

**Stroke Committee of the
Governor's EMS and Trauma Advisory Council
J. Neal Rutledge MD, Chair**

May 25, 2007

In SB330 enacted by our legislature in 2005, a strong system to treat people with strokes in a timely manner and to improve the overall treatment was ordered. The Governor's EMS and Trauma Advisory Council (GETAC) Stroke Committee makes the following recommendations to meet that goal.

Texas Stroke Center Designations

(A.)The Governor's EMS and Trauma Advisory Council (GETAC) Stroke Committee of the Department of State Health Services (DSHS) recommend the designation of three levels of state recognized stroke centers/facilities as follows:

- Level 1: Comprehensive Stroke Centers
- Level 2: Primary Stroke Centers
- Level 3: Support Stroke Facilities

(B) Each center applying for state Stroke Center/Facility level designation shall meet the following criteria:

- 1) Level 1: Comprehensive Centers ("CSCs") will meet the requirements of a Primary Stroke Center and those specified in the Consensus Statement of Stroke on Comprehensive Stroke Centers. (Recommendations for comprehensive Stroke centers: a consensus statement from the Brain Attack Coalition. Stroke. 2005; 36(7):1597-616.) These include, but are not limited by, the following specifications:
 - a. A 24/7 stroke team capability as defined herein plus all of the requirements specified for a Primary Stroke Center
 - b. Personnel with expertise to include vascular neurology, neurosurgery, neuroradiology, interventional neuroradiology/endovascular physicians, critical care specialists, advanced practice nurses, rehabilitation specialists with staff to include physical, occupational, speech, and swallowing therapists, and social workers.
 - c. Advanced diagnostic imaging techniques such as magnetic resonance imaging (MRI), computerized tomography angiography (CTA), digital cerebral angiography and transesophageal echocardiography.
 - d. Capability to perform surgical and interventional therapies such as stenting and angioplasty of intracranial vessels, carotid

endarterectomy, aneurysm clipping and coiling, endovascular ablation of AVM's and intra-arterial reperfusion.

- e. Supporting infrastructure such as 24/7 operating room support, specialized critical care support, 24/7 interventional neuroradiology/endovascular support, and stroke registry
- f. Educational and research programs

2) Level 2: Primary Stroke Centers ("PSCs") will meet the requirements specified in "Recommendations for the Establishment of Primary Stroke Centers, JAMA 2000 June 21; 283 (23):3125-6." They will be able to deliver stroke treatment 24/7. These include, but are not limited by, the following specifications:

- a. 24 hour stroke team
- b. Written care protocols
- c. EMS agreements and services
- d. Trained ED personnel
- e. Dedicated stroke unit
- f. Neurosurgical , Neurological, and Medical Support Services
- g. Stroke Center Director that is a physician
- h. Neuroimaging services available 24 hours a day
- i. Lab services available 24 hours a day
- j. Outcomes and quality improvement plan. At a minimum this plan will incorporate the following 13 items for tracking, performance, and reporting :
 - i. Deep Vein Thrombosis prophylaxis given
 - ii. Discharged on antiplatelet/antithrombotics
 - iii. Patients with atrial fibrillation receiving anticoagulation therapy
 - iv. Tissue Plasminogen Activator (tPA) considered
 - v. Antithrombotic medication within 48 hours of hospitalization
 - vi. Lipid profile ordered during hospitalization
 - vii. Screen for dysphagia performed
 - viii. Stroke education provided
 - ix. A smoking cessation program provided or discussed
 - x. A plan for rehabilitation was considered
 - xi. The number of EMS stroke patients transported to the facility
 - xii. The number of EMS stroke patients admitted to the hospital
 - xiii. The number and percentage of stroke cases treated with intravenous (IV) or intraarterial (IA) tPA
- k. Annual stroke CE requirement as per Medical Director in accordance with JACHO guidelines
- l. Public education program

- 3) Level 3¹: Support Stroke Facilities (“SSFs”) provide timely access to stroke care but may not be able to meet all the criteria specified in the Level 1(CSCs) and Level 2 (PSCs) guidelines. They are required to:
- a. Develop a plan specifying the elements of operation they do meet.
 - b. Have a Level 1 or Level 2 center that agrees to collaborate with their facility and provide the supplemental resources needed to meet the criteria outlined in the Level 2 requirements that they lack.
 - c. The collaboration will provide 24/7 access to a qualified health care individual.
 - d. Identify in the plan where the Level 1 or Level 2 center has agreed to collaborate with and accept their stroke patients for stroke treatment therapies the SSF are not capable of providing
 - e. Obtain a written agreement between the Level 1 or Level 2 Stroke Center with their facility specifying the collaboration and interactions.
 - f. Develop written treatment protocols which will include at a minimum:
 - 1. Transport or communication criteria with the collaborating/accepting Level 1 or Level 2 center.
 - 2. Protocols for administering thrombolytics and other approved acute stroke treatment therapies.
 - g. Obtain an EMS/RAC agreement that:
 - 1. clearly specifies transport protocols to the SSF, including a protocol for identifying and specifying any times or circumstances in which the center cannot provide stroke treatment; and,
 - 2. specifies alternate transport agreements that comply with GETAC EMS Transport protocols.
 - h. Document ED personnel training in stroke.
 - i. Designate a stroke director (this may be an ED physician or non-Neurologist physician)
 - j. Employ the NIHSS for the evaluation of acute stroke patients administered by personnel holding current certification
 - k. Clearly designate and specify the availability of neurosurgical and interventional neuroradiology/endovascular services.
 - l. Document access and transport plan for any unavailable neurosurgical services within 90 minutes of identified need with collaborating Level 1 or 2 Stroke Center.
 - m. Be a licensed DSHS general hospital

¹ The designation of a Level 3 Center is defined to allow timely access to acute stroke care that would not otherwise be available such as in rural situations where transportation and access are limited and is intended to recognize those models that deliver standard of care in a quality approach utilizing methods commonly known as “drip and ship” and telemedicine approaches.

- 4) Any center applying for or receiving a state Stroke Center/Facility level designation must maintain active participation in stroke, hospital, and/or other committees per the by-laws of their designated RAC.

(C) Centers or hospitals requesting Level 1, Level 2, or Level 3 state-approved Stroke Center/Facility designation will submit a signed affidavit by the CEO of the organization to the DSHS detailing compliance with the requirements designated in this Rule.

- 1.) Centers or hospitals seeking Level 1 CSC or Level 2 PSC state-approved Stroke Center designation who submit a copy of that level of certification by state-recognized organizations such as JCAHO shall be assumed to meet the requirements pursuant to this Rule.

- 2.) Each center or hospital shall submit annual proof of continued compliance by submission of a signed affidavit and detailed compliance by the CEO of the organization.

- 3) Each center or hospital shall also submit an annual letter of support, participation and cooperation from their RAC.

- 3.) The DSHS may review sites as needed to verify compliance. National averages and percentages based on yearly surveys of centers outcome and quality improvement plan submitted in the detailed compliance affidavit may be used to trigger audits.

(D) DSHS will publish a list on its website of hospitals or centers meeting state approved criteria and their Stroke Center/Facility designation. This list will also be made available to the state RAC's for their EMS transportation plans.

- 1.) Centers holding JCAHO or other state-recognized certification will be specified with an additional qualifier and will be listed prior to listing centers holding similar level designation without formal certification.

(E) If a hospital or center fails to meet the criteria for a state Stroke Center/Facility level designation for more than 6 weeks or if a hospital or center no longer chooses to maintain state Stroke Center/Facility level designation, the hospital shall immediately notify, by certified mail return receipt requesting, the DSHS, local EMS, and governing RAC.

(F) If a hospital is in good standing and on the approved state Stroke Center list, the hospital may advertise to the public its state-approved status and state level designation. A Texas Level 1 (CSC) may use the words, "Texas-approved Level

1 Stroke Center” or “Texas-approved Comprehensive Stroke Center”. A Level 2 center may use the words, “Texas-approved Level 2 Stroke Center” or “Texas-approved Primary Stroke Center”. A Level 3 Stroke Facility approved by the state may use the words “Texas-approved Level 3 Support Stroke Facility” or “Texas-approved Support Stroke Facility”. If the hospital or center is removed from state-approved level Stroke Center/Facility designation, no further public advertising is allowed and existing advertising must, where feasible, be removed from public distribution within 60 days from the date of removal. To the extent that removal of advertisement is infeasible, for example advertisement previously distributed in magazines, newspapers or on the internet, any automatic renewal of such advertisement shall be cancelled upon removal, and no further advertisement in said media shall be pursued.

Early Treatment Protocols for Rapid Transport

The Governor’s EMS and Trauma Advisory Council (GETAC) Stroke Committee of the Department of State Health Services (DSHS) recommend that the initial stroke transport plan have 3 components that each RAC should implement:

1. Appointment of a “stroke committee” to develop and oversee a region-specific stroke transport plan.
2. The regional plan will conform to the following general principles:
 - a. A written plan is developed for regional triage of adult (TSA defines adult) stroke patients to hospitals best able to care for them.
 - b. Emergency transportation (immediate priority, most rapid transport or transfer) of patients out to 8 hours from symptom onset. This time window can be altered as new therapies become available.
 - c. Instruct paramedics to take patients to the highest level state designated Stroke Center if available within the region (or adjacent region, if a higher level Stroke Center in the adjacent region is closer than a lower level Stroke Center in the region). In making this determination, distance and time parameters should be considered. There should be no more than a 15 minute delay caused by taking a patient to the next highest level of stroke care. Where the available stroke care level and Stroke Centers/Facilities are comparable, a scheme should be developed to ensure a fair distribution of patients among qualified Stroke Centers/Facilities except for patient preference.

3. Create and maintain a registry of the number and destination of stroke patients transported and submit yearly to the DSHS.

Emergency Medical Services Training

The Governor's EMS and Trauma Advisory Council (GETAC) Stroke Committee of the Department of State Health Services (DSHS) is cognizant that training and oversight of EMS personnel can be time and resource intensive, and so recommends the following minimal additions be added to Emergency Medical Service Provider's licensure detailed in the Texas Administrative Code.

- 1) That all EMS personnel be trained and use the "Cincinnati Stroke Scale" in the assessment of possible stroke victims.
- 2) That all certified or licensed EMS personnel receive training in the recognition and emergency care of stroke, equivalent to training received in the current "ACLS Case 10 stroke scenarios".
- 3) That EMS providers have documented familiarity with the Stroke Center Certification and the Emergency Transport Protocol in their RAC.
- 4) That recognition and documentation of stroke training be overseen by the Medical Director supervising the EMS personnel.
- 5) That current ACLS successful course completion be recognized as documentation of that training or that alternatively the supervising Medical Director be responsible for the oversight, documentation and attestation of equivalent training on a yearly basis.
- 6) As practical EMD (911) dispatch shall receive training and made aware of emergent nature of stroke and Cincinnati Stroke Scale (FAST)

Coordination and Community Education of Stroke Plan

The GETAC Stroke Committee is cognizant that such programs can be time and resource intensive, and recommends the Department of State Health Services (DSHS) and the Texas Council on Cardiovascular Disease and Stroke perform the following:

- Develop an effective and resource-efficient plan educating cities and RACs of the new GETAC rules on stroke facilities and emergency transport plan,
- conduct health education, public awareness, and community outreach on the emergent care of stroke and its prevention,
- coordinate its activities among other agencies within the state,

- develop a database/registry of treatment and care of stroke, based on the QA/QI information provided in the yearly affidavits
- develop a web site and information on state stroke centers and facilities,
- collect and analyze information related to stroke and the state stroke plan, and
- include stroke care as a criteria in it's Recognition Programs.