



CME Sponsors: American Medical Seminars, Inc.  
 Activity Title: Emergency Medicine: An Evidence-Based Approach to Adult Care  
 Activity Dates: March 14-18, 2016  
 Presenting Faculty: Ken Butler, M.D.; Andrew Chang, M.D., M.S., F.A.C.E.P., F.A.A.E.M.;  
 and Joel Kravitz, M.D., F.A.C.E.P., F.R.C.P.S.C.

### NARRATIVE DESCRIPTION

Following this course, the participant should be able to recognize the epidemiology, demographics and common clinical presentations for the diseases and disorders discussed; construct an appropriate history, physical exam and laboratory evaluation to develop cost-effective and accurate diagnosis; manage as well as employ appropriate follow-up and/or specialty referral for the diseases and disorders presented. This activity is expected to result in improved competence in making appropriate diagnosis and providing effective treatment and referral or follow-up care with the overall goal of improving patient outcomes.

The emphasis will be on aligning physician behavior with current guidelines and evidence-based medicine, as indicated within each topic's specific objectives. Emergency Medicine is a specialty that has a high rate of utilization and change in standards of care. It is often the point of entry for medical care; therefore, this course was designed to be of value to all practitioners at the level of a practicing physician in an effort to keep them abreast of current clinical practices in Emergency Medicine.

### SPECIFIC OBJECTIVES

#### Day 1

##### Endocrine Emergencies, Part I.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Create, using latest evidence, a comprehensive treatment plan for diabetic ketoacidosis (DKA).
2. Compare and contrast DKA and hyperosmolar non-ketotic states (HHNK).
3. Integrate the understanding of glucose handling to create a treatment plan for hypoglycemia and alcoholic ketoacidosis.

##### Endocrine Emergencies, Part II.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Construct a treatment algorithm for the management of thyroid storm and thyrotoxicosis.
2. Detect adrenal insufficiency and formulate a treatment plan.
3. Assess the clinical presentation of myxedema coma and develop a treatment plan.
4. Detect and develop a plan to test for less common endocrine and paraneoplastic syndromes, including pheochromocytoma and parathyroid disease, and formulate treatment plans.

##### As the World Turns: Peripheral Vertigo in the ED.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Illustrate the pathophysiology of benign positional vertigo.
2. Differentiate the various diagnostic tests in the evaluation of patients with peripheral vertigo.
3. Discover how to perform various therapeutic maneuvers, such as the Epley maneuver, in the treatment of patients with benign positional vertigo.

##### Seizures in the Emergency Department.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Specify key demographic information related to the epidemiology of seizures in the ED setting.
2. Differentiate commonly used antiepileptic drugs and their dosing in seizures and status epilepticus.
3. Appraise the advantages of fosphenytoin over phenytoin in the treatment of status epilepticus.

#### Day 2

##### Neuromuscular Weakness.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Discriminate between various clinical entities causing neuromuscular weakness, including Guillain-Barré syndrome, myasthenia gravis, and others.
2. Demonstrate techniques to be able to discriminate between organic and functional weakness.
3. Compare and contrast upper and lower motor neuron disease.

##### Coagulopathy in the ER: All Bleeding Stops Eventually.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Differentiate different patterns of coagulopathy that present to the ED.
2. Develop an evaluation and treatment plan for non-traumatic bleeding disorders in the ED, including hemophilia, TTP, ITP and others.
3. Outline the rationale and indications for the use of blood products used in the treatment of the bleeding patient.
4. Discuss some of the newer anticoagulation agents used today, such as Prasugrel (Effient) and Dabigatran (Pradaxa).



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### Supraventricular Tachycardias.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Differentiate EKG findings for atrial fibrillation, atrial flutter, paroxysmal supraventricular tachycardia, and Wolf-Parkinson-White syndrome.
2. Specify the factors determining the seriousness of any tachycardia.
3. Utilize current effective and approved therapies to treat various supraventricular tachycardias.

### Aortic Catastrophes.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Determine the Stanford classification of a particular aortic dissection based on location.
2. Apply appropriate initial therapy in the patient with aortic dissection.
3. Assess the risk of rupture of abdominal aortic aneurysm based on size.

### Day 3

#### Potassium and Sodium at Panic Levels.

Upon completion of this session, the participant should be able to:

1. Specify common ED causes of potassium and sodium abnormalities.
2. Discriminate the various therapies used to treat hyperkalemia.
3. Specify the indications to administer hypertonic saline.

#### The Thunderclap Headache.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Determine characteristics suggesting a thunderclap headache.
2. Construct a differential diagnosis beyond subarachnoid hemorrhage in the patient presenting with a thunderclap headache.
3. Interpret spinal fluid results in the workup of a thunderclap headache.

#### Management of the Emergency Psychiatric Patient.

Upon completion of this session, the participant should be able to: <sup>GL, COMP</sup>

1. Recognize the early signs of agitation and employ strategies to resolve them.
2. Select appropriate agents for chemical restraint based on available evidence.
3. Using ACEP guidelines as a framework, develop a plan for the medical clearance of a psychiatric patient.

### Ophthalmologic Emergencies.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Develop an algorithm for the differential diagnosis of the red eye.
2. Create a diagnostic strategy for sudden monocular and binocular blindness.
3. Review the treatment plans for emergent ophthalmic conditions, including glaucoma, and retinal vein and artery occlusions.
4. Develop a treatment strategy for ophthalmic trauma.

### Day 4

#### Traumatic Brain Injury.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Develop an approach to assessing the head injured patient where you can forget about the GCS scoring system.
2. Identify the TBI clinical presentation where "The eyes have it".
3. Determine when TBI necessitates a "formal" RSI intubation.

#### Being "Hip" On Ortho.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Assess if this is just another "found down" patient.
2. Identify which fractures have the highest "missed" rate.
3. Determine when ultrasound is better than a plain film.

#### Trauma and Orthopedic Pitfalls – Injuries Not To Be Missed.

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Detect subtle injuries that, unless treated, can have impact on long term musculoskeletal function.
2. Determine and treat subtle presentation of severe traumatic and neurologic injuries.
3. Distinguish particular injury patterns to avoid missing correlated injuries in a traumatically injured patient.

#### Drug-Drug Interactions (DDIs).

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Assess the scope of the problem of drug-drug interactions as it pertains to both the outpatient and emergency settings.
2. Explore interactions between prescription and non-prescription medications and review their treatments.



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3. Review common drug-drug interactions and their complications commonly seen in the emergency room.

## Day 5

### **Bedside Sedation.**

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Analyze patient characteristics and clinical presentations where the most important risk is for apnea.
2. Debate pulse oximeter and wave form capnography - do we need it?
3. Assess and specify when sedation is an appropriate consideration for the critically ill.

### **The High-Risk Abdomen You Cannot Afford To Miss.**

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Identify clinical presentations and findings that should alert you to not being fooled by a negative test.
2. Develop clinical strategies that will enable you to think outside the abdominal "black box."
3. Determine how one simple bedside test can save a life.

### **Abdominal Pain – The Black Box of the Belly.**

Upon completion of this session, the participant should be able to: <sup>COMP</sup>

1. Review some challenging cases of abdominal pain to help differentiate benign from severe abdominal pain.
2. Evaluate the utility of various tests, including labs, ultrasound and CT scan in the diagnosis of abdominal pain.
3. Determine subtle features of certain presentations of abdominal pain that suggest a more severe cause.
4. Explore diagnoses of abdominal pain in the absence of abdominal pathology.

### **Facial Trauma.**

Upon completion of this session, the participant should be able to:

1. Perform both a rapid screen and a thorough evaluation of the patient with facial trauma.
2. Outline the challenges in securing an airway in the patient with facial trauma.
3. Describe the indication for different imaging procedures for facial trauma.
4. Manage injuries to the soft tissues of the face (lips, tongue, eyelids...).