

# Emergency Medical Stroke Assessment (EMSA)



# Course Faculty

## **Toby I. Gropen, MD, FAHA**

James H. Halsey Jr., MD Professor and Chief, Division of Cerebrovascular Disease  
Director, Comprehensive Neurovascular Stroke Center  
University of Alabama at Birmingham  
Co-Chairman Stroke Operations Committee, Birmingham Regional EMS System

## **Michael Frankel, MD**

Lead Neurologist for the Georgia Coverdell Acute Stroke Registry  
Professor & Director of Vascular Neurology, Emory University School of Medicine  
Director of the Marcus Stroke and Neuroscience Center  
Chief of Neurology, Grady Memorial Hospital

# Course Description

This course is based on the premise that earlier identification of strokes will lead to earlier treatment and better outcomes.

Materials covered include: Types of stroke, stroke symptoms and signs, interpreting stroke onset time, and distinguishing patients with stroke from those with common stroke mimics. The course focus is on identification of patients with stroke, including those due to a large vessel occlusion (LVO), through the use of the Emergency Medical Stroke Assessment (EMSA), and treatment options for acute ischemic stroke.

# Learning Objectives

**At the conclusion of this course, participants will be able to:**

- Recognize stroke symptoms and signs and common stroke mimics
- Recall treatment options for ischemic strokes and the time frame for certain treatment options
- Examine a patient using the EMSA, and interpret the results
- Support patients in getting routed to the most suitable location avoiding delays

## Emergency Medical Stroke Assessment (EMSA)

Check any elements that are abnormal

Abnormal

### E: Eye Movement

#### Horizontal Gaze

Ask patient to keep their head still and follow your finger left to right with their eyes  
Abnormal: Patient is unable to follow as well in one direction compared to the other

### M: Motor – Face, Arm, or Leg Weakness

#### Facial Weakness

Ask patient to show their teeth or smile  
Abnormal: One side of the face does not move as well as the other

#### Arm Weakness

Ask patient to hold out both arms, palms up, for 10 seconds with eyes closed  
Abnormal: One arm does not move or drifts down compared to the other

#### Leg Weakness

Ask patient to lift up one leg and then the other for 5 seconds  
Abnormal: One leg does not move or drifts down compared to the other

### SA: Slurred Speech or Aphasia

#### Naming

Ask patient to name your watch and pen  
Abnormal: Patient slurs words, says the wrong words, or is unable to speak

#### Repetition

Ask patient to repeat “They heard him speak on the radio last night” after you  
Abnormal: Patient slurs words, says the wrong words, or is unable to speak

# Videos and Examination/Certification Links

Follow the links below:

- Emergency Medical Stroke Assessment Video  
<http://www.kaltura.com/tiny/xr3fh>
- Stroke Concept of Last Known Well Video  
<https://vimeo.com/155225054>
- Examination/Certification  
<https://redcap.dom.uab.edu/surveys/?s=EP9PYX8A3N>