East Texas Gulf Coast Regional Trauma Advisory Council

Regional Advisory Council - R (RAC-R)

RAC-R proudly supports and serves Jasper, Newton, Hardin, Orange, Liberty, Jefferson, Chambers, Galveston and Brazoria Counties. Covering approximately *8816 square miles of Southeast Texas

East Texas Gulf Coast Regional Trauma Advisory Council (RAC-R)
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*The approximate square mile numbers were obtained from Wikipedia

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Introduction

Stroke remains to be the leading cause of serious, long-term disability in the United States - where someone suffers a stroke every 40 seconds, on the average, and dies every 4 minutes. Stroke is one of the leading conditions that cause 45 million people in the United States with functional disabilities. Functional disabilities pertain to the difficulty in performing daily activities that involve vision, hearing, and speech in one's work, job, business, or daily chores.

Stroke is the 4th most common cause of death in the United States (4.3 per 100,000 population annually). A very interesting piece of information about these recently-released statistics is that, in terms of gender, stroke appears to occur more in women than in men in the United States and Canada. There are about 55,000 more American women than men who suffer stroke each year. The prevalence of stroke in men is estimated at 2.5 million.

Mission

The mission of the East Texas Gulf Coast Regional Trauma Advisory Council Critical Care Committee is to facilitate coordination of stroke providers to ensure the most efficient, consistent, expeditious, effective and innovative care for each and every individual whom experiences an acute stroke, by developing, implementing, and maintaining an integrated quality process in stroke prevention and comprehensive stroke care.

Vision

RAC-R will develop and support leadership within our region, state, and nation regarding the care of stroke patients and the solution to preventable mortality and morbidity.

Organization

RAC-R is a rural and sparsely populated area that services a large geographic area with long response and transport times. Within RAC-R, one hospital is designated as a Comprehensive Stroke center and three facilities designated as Primary Stroke centers all located in Jefferson County. In addition, Galveston County has two facilities designated as Primary Stroke Centers. For this reason RAC-R places a great deal of emphasis on its cooperation with SETRAC (TSA-Q). There are 17 Primary Stroke Facilities within SETRAC (TSA-Q) and one Comprehensive Stroke Center. Not all but the majority of facilities in RAC-R facilitate transfers of their acute stroke patients to hospitals within SETRAC (TSA-Q).

RAC-R will focus its attention on providing the infrastructure and leadership necessary to sustain appropriate

stroke treatment and transfer systems within and into RAC's where more definitive acute stroke care can be delivered. All RAC-R committees have an invested interest in continuing to improve the care that is rendered to stroke patients. It is imperative that all members of RAC-R work collectively and cooperatively to ensure that the highest level of care is being delivered to each and every stroke patient by pre-hospital and hospital

professionals. RAC-R will provide stroke and public awareness education, and stroke education to health care providers in each of the nine counties.

Regional Plan

This plan has been developed in accordance with generally accepted stroke guidelines and procedures for implementation of a comprehensive Emergency Medical Services (EMS) and Stroke System plan. This plan does not establish a legal standard of care, but rather is intended as an aid to decision-making in stroke patient care scenarios. It is not intended to supersede the physician's prerogative to order treatment.

Goals

Identify and integrate our resources as a means to obtaining commitment and

cooperation. Identify leverage tactics to promote EMS provider participation.

Establish system coordination relating to access, protocols/procedures and referrals. These structures will establish continuity and uniformity of care among the providers of stroke care.

Promote internal communication as the mechanism for system coordination which will include the EMS providers, hospitals, and members of the RAC-R and SETRAC Critical Care Committee.

Create system efficiency for the patient and the programs through continuous quality improvement programs which will identify the patient's needs, outcome data and help develop standard uniformity.

Institute an understanding of the guidelines for Stroke Center designation as dictated by the Texas Department of State Health Services.

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Requirements for Texas Stroke Center Designations

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

Level I: 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 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 Attached to this document for reference). 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. Neuro imaging services available 24 hours a day
i. Lab services available 24 hours a day
j. Outcomes and quality improvement plan
k. Annual stroke CE requirement
l. Public education program

3) Level 3[1]: 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 to accept their stroke patients where they lack the capacity to provide stroke treatment.
   c. Identify in the plan the Level 1 or Level 2 center that has agreed to collaborate with and accept their stroke patients for stroke treatment therapies the SSF are not capable of providing
   d. Obtain a written agreement between the Level 1 or Level 2 Stroke Center with their facility specifying the collaboration and interactions.
   e. 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.

   f. 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.
   g. Document ED personnel training in stroke.
   h. Designate a stroke director (this may be an ED physician or non-Neurologist physician)
   i. Employ the NIHSS for the evaluation of acute stroke patients administered by personnel holding current certification
   j. Clearly designate and specify the availability of neurosurgical and interventional neuroradiology/endovascular services.
   k. Document access and transport plan for any unavailable neurosurgical services within 90 minutes of identified need with collaborating Level 1 or 2 Stroke Center.

[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.

(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 Joint Commission 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 by the CEO of the organization.

(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 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.

Public Awareness

The pre-hospital and hospital should participate in regional stroke awareness campaigns and other public education activities regarding stroke prevention and care. All RAC-R members should actively initiate and promote stroke prevention activities.

Pre-hospital Triage and Treatment

Goal – Patients will be identified, rapidly and accurately assessed, and based on identification of their actual or suspected onset of symptoms, should be transported to the nearest level II (Primary) stroke facility. The facility should be notified as soon as feasible to allow the facility to prepare for the patients arrival which will greatly reduce the door-to-intervention time.

Purpose – Appropriate identification of the stroke patient will ensure that the patient be delivered to the appropriate facility. Notification of the facility will allow proper preparation to reduce the wait time for the patient. Use of any approved stroke assessment will assist the pre-hospital provider in determining the patients need and facility destination decision. Each provider needs to determine what assessment criteria they will utilize and each staff member should be trained on its appropriate use as to understand the findings rendered.

System Triage

Goal – Patients with an onset of stroke symptoms less than 3 hours (2005 AHA Guidelines) should be transported to the closest appropriate level I (Comprehensive) or level II (Primary) stroke facility for evaluation and treatment with interventional measures. It is expected that, after determining the patients hemodynamic stability, the EMS provider will make the determination that, if transport to a level I (Comprehensive) or level II (Primary) facility will increase transport time by no more than 15 minutes, the patient will be transported by ground to the closest designated stroke facility.

Unless immediate intervention (ABC's, cardiac arrest etc.) is required, patients with an onset of stroke symptoms less than 8 hours should be taken to a level 1 facility to be evaluated for advanced therapy. If the ground transportation time adds greater than 15 minutes or if lifesaving interventions are required for safe transport, EMS should consider calling for helicopter transport.

In the event that transport time by ground will be greater than 15 minutes the patient should be transported by air medical transport if available. Additionally, if immediate life saving intervention (Advanced airway, cardiac arrest, etc.) is required, patients with an onset of less than 3 hours should be transported to a level II (Primary) stroke facility. Patients with an onset of stroke symptoms less than 8 hours should be taken to a level 1 facility to be evaluated for advanced therapy. Patients with onset of stroke symptoms greater than 8 hours should be taken to the closest level 1 or level 2 stroke facilities.

It is always best to err on the side of the patient and what is in the best interest of the patient to afford the best chance of a favorable outcome.

Air Medical Transport Activation

Goal – Air medical transport resources will be appropriately utilized in an effort to reduce delays in providing exceptional stroke care.

Decision Criteria –

a. Helicopter activation / scene response should be considered when it can reduce transportation time for patients with onset of symptoms less than 8 hours.
b. Contact the air medical service for assistance in the decision making process.
c. Patients meeting criteria for helicopter dispatch should be transported to the nearest level I (Comprehensive) or level II (Primary) stroke center.

Hospital to Hospital Transfers

Goal – The goal of establishing, implementing and maintaining a facilities hospital to hospital transfer plan is to ensure that those stroke patients requiring additional or specialized care and treatment beyond a facility's capability are identified and transferred to an appropriate facility as soon as possible and with as little delay as humanly possible.

Objectives –

a. To ensure that all regional hospitals make transfer decisions based on standard definitions which classify stroke patients according to adopted facility triage criteria.
b. To identify stroke treatment and specialty facilities within the area.
c. To establish treatment and stabilization criteria and acceptable time guidelines for hospital to hospital transfer acceptance of the patient.

Transfer Discussion –

a. The level of healthcare resources required for acute stroke care patients is outlined in the pre-hospital triage criteria. When a stroke patient is identified the tertiary facility should call a designated level II (Primary) stroke facility and advise that they have a "Code Stroke".
b. The Level II (Primary) stroke facility should consult with the provider at the transferring facility to ensure that the patient is stable and to determine the best transport decision for the patient (air transport vs. ground transport)
c. The Level II (Primary) stroke facility should determine their ability to accept the patient in transfer as soon as possible.
d. In the event that the transferring facility does not have contact information for the appropriate specializing physician the Level II stroke facility should facilitate communication with the appropriate physician and the transferring physician or practitioner.