Policy Position Statement on Implementation Strategies for Emergency Medical Services within Stroke Systems of Care
September 2007

I. Background
Stroke remains the third leading cause of death and a leading cause of long-term disability among Americans; approximately 700,000 individuals suffer a new or recurrent stroke each year.\(^1\) Advances over the past decade in acute stroke care highlight the important role of emergency medical services (EMS) agencies and emergency medical services systems (EMSS) in optimizing stroke care. EMS refers to the full scope of prehospital services necessary for acute stroke care, including 9-1-1 activation and dispatch, emergency medical response, triage, and stabilization in the field, and transport by ground or air ambulance to a hospital or between facilities. EMSS refers to the delivery systems for EMS that may be organized on a local, regional, statewide, or nationwide basis using public or private resources. The successful integration of one (and often multiple) EMSS is critical to ensuring the effectiveness of a stroke system of care.

II. Recommendations
This paper by Acker et al., expands on the four categories of recommendations that were part of the original 2005 Stroke Systems Task Force white paper\(^2\) and defines specific recommendations, resources and measurement parameters for each category. These parameters and policy recommendations can serve as the basis for state-level model legislation. At the federal level, the STOP Stroke Act, if passed and appropriated, would provide resources and leadership to states for implementing many of these recommendations.

The four categories of recommendations are:

1. For Activating and Dispatching the EMS Response for Stroke Patients, Stroke Systems should Require Appropriate Processes that ensure Rapid access to EMS for Acute Stroke Patients
   a. Locate acute stroke patients rapidly by ensuring that the public has access to enhanced landline and wireless 9-1-1 (W-E911).
   b. Identify acute stroke patients rapidly and accurately by ensuring EMS communicators recognize stroke signs and symptoms as reported by callers.
   c. Dispatch the highest level of care available to suspected stroke patients in the shortest time possible by ensuring that EMS communicators use emergency medical dispatch guidelines reflecting the current ASA/AHA guidelines.

2. For EMS responders, EMSS should use protocols, tools and training that meet current AHA/ASA guidelines for stroke care.
a. Identify Acute Stroke Patients Rapidly and Accurately by Ensuring that EMS Responders Use Validated Screening Algorithms Effectively.
b. Establish Goals for the EMSS response time for suspected stroke patients. The EMSS response time comprises the dispatch time, the turnout time, and the travel time.

3. Prehospital providers, emergency physicians, and stroke experts should collaborate in the development of EMS training, assessment, treatment, and transportation protocols for stroke.
   a. Promote ongoing collaboration among prehospital and hospital providers in the acute treatment of stroke patients.
   b. Develop and implement stroke education activities collaboratively with prehospital and hospital providers.
   c. Develop stroke system transport protocols collaboratively with prehospital and hospital providers, as well as with other stakeholders.
   d. Engage collaboratively with prehospital and hospital programs in continuous quality improvement processes for stroke patient care while complying with protections for the privacy of personal health information.

4. Patients should be transported to the nearest certified stroke center for evaluation and care if a stroke center is located within a reasonable transport distance and transport time. The determination needs to take into account regional issues such as the availability of certified stroke centers and geography and whether transportation to a certified stroke center is possible within the appropriate time for acute therapeutic interventions.
   a. Assess stroke patient eligibility for acute stroke therapies using a stroke history checklist or algorithm designed for prehospital personnel.
   b. Establish EMSS transport destination protocols that reflect optimal patient care with transport to a stroke center.
   c. Establish protocols for the transfer of stroke patients from nonstroke center hospitals to certified stroke centers.
   d. Transport stroke patients to stroke-ready hospitals regardless of the patients’ geopolitical location.

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