

## 2007 American Stroke Association Acute Ischemic Stroke Guideline Review

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This summary accompanies the audio files posted on the ACEP Web site and highlights elements of the new “Guidelines for the Early Management of Adults with Ischemic Stroke” that have particular relevance to the emergency medicine community.[1]

### **Prehospital Care**

Prehospital care continues to be recognized as an integral component in the system of stroke care. A new guideline describing the development of emergency medical systems published in *Stroke* complements this guideline and describes EMS integration at a higher, more systems based level.[2] These guidelines also complement the teachings in the Advanced Cardiac Life Support materials on stroke.

These guidelines again recommend:

- 911 utilization for all stroke patients
- Priority dispatch for suspected stroke
- Rapid on-scene assessment and transport
- Field use of a stroke screening tool
- Prehospital notification of potential stroke patient
- Potential triage of potential stroke patients to regional stroke centers, as identified by local stroke systems (state department of health, Joint Commission, etc)

The triage of stroke patients has the greatest implication for emergency medicine, potentially increasing patient volumes in certain centers. If a hospital seeks primary stroke center designation it must do so in concert with its emergency department staff in order to appropriately resource the ED for the larger patient volume and need to rapidly assess, diagnosis, and treat. This includes providing an open back door to facilitate rapid admission to stroke units for continued care.

### **Emergency Department Care**

The new guidelines contain updated material on the evaluation, diagnosis and early management of patients with AIS. Many of the guidelines remain unchanged and call for:

- Rapid triage to an acute care area
- Rapid laboratory and neuroimaging
- Timely availability of stroke expertise
- Intravenous tissue plasminogen activator in appropriate patients (a LOE 1 recommendation)
- Consideration in select patients of intra-arterial thrombolysis or mechanical thrombectomy
- Admission of all stroke patients to a stroke unit

New to these guidelines related to the ED include:

- Neuroimaging interpretation must be performed by an expert in the field
- Chest x-rays when indicated by clinical suspicion
- Seizures at onset of symptoms is not an absolute contraindication to thrombolytics. Stroke expertise, and or advanced neuroimaging may be used to identify patients with ongoing ischemia

### **Summary**

These guidelines represent an update from the previous 1999 guidelines. They continue to recognize the importance of the ED and place greater emphasis on providing the ED with resources to ensure optimal care. They do not call for the emergency physician to act in a vacuum, but rather call for emergent availability of stroke expertise and neuroimaging availability.

**References:**

1. Adams, H.P., Jr., et al., *Guidelines for the early management of adults with ischemic stroke: a guideline from the American Heart Association/American Stroke Association Stroke Council, Clinical Cardiology Council, Cardiovascular Radiology and Intervention Council, and the Atherosclerotic Peripheral Vascular Disease and Quality of Care Outcomes in Research Interdisciplinary Working Groups: the American Academy of Neurology affirms the value of this guideline as an educational tool for neurologists*. *Stroke*, 2007. **38**(5): p. 1655-711.
2. Acker, J.E., 3rd, et al., *Implementation Strategies for Emergency Medical Services Within Stroke Systems of Care. A Policy Statement From the American Heart Association/ American Stroke Association Expert Panel on Emergency Medical Services Systems and the Stroke Council*. *Stroke*, 2007.