with epilepsy.

Planning Committee
Jehuda P. Sepkuty, M.D., Co-Chair
Marcio A. Sotero de Menezes, M.D., Co-Chair
Mark Balvin, M.B.A., CNIM
Michael Doherty, M.D., FAAN
Colleen Douville, B.A., R.V.T.
Pam Ehrbar, B.A., CME Specialist
Ryder Gwinn, M.D.
Alan Haltiner, Ph.D.
Stephanie Jordan, REEG, E.P.T., CNIM, CLTM
Jessica Martinson, M.S., CME Manager
Robin L. Olson R.N., M.S.N., CNRN

Accreditation with Commendation
Swedish Medical Center is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AMA PRA Category 1 Credits™
Swedish Medical Center designates this live activity for a maximum of 13.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nursing CE Contact Hours
Contact hours for this activity have been submitted to Swedish Medical Center, an approved provider of continuing education by the Washington State Nurses Association, an accredited approver by the American Nurses Credentialing Center’s commission on Accreditation. Please contact Vicki Enslow at Swedish Medical Center for more information about contact hours at 206-320-2711.

Acknowledgments
This symposium is financially supported in part by educational grants in accordance with ACCME’s Standards for Commercial Support. At the time of this printing, a complete listing of commercial supporters was not available. Appropriate acknowledgment will be given to all supporters at the time of the symposium.

Location
Swedish Medical Center/Cherry Hill is located at 500 17th Avenue in Seattle, Washington. The conference will be held in the Swedish Education and Conference Center on the first floor of the James Tower. Parking is available in the garage on 16th Avenue between Cherry and Jefferson. From I-5 (northbound and southbound), take the James Street exit. Travel east on James Street. James will become Cherry Street. Turn right (south) on 16th Avenue. Turn right into the main garage entrance.
THURSDAY, JUNE 9, 2011
7:30 a.m.  Pre-Conference Session
Swedish Neuroscience Institute Grand Rounds
Focus on Intraoperative Monitoring: Functional
Mapping in the OR and Anesthesia and IOM
Jehuda P. Sepkuty, M.D. and Arthur Lam, M.D.
8:30 a.m.  Registration and Continental Breakfast
8:55 a.m.  Welcome and Introductions
Session I:  Epilepsy-Related Neurophysiology I
9 a.m.  Insights into Pathophysiology and Therapy
from a Mouse Model of Dravet Syndrome
John Oakley, M.D., Ph.D.
9:30 a.m.  Keynote Presentation
Analysis of Interictal and Ictal EEG to Localize
Partial Seizure Origins
John S. Ebersole, M.D.
10:30 a.m.  Panel discussion/Q&A
10:40 a.m.  Break
10:55 a.m.  Video EEG Diagnosis in Adult Epilepsy
Michael Doherty, M.D., FAAN
11:15 a.m.  Video EEG Diagnosis in Pediatric Epilepsy
Ednea A. Simon, M.D.
11:35 a.m.  Expert Panel: Review EEG Cases
Michael Doherty, M.D., Ednea Simon, M.D.
and John S. Ebersole, M.D.
12:15 p.m.  Lunch (provided)
Session II:  Clinical Imaging Applied to Epilepsy
1 p.m.  Adventures in (Subdural) Space:
High Frequency EEG, the Brain Computer
Interface and the New Corticography
Anthony Ritaccio, M.D., FAAN
2 p.m.  Review of Structural Imaging Using MRI
John W. Henson, M.D., FAAN
2:30 p.m.  PET Imaging in Epilepsy
Ednea A. Simon, M.D.
3 p.m.  Panel Discussion/Q&A
3:15 p.m.  Break
3:30 p.m.  Imaging in Epilepsy
Bart P. Keogh, M.D., Ph.D.
4 p.m.  Indications and Applications of
Magnetoencephalography (MEG): Seizure Onset Localization
Robert C. Knowlton, M.D., MSPH
4:30 p.m.  Panel Discussion/Q&A
4:45 p.m.  Adjourn
FRIDAY, JUNE 10, 2011
7:30 a.m.  Registration and Continental Breakfast
Session III:  Epilepsy-Related Neurophysiology II
8 a.m.  Neurocritical Care Brain Monitoring with EEG:
Pearls, Pitfalls, Potentials and Opinions
Lawrence J. Hirsch, M.D.
9 a.m.  Introduction to Amplitude-Integrated EEG
Alexa Craig, M.D.
9:30 a.m.  Panel Discussion/Q&A
9:40 a.m.  Break
9:55 a.m.  Genetics and Neurophysiology-Driven
Treatment in Pediatrics
Marcio A. Sotero de Menezes, M.D.
10:55 a.m.  Using Neurophysiologic Clues to Help Treat
Refractory Epilepsy
Michael Doherty, M.D., FAAN
11:35 a.m.  Panel Discussion/Q&A
11:45 a.m.  Lunch (provided)
Session IV:  Clinical Epilepsy
12:45 p.m.  Not Everything Shaking and Twitching Is
an Epileptic Seizure: Clinical Aspects of
Non-Epileptic Seizures
Jehuda P. Sepkuty, M.D.
1:15 p.m.  Neuropsychology as a Window into
Somatization in Non-Epileptics
Alan Haltiner, Ph.D.
1:35 p.m.  Presurgical Evaluation for Intractable Epilepsy
Lisa Caylor, M.D.
2:15 p.m.  Panel Discussion/Q&A
2:25 p.m.  Break
2:40 p.m.  Epilepsy Surgery: Evidence for Efficacy
Ryder Gwinn, M.D.
3:10 p.m.  Functional Mapping with
Magnetoencephalography (MEG)
Robert C. Knowlton, M.D., MSPH
3:40 p.m.  Neuromodulation for Epilepsy
Ryder Gwinn, M.D.
4:20 p.m.  Panel Discussion/Q&A
4:30 p.m.  Adjourn
Course Objectives

At the conclusion of this symposium, the participant will provide better patient care through an increased ability to:

**Swedish Neuroscience Institute Grand Rounds**
- Demonstrate how functional mapping in the OR can improve outcomes and explain influence of anesthetic agents on monitoring modalities

**Session I: Epilepsy-Related Neurophysiology I**
- Identify pathophysiology contributing to seizures and co-morbidities in Dravet syndrome and consider how a mechanistic understanding of seizures can guide treatment decisions
- Compare localization strategies using visual inspection of EEG traces and identify the strengths, indications and limitations of EEG source modeling
- Explain how video EEG analysis may help lateralize, localize and diagnose epilepsy type
- Explain use of video EEG as a diagnostic tool and discuss evaluation of seizure semiology and differential diagnosis using VEEG

**Session II: Clinical Imaging Applied to Epilepsy**
- Describe high frequency EEG oscillations and their relationship to normal brain function and identify the evolving role of electrocorticography in the brain-computer interface
- Discuss structural imaging through the use of magnetic resonance imaging (MRI)
- Explain the use of PET as a diagnostic and surgical evaluation tool in epilepsy
- Outline general imaging approaches to epilepsy and review “non-anatomic” imaging in epilepsy
- Describe the concepts of MEG-based source localization and analyze the role of MEG in epilepsy surgery

**Session III: Epilepsy-Related Neurophysiology II**
- Recognize and manage non-convulsive seizures and interpret EEG patterns found in the critically ill
- List basic principles of Amplitude-Integrated EEG (aEEG) and discuss aEEG and seizure monitoring as well as common artifacts
- Define the diagnosis and treatment of genetic epilepsies and explain neurophysiology-related treatments
- Interpret electrical influences on treatment decisions, discuss physiological histories and review pharmacologies that help shape treatments

**Session IV: Clinical Epilepsy**
- Review video clips to differentiate epileptic from non-epileptic seizures and discuss management of non-epileptic seizures
- Identify risk factors associated with non-epileptic seizures (NES) and explain the use of psychometric testing
- Review diagnostic testing used in evaluating patients with medically intractable epilepsy and apply how results are used in determining an individual’s suitability for surgery
- Describe ablative and disconnective interventions available to treat seizures and explain indications and timing to maximize the benefits of surgery
- Explain the concepts of stimulation-evoked field MEG source localization
- Demonstrate the clinical application of MEG functional mapping in brain tumors and epilepsy and discuss mapping in the context of functional imaging
- Summarize FDA-approved and unapproved therapies available for treatment of seizures
- Review efficacy data available for neuromodulative therapies available to treat seizures and illustrate the rationale and timing for using these therapies in treating seizures

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[Image of Swedish Neuroscience Institute]
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Faculty

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**Registration Information:**
Preregistration is required as space is limited. Participants who register by the “Advance Registration” deadline will receive a confirmation postcard after Monday, May 30, 2011. Registrations will only be processed when accompanied by full payment.

**Cancellation:**
To receive a refund, notice of cancellation must be received no later than Friday, June 3, 2011.

If using the registration form, please mail or fax it to:
Continuing Medical Education
Swedish Medical Center/Cherry Hill
500 17th Avenue, Suite PB #303
Seattle, WA 98122
Fax: 206-320-7462

Please note: No registrations are accepted by phone or e-mail. If you have special needs, please contact the CME office at 206-386-2755.

**Note:** Preregistration is not required for the Swedish Neuroscience Institute Grand Rounds lecture at 7:30 a.m. on June 9.

**Registration Fees:** Please check one of the following:

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<th>Specialty</th>
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