



Regional Stroke System Plan

[Trauma Service Area O]

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I. INTRODUCTION

Cardiovascular disease is the number one cause of death in Texas and the United States. According to the American Heart Association (AHA) and the American Stroke Association (ASA) nearly 800,000 people in the United States have a stroke every year, with about three in four being first-time strokes. AHA and ASA also state that stroke is the number five cause of death in the US, killing nearly 130,000 people a year, that is one in every 20 deaths. Someone in the US will have a stroke every 40 seconds. Every 4 minutes someone dies from a stroke.

II. CATRAC STROKE COMMITTEE

Mission

The mission of the Capital Area Trauma Regional Advisory Council (CATRAC) Stroke Committee is to review and maintain the written plan for regional triage and transfer of stroke patients to appropriate facilities; to create a stroke registry for regional data collection; to maintain a system to provide education to pre-hospital and emergency healthcare providers with updates of the availability and advances in stroke care; and to enhance community awareness of early recognition of stroke through educational resources.

Vision

CATRAC will provide leadership and guidance within the CATRAC Region, also known as Trauma Service Area O (TSA-O), and the state regarding the care of stroke patients and utilize preventative measures to decrease morbidity and mortality.

Organization

CATRAC's missions regarding stroke include providing leadership and guidance necessary to sustain a stroke system of care within the eleven designated counties served; improving the level of care provided to those persons living in or traveling through the region; and facilitating stroke awareness education to the public and healthcare providers in each of the eleven counties. CATRAC also strives to ensure the quality of care provided to the stroke patient is at its highest level through work and cooperation of our standing committees and work groups

Regional Stroke 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. The plan does not establish a legal standard of care, but rather is intended as an aid to decision-making in stroke patient care scenarios.

III. STROKE SYSTEM OF CARE GOALS

The purpose of the CATRAC Stroke Committee is to facilitate the development, implementation, and operation of a comprehensive stroke system based on accepted, evidence-based standards of care in order to decrease morbidity and mortality related to stroke. CATRAC will solicit participation from EMS and first responders, health care facilities, organizations, professional societies involved in health care.

- Identify and integrate resources as a means to obtaining commitment and cooperation in developing a regional stroke system of care.
- Identify strategies to promote EMS provider participation in the stroke system of care.
- Establish system coordination relating to access, guidelines and referrals. This coordination is intended to establish continuity and uniformity of care for the stroke patient.
- Promote internal communication as the mechanism for system coordination which will include EMS providers, hospitals and members of the CATRAC Stroke 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. Create system efficiency through continuous quality improvement processes to develop standardization and uniformity in approaches to stroke patient care.

IV. STROKE DESIGNATION

CATRAC follows the Texas Department of State Health Services (DSHS) rules in regards to the requirements for a stroke facility to receive a state designation. CATRAC will not designate stroke facilities at any level, but may set minimum standards for participation in the CATRAC (TSA-O) Stroke System of Care. Appendix C outlines the requirements for Stroke Facility Designation for Level III- Support Centers, Level II- Primary Centers, and Level I- Comprehensive Centers and information is updated and maintained on the DSHS website.

CATRAC Stroke Facility Participation

A hospital facility interested in seeking state designation as a Stroke Center (Level I, II, or III) must apply to the Texas Department of State Health Services. The application will include a "Letter of Participation" from CATRAC. Participation requirements include but are not limited to:

- 75% participation by the facility in the CATRAC Stroke Committee meetings on an annual basis;
- 75% participation by the facility in quarterly CATRAC General Membership meetings on an annual basis;
- Submission of stroke data to CATRAC as requested by grant requirements or determination of metrics by the CATRAC Stroke Committee.

Public Awareness/Stroke Prevention

The CATRAC stroke system stakeholders (CATRAC, EMS and facilities) will partner to conduct health education, public awareness and community outreach on the prevention of stroke, recognition of signs and symptoms of stroke and the emergency care of the stroke victim. A facility that seeks a designation status will be required to participate in the CATRAC stroke system of care and collaborate in providing education and awareness to stakeholders and the community.

V. REGIONAL TRANSPORT GUIDELINES

Goal: Patients with an onset of stroke symptoms less than 3 hours will be taken to the closest Level I or Level II Stroke Facility for treatment and evaluation for interventional care. It is expected that, after determining the patient is hemodynamically stable, the EMS personnel will make the determination that, if transport to a Level I or Level II facility will increase the transport time by more than 15 minutes the patient should be taken to the closest Level III 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 I 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.

Early consideration of Air Medical transport will be used to decrease transport time. (See Appendix A) Patients meeting criteria for helicopter dispatch should be transported to the nearest Level I or Level II Stroke Center.

Goal: Medical Air Transport resources should be appropriately utilized in order to reduce delays in providing optimal stroke care.

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, will be transported to the nearest most appropriate stroke facility. Please see the attached CATRAC Pre-hospital Transport Guidelines for Stroke created by the CATRAC Stroke Committee.

OBJECTIVES

- Ensure the prompt availability of medical resources needed for optional patient care.
- Notify receiving facility of potential stroke patient's arrival.

FACILITY CRITERIA

Goal: The goal of establishing implementing facility criteria in the CATRAC is to ensure that all hospitals in the region use the standard definitions to classify stroke patients in order to ensure uniform patient reporting and facilitate inter-hospital transfer decisions.

OBJECTIVES

- To ensure that each stroke patient is identified rapidly and accurately assessed, and based on identification and classification of their actual or suspected onset of symptoms treated appropriately or transferred to the nearest appropriate stroke facility.
- To ensure prompt availability of medical resources needed for optimal patient at the receiving stroke facility.
- To develop and implantation a system of standardized stroke patient classification definitions.

VI. INTER-HOSPITAL TRANSFERS

Goal: The goal for establishing and implementing a facility's inter-hospital transfer plan in the CATRAC Region 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.

OBJECTIVES

- To ensure that all regional hospitals make transfer decisions based on standard definitions which classify stroke patients according to facility triage criteria.
- To identify stroke treatment and specialty facilities within the CATRAC.
- To establish treatment and stabilization criteria and time guidelines for CATRAC patient care facilities.

VII. STROKE SYSTEMS QUALITY MANAGEMENT AND PROCESS IMPROVEMENT

The facility must have a system in place to review process improvement issues with stroke cases. Additionally, the facility must participate in the CATRAC regional process improvement within the Stroke Committee.

Goal: The goals for the stroke systems process improvement in the CATRAC Region are to establish a method for monitoring and evaluating systems performances over time and assess impact of stroke development.

OBJECTIVES

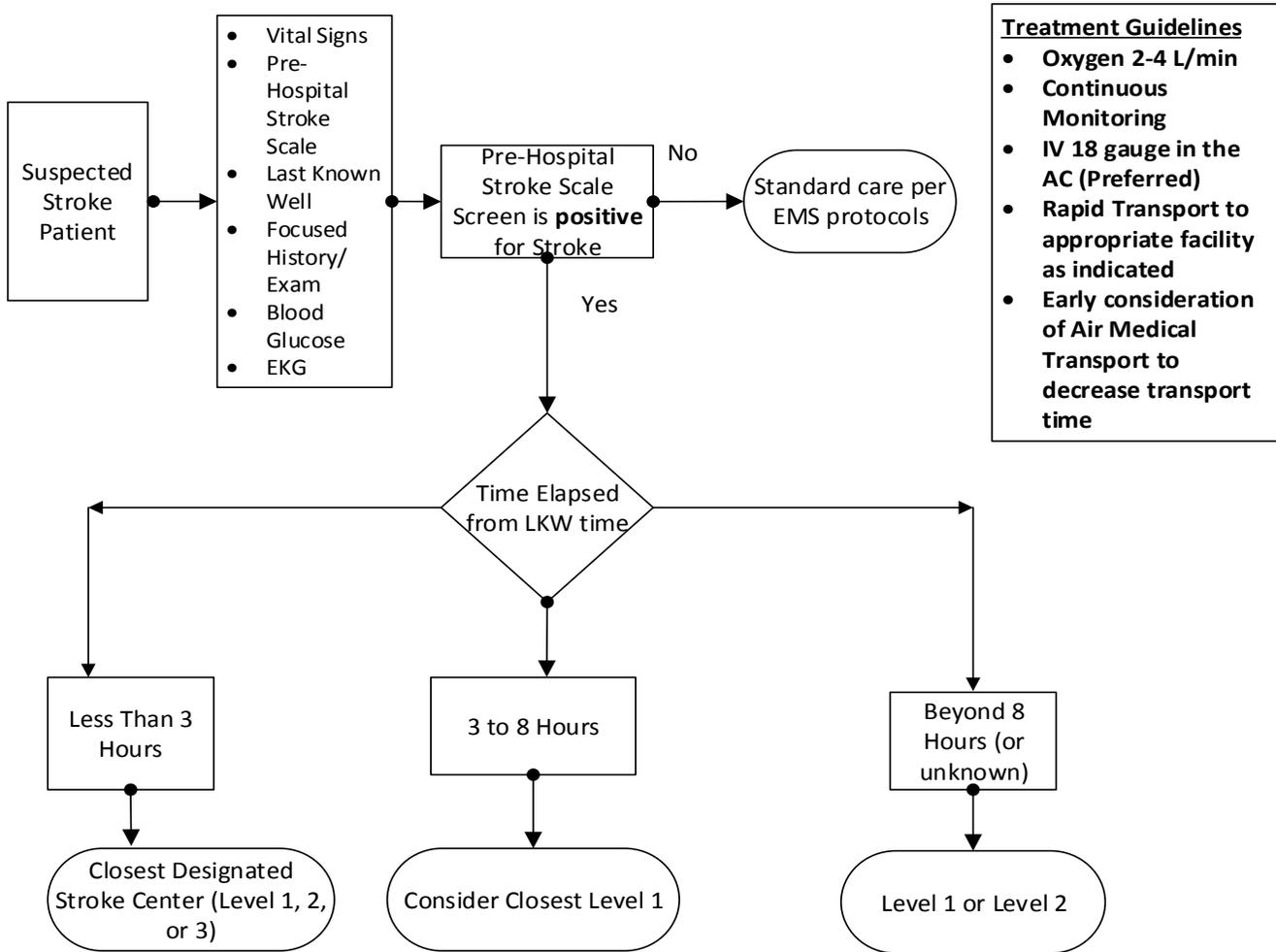
- To identify stroke data filters, that reflects the process and outcomes of stroke care in the CATRAC region.
- To provide a multidisciplinary forum for stroke care providers to evaluate stroke patient outcomes from a systems perspective and assure the optimal delivery of stroke care.
- To facilitate the sharing of information, knowledge and scientific data.
- To provide a process for medical oversight of regional stroke operations.

DISCUSSION

- The Stroke Committee will set the agenda for PI processes by determining the type of data, the manner of data collection and identify the events and indicators to be evaluated and monitored. Indicator identification will be based on high risk and problem prone parameters. Indicators will be objective care techniques, and/or systems/process outcomes. This will be done within regularly scheduled meetings of the committee.

Stroke Appendix A: Prehospital Transport Guidelines for Stroke

Capital Area Trauma Regional Advisory Council (CATRAC) Pre-Hospital Transport Guidelines for Stroke



*Transport to the highest level of care unless transport time would create a more than 15 minute delay.
 *Recommendation only. Final transport protocols are at the discretion of the EMS Medical Command.

Stroke Appendix B: CATRAC Designated Stroke Centers

Level I Comprehensive Stroke Centers	
Hospital	Address
Seton Medical Center Austin	1201 W 38th St, Austin, TX 78705
St. David's Medical Center	919 E 32nd St, Austin, TX 78705
University Medical Center at Brackenridge – as of May 21, 2017 this hospital will be Dell Seton Medical Center at the University of Texas	601 East 15th Street Austin, TX 78701 – address as of May 21, 2017: 1500 Red River St, Austin, TX 78701

Level II Primary Stroke Centers	
Hospital	Address
Baylor Scott & White Medical Center - Lakeway	100 Medical Parkway, Lakeway, TX 78738
Baylor Scott & White Medical Center - Round Rock	300 University Blvd, Round Rock, TX 78665
Central Texas Medical Center	1301 Wonder World Dr, San Marcos, TX 78666
Seton Medical Center Hays	6001 Kyle Parkway, Kyle, TX 76840
Seton Medical Center Williamson	201 Seton Parkway, Round Rock, TX 78665
St. David's Georgetown Hospital	2000 Scenic Drive, Georgetown, TX 78626
St. David's North Austin Medical Center	12221 Mopac Expressway North, Austin, TX 78758
St. David's Round Rock Medical Center	2400 Round Rock Ave, Round Rock, TX 78681
St. David's South Austin Medical Center	901 W. Ben White Blvd, Austin, TX 78704
Cedar Park Regional Medical Center	1401 Medical Parkway, Cedar Park, TX 78613

Level III Support Stroke Facilities	
Hospital	Address
N/A	

NOTE: DSHS Designation Level of Stroke Facilities can be found on the DSHS website in the EMS & Trauma Systems section at <http://www.dshs.texas.gov/emstraumasystems/stroke.shtm>.

Stroke Appendix C: Recommendations by the GETAC Stroke Committee

- 1) Level 1: Comprehensive Centers (“ CSC”)
 - a. A 24/7 Stroke Team
 - b. Personnel with expertise to include vascular neurology , neurosurgery , interventional neuroradiology / endovascular physicians , critical care specialist, advanced practice nurses , rehabilitation specialist with staff to include physical , occupational , speech and swallowing therapists , and social workers.
 - c. Advanced diagnostic imaging: 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 a 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 (“ PSC”)
 - 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
 - k. Annual stroke CE requirement
 - l. Public education program

- 3) Level 3: Support Stroke Facilities (“ SSFs”):
 - a. Develop a plan specifying the elements of operation they do meet.
 - b. Have a level 1 or a level 2 center that agrees to collaborate with their facility and to accept their stroke patients were they lack 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 thrombolytic 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, 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 Level 2 Center.