NORTH CENTRAL TEXAS
TRAUMA REGIONAL ADVISORY COUNCIL

2023 Regional Stroke System Plan

Endorsed by NCTTRAC Board of Directors Date:
November 28, 2022

Approved by NCTTRAC General Membership Date:
December 13, 2022

Supersedes Regional Stroke System Plan Date:
August 11, 2021

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NCTTRAC serves the counties of Cooke, Fannin, Grayson, Denton, Wise, Parker, Palo Pinto, Ellis, Kaufman, Navarro, Collin, Hunt, Rockwall, Erath, Hood, Johnson, Somervell, Tarrant, and Dallas.

Any questions and/or suggested changes to this document should be sent to:

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APPROVAL AND IMPLEMENTATION

This plan applies to all counties within Trauma Service Area (TSA) E. TSA-E includes Collin, Cooke, Dallas, Denton, Ellis, Erath, Fannin, Grayson, Hood, Hunt, Johnson, Kaufman, Navarro, Palo Pinto, Parker, Rockwall, Somervell, Tarrant, and Wise counties.

This plan is hereby approved for implementation and supersedes all previous editions.

Signature on File
_____
Secretary

_____
Date

RECORD OF CHANGES

The North Central Texas Trauma Regional Advisory Council ensures that necessary changes and revisions to The Regional Stroke System Plan are prepared, coordinated, published, and distributed.

The plan will undergo updates and revisions:

- On an annual basis to incorporate significant changes that may have occurred
- When there is a critical change in the definition of assets, systems, networks, or functions that provide to reflect the implications of those changes
- When new methodologies and/or tools are developed; and
- To incorporate new initiatives.

The Regional Stroke System Plan revised copies will be dated and marked to show where changes have been made.

“Record of Changes” form is found on the following page.

RECORD OF CHANGES

This section describes changes made to this document. Use this table to record:

- Location within document (e.g., page #, section #, etc.)
- Change Number, in sequence, beginning with1
- Date the change was made to the document
- Description of the change and rationale if applicable
- Name of the person who recorded the change

Article/Section	Date of Changes	Summary of Changes	Change Made by (Print Name)
All	7/7/2021	Changed dates to reflect FY22 approval	Corrine Cooper
Section IX	7/7/2021	Reformatted sentence structure	Corrine Cooper
Section IX	7/7/2021	Updated metropolitan and non-metropolitan terminology used by DSHS, as it relates to population density	Corrine Cooper
Section XII	7/7/2021	Updated EMResource verbiage regarding ED operations status	Corrine Cooper
All	7/26/2021	Changing designations numbers to roman numerals for each level	Christina Gomez
All	7/26/2021	Changed Regional Stroke Plan to Regional Stroke System Plan throughout sections where mentioned	Christina Gomez
Section V, IX, and X	7/26/2021	Replaced verbiage: Paradigms and protocols replaced with guidelines	Christina Gomez
Section VII	7/26/2021	Changed verbiage for Medical Direction of Prehospital Care Providers to solidify the timeframe of updates and responsibilities	Christina Gomez
Section XI	7/26/2021	Changed verbiage of Decision Criteria to better align with Air Medical transport times	Christina Gomez
Section XIII	7/26/2021	Reformatted sentence structure for clarification of interfacility transfer criteria	Christina Gomez
Section IX	7/26/2021	Added vitals and blood glucose to the system triage section	Christina Gomez
Title	10/5/2022	Year removed from the title	Christina Gomez
Section III	10/5/2022	Information added regarding the new stroke designation level approved by	Christina Gomez

Article/Section	Date of Changes	Summary of Changes	Change Made by (Print Name)
Section III	10/5/2022	Stroke Committee Data Registry recommendation information added; description of new committee-approved award program included with the Participation letter for stroke designation	Christina Gomez
Section VIII	10/5/2022	Stroke facility responsibilities elaborated on the reflect DSHS Stroke Rules update	Christina Gomez
Section X	10/5/2022	Pediatric facility information regarding stroke patients updated to reflect article updates and region-specific guidelines	Christina Gomez
Section XII	10/5/2022	EMResource updates regarding Diversion and Bypass protocols added	Christina Gomez
Section XIII	10/5/2022	Information updated Inter Facility recommendations and tele stroke practices	Christina Gomez
Section XIV	10/5/2022	Update to new DIDO, Door-to-Needle, and Door-to-Device times; updates from the approved SOP	Christina Gomez
References	10/5/2022	Update to articles and new peer-reviewed journals	Christina Gomez

Final revisions should be submitted to the NCTTRAC Emergency Healthcare Systems Department at EHS@NCTTRAC.org, telephone 817.608.0390.

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1. SCOPE

1.1 Mission

1.1.1 The mission of the North Central Texas Trauma Regional Advisory Council (NCTTRAC) Stroke Committee is to develop a cohesive and aligned patient-centered regional stroke system of care (SSOC) that identifies and engages all potential key stakeholders with the purpose of improving the knowledge of the public, encourage primordial and primary prevention, advance and facilitate stroke therapy, improve secondary prevention and recovery from stroke; as well as reduce disparities in stroke care within the region. Such efforts will provide the infrastructure to facilitate achieving the primary goal of the Regional Stroke System Plan, to mitigate the effects of stroke within the region.

1.2 Vision

1.2.1 NCTTRAC Stroke Committee will provide leadership in stroke treatment by creating a broad stakeholder coalition with the responsibility and resources to develop, operate, evaluate, and integrate a regional SSOC based on relevant guideline recommendations.[1-6] Stakeholders should draw from key constituents, including healthcare providers, patients, caregivers, hospitals, home health companies, regulatory agencies, and payers.

1.3 Organization

1.3.1 One of the NCTTRAC Stroke Committee's goals is to provide the infrastructure and leadership necessary to sustain an exemplary and concerted regional SSOC within the designated nineteen-county region known as Trauma Service Area E (TSA-E), which strives to improve the level of care provided to persons living or traveling through this region. NCTTRAC standing committees and member organizations (hospitals, first responder organizations, emergency medical services (EMS) providers, air medical providers, emergency management, and public health) work collaboratively to provide quality care to stroke patients throughout the continuum of stroke care. The continuum of the eight domains of a SSOC includes community education, primordial prevention, primary prevention, EMS response, acute stroke treatment, secondary prevention, stroke rehabilitation, and continuous quality improvement (QI).[1]

1.4 Regional Plan

1.4.1 The Regional Stroke System Plan has been developed in accordance with generally accepted stroke guidelines and procedures for implementation of a comprehensive EMS and regional SSOC. This plan does not establish a legal standard of care but rather is intended to aid decision-making in the care of stroke patients. The Regional Stroke System Plan is not intended to supersede the physician's prerogative to order treatment.

2. STROKE SYSTEMS OF CARE GOALS

2.1 The purpose of the Stroke Committee shall be to facilitate the collaboration and advancement of a regional SSOC based on accepted standards of care and guideline statements. The NCTTRAC Stroke Committee will solicit participation from key stakeholders comprised of broadly healthcare providers, patients, caregivers, hospitals, home health companies, regulatory agencies, professional societies involved in health care, and payers. NCTTRAC Stroke Committee will encourage regional participation in providing and outlining quality stroke care that is patient-focused, complies with state and national guidelines, and seeks to improve public health in the 8 domains of a SSOC: community education,

primordial prevention, primary prevention, EMS response, acute stroke treatment, secondary prevention, stroke rehabilitation, and continuous QI.[1] Policies that standardize the organization of stroke care throughout the continuum shall be enacted and indorsed. Such policies should aim to lower barriers to seeking emergency care for stroke, ensure that stroke patients receive care at appropriate facilities in a timely manner, and facilitate access to secondary prevention, rehabilitation, and recovery resources after stroke.[1] Adopted from current guidelines, NCTTRAC Stroke Committee shall develop a plan for a regional SSOC that addresses these key domains.[1]

3. RECOGNITION AND RESPONSIBILITIES OF STROKE FACILITIES

3.1 Goals

3.1.1 The NCTTRAC Stroke Committee and Regional Stroke System Plan aims to ensure that patients seeking emergency care for stroke receive care at the appropriate facilities in a timely manner and to facilitate access to secondary prevention, rehabilitation, and recovery resources after stroke. The NCTTRAC Stroke Committee promotes collaboration and commitment among the stroke facilities to develop uniform stroke systems standards that address stroke patient needs throughout the continuum of care; addressing the eight domains of a SSOC: community education, primordial prevention, primary prevention, EMS response, acute stroke treatment, secondary prevention, stroke rehabilitation and continuous QI.[1]

3.2 The NCTTRAC Stroke Committee encourages and promotes stroke centers within the region to work in an integrated fashion, providing and sharing best practices. Additionally, the collaboration seeks to establish recommendations for system coordination and interfacility transfers, assuring that high acuity stroke patients receive appropriate consideration for thrombectomy, thrombolysis, neurosurgical and neurocritical care.

3.3 Currently, there is no certification for pediatric stroke facilities. However, Cook Children's Medical Center and Children's Health Dallas are regional pediatric hospitals with a stroke program that meets subspecialty and imaging capability to manage strokes in patients under 18 years- old.

3.4 Committees Charged

3.4.1 Responsibilities charged to the NCTTRAC Stroke, Medical Directors, and EMS Committees.

3.5 Objectives

3.5.1 The NCTTRAC Stroke Committee will utilize the Texas Department of State Health Services (DSHS) recognized designation for stroke facilities that provide the framework for stroke care within the region; Comprehensive Stroke Centers (CSC/Level I), Advanced or non- Comprehensive Thrombectomy Stroke Centers (Level II/TSC), Primary Stroke Centers (PSC/Level III) and Acute Stroke-Ready (Level IV/ASRH). The stroke facility names will change to reflect the new designation as outlined in the Texas Administrative Code Rule §157.133 Requirements for Stroke Facility Designation (Texas Administrative Code (state.tx.us)). The new names will be: Comprehensive Stroke Centers (CSC/Level I), Advanced or non- Comprehensive Thrombectomy Stroke Centers (Level II/TSC), Primary Stroke Centers (PSC/Level III) and Acute Stroke-Ready (Level IV/ASRH).

3.5.2 Stroke Center accreditation remains the cornerstone to ensure healthcare facilities remain committed to meeting overall high patient-safety standards. The DSHS shall determine the designation level for each facility by physical location, based on, but not limited to, national stroke standards, the facility's resources, and level of care

capabilities; as well as compliance with the requirements outlined by the Texas Administrative Code, Rule §157.133 Requirements for Stroke Facility Designation. Designated stroke facilities in the NCTTRAC SSOC, including children's facilities capable of caring for pediatric strokes, must comply with department-approved national stroke standard requirements outlined by the DSHS (Stroke Systems - Texas Department of State Health Services, EMS & Trauma Systems). Hospitals must have compliance with the requirements validated by a department-approved survey organization. Each hospital shall demonstrate the capability to provide stabilization and transfer or treatment for acute stroke patients, written stroke standards of care, and a written stroke Quality Assessment and Performance Improvement (QAPI) plan as outlined by the Texas Administrative Code, Rule §157.133 Requirements for Stroke Facility Designation. Additionally, stroke facilities shall actively participate in the RAC Stroke Committee and transport plan; and submit data to the DSHS department as requested. Stroke facilities are required to receive and maintain stroke facility designation as outlined by the Texas Administrative Code, Rule§157.133 Requirements for Stroke Facility Designation. Additional goals, considerations, and responsibilities for NCTTRAC stroke facilities as outlined by guideline statements1-6 and Texas Administrative Code, Rule §157.133 Requirements for Stroke Facility Designation:

3.5.2.1 The Joint Commission and other certification programs offer four advanced levels of stroke certification for accredited facilities. All levels of certification utilize a standard method of delivering care centered on evidence-based guidelines for stroke care. Each level builds on the capabilities of the previous certification.

3.5.2.2 The TCS is a new level of care recently identified to address the need for greater access to thrombectomy in the community. TSC certification is intended for regions of the country that do not have ready access to CSCs; a CSC is the preferred destination for patients with suspected large vessel occlusion (LVO) when they are within acceptable transport times. If no CSC is available, a TSC should be the preferred destination for these patients from among all nearby PSCs.[1, 4, 7]

3.5.2.3 The CSC, TSC, PSC, and ASRH framework provides an appropriate platform for the data-driven development of hospital-based processes of care and outcomemetrics.

3.5.2.4 As part of the QAPI plan, stroke facility treatment processes, technical outcomes (reperfusion rates), complications, and patient clinical outcomes should be tracked. All certified stroke facilities should meet or exceed the standards outlined by the DSHS-approved stroke facility certifying agency.

3.5.2.5 To facilitate quality improvement within the NCTTRAC and at the stroke facility, stroke registry participation, such as the RAC Data Collaborative, is strongly recommended.

3.5.2.6 All levels of stroke centers should work within the region inan integrated fashion, providing and sharing bestpractices.

3.5.2.7 Stroke centers should adopt approaches to secondary prevention that address all major modifiable risk factors and are consistent with the national guidelines for all patients with a history or a suspected history of stroke or TIA.[1]

3.5.2.8 Stroke centers should provide education and training for patients and family

members. Clear, comprehensive, and timely communication across the inpatient and outpatient post-stroke continuum of care is essential to ensure appropriate medical and rehabilitation care.[1]

3.5.2.9 To standardize the post-acute care after stroke discharge, stroke centers should comprehensively screen for post-acute complications, provide individualized care plans for patients during the transition of care, provide referrals to community services, and reinforce secondary prevention and self-management of stroke risk factors and lifestyle changes to decrease the risk of recurrent stroke. Trained stroke nurses, nurse practitioners, social workers, community health workers, and others should play a pivotal role.[1, 6]

3.5.2.10 Stroke care centers should ensure that all stroke survivors receive a standardized screening evaluation during the initial hospitalization to determine whether rehabilitation services are needed and the type, timing, location, and duration of such therapy.[1]

3.5.2.11 Long-term follow-up with primary care and specialists (physiatrist or neurology) should be arranged to identify patients with residual impairments and ensure appropriate continued rehabilitation.

3.5.2.12 Efforts should be made to advance the use of technology and patient-reported outcomes and to facilitate improved care transitions in stroke care. These interventions should be refined based on continuous QI measurement and methods. Such efforts will bolster overall stroke prevention, treatment, and recovery, as well as may reduce the persistent disparities observed in stroke care. Before implementation, new policies should be evaluated for potential adverse impact on access to care and disparities in care.[1]

3.5.2.13 A hospital shall not use or authorize the use of any public communication or advertising containing false, misleading, or deceptive claims regarding its stroke designation status. Public communication or advertising shall be deemed false, misleading, or deceptive if the facility uses these terms:

3.5.2.13.1 (1) "stroke facility," "stroke hospital," "stroke center," or similar terminology and the facility is not currently designated as a stroke facility in accordance with this section; or

3.5.2.13.2 (2) "comprehensive Level I stroke center," "advanced Level II stroke center," "primary Level III stroke center," "acute stroke ready Level IV center," or similar terminology in its signs, advertisements, or printed materials the facility provides to the public, unless the hospital is currently designated at that defined level of stroke facility in accordance with the Texas Administrative Code, Rule §157.133 Requirements for Stroke Facility Designation.

3.5.2.14 EMResource is the official means of notification of these capabilities and their availability. A facility relinquishing stroke designation shall provide 30 days advance notice to the DSHS Department, NCTTRAC, EMS providers and healthcare facilities which customarily transfer–out and/or transfer–in stroke patients, NCTTRAC and the DSHS Department.

3.5.2.14.1 The facility is responsible to continue providing stroke care services and ensure that stroke care continuity for the region remains in place for the 30 days following the notice of relinquishing its stroke designation.

3.5.3 NCTTRAC will not designate stroke facilities at any level, but may set minimum standards for what is considered active participation for the purposes of a Letter of Participation:

3.5.3.1 Stroke facility needs to maintain a valid DSHS designation as a Stroke Center.

3.5.3.2 NCTTRAC minimum participation requirements as defined in the NCTTRAC Bylaws (See Annex A: *NCTTRAC Bylaws*) or Standard Operating Procedures.

3.5.3.3 Gold Star Stroke Facility status is awarded to stroke facilities sharing performance measures with the Regional Data Collaborative, as part of the NCTTRAC quality initiative to improve regional stroke care in the NCTTRAC SSOC.

3.5.3.4 Gold Star Stroke Facility Plus status is awarded to stroke facilities providing transparent performance measures with the Regional Data Collaborative, as part of the NCTTRAC quality initiative to improve regional stroke care in the NCTTRAC SSOC.

4. COMMUNITY EDUCATION AND STROKE PREVENTION

4.1 Goals

4.1.1 Through a collaboration between NCTTRAC keystroke stakeholders, the SSOC will seek to address risk factors and behavior modifications aimed at community education, primordial prevention, primary prevention, and secondary prevention of stroke. An additional goal is to increase public, physician, hospital, and EMS personnel awareness of the signs and symptoms of stroke, stroke treatment options, and best practices as outlined by the NCTTRAC Stroke Committee and current guidelines. Public education programs should be sustainable over time and designed to reach racially/ethnically, age and gender diverse populations

4.2 Committee Charged

4.2.1 Responsibilities charged to the NCTTRAC Stroke Committee.

4.3 Objectives

4.3.1 The NCTTRAC stroke system key stakeholders will partner to achieve the following objectives either in collaboration or independently as a pillar in the stroke care system1:

4.3.1.1 Support local and regional educational initiatives to increase stroke awareness (including stroke warning signs, risk factors, primary and secondary prevention, and recovery), aimed at the general and pediatric population with enriched targeting of populations at increased risk for stroke and poor outcomes after stroke.[1]

4.3.1.2 Adopt innovative behavioral interventions and encourage research in tools that support sustainable improvements addressing barriers to healthy behaviors, prevention adherence, and behavioral responses to warning symptoms.[1]

4.3.1.3 Public health leaders and medical professionals shall plan and implement public education programs focused on stroke systems and the need to seek emergency care (by calling 9-1-1) in a rapid manner. These programs shall be designed to reach diverse populations. Such educational programs should aim to increase the use of the 9-1-1 EMS system, reduce stroke onset to ED arrival times, increase EMS prehospital notification and increase the timely

use of stroke treatments.[1]

4.3.1.4 Adopt approaches to secondary prevention that address all major modifiable risk factors and that are consistent with the national guidelines for all patients with a history or a suspected history of stroke or TIA.[1]

4.3.1.5 Support education and training for patients and family members. Clear, comprehensive, and timely communication across the inpatient and outpatient post-stroke continuum of care is essential to ensure appropriate medical and rehabilitation care.[1]

5. SYSTEM ACCESS

5.1 Goals

5.1.1 The goal for system access within TSA-E is two-fold: 1) access to emergency stroke care within the region must be rapidly available; 2) EMS must be available to provide quality health care to patients in TSA-E. In portions of this region, First Responder Organizations (FRO) may provide initial treatment pending EMS arrival.

5.2 Committees Charged

5.2.1 Responsibilities charged to the NCTTRAC EMS and Stroke Committees.

5.3 Objectives

5.3.1 In consultation with EMS leaders, local, regional, and state agencies, as well as medical authorities and local experts, NCTTRAC will develop triage guidelines that ensure that all patients with a known or suspected stroke are rapidly identified, assessed, and triaged as outlined in this document. Standardized approaches to prehospital stroke assessment, triage, management, and interfacility documentation as outlined by the NCTTRAC Regional Stroke Plan are encouraged for 9-1-1 call centers and EMS dispatchers.

5.3.2 One of the primary elements of an EMS/Stroke system is to provide access to EMS and subsequent mobilization of a medical response to the scene. Every call for emergency services should universally and automatically be accompanied by location-identifying information. A regional system providing dedicated lines that allow direct routing of emergency calls is ideal. Routing is based on telephone exchange areas, not municipal boundaries. Automatic Number Identification (ANI) and Automatic Location Identification (ALI) should be available. Alternative routing allows 9-1-1 calls to be routed to a designated alternative location. Most areas route their calls to the county 9-1-1 in case of overload or failure.

5.3.3 When calls come into a 9-1-1 center, the communication system ensures that the call taker has the appropriate written protocols as well as proper training. The caller should not have to talk to more than two telecommunications personnel. The call transfer equipment used in transferring these calls should take no longer than ten seconds, and the equipment must have a history of being 95% reliable.

5.3.4 The 9-1-1 center should utilize specific screening protocols for potential stroke patients and prioritize EMS dispatch at the appropriate level for patients screening positive for acute stroke.[4,8-10] The 9-1-1 centers should utilize QI processes to review screening and dispatch for patients transported by EMS who are suspected of having a stroke and, whenever possible, review the actual final clinical hospital diagnoses. Call takers should have annual stroke education training requirements to maintain knowledge and proficiency.

6. EMS AND COMMUNICATIONS

6.1 Goals

6.1.1 EMS communications systems must provide the means by which emergency resources can be accessed, mobilized, managed, and coordinated. An emergency assistance request and the coordination of the response require communication linkages for 1) access to EMS from the scene of the incident, 2) dispatch and coordination of EMS resources, 3) coordination with medical facilities, and 4) coordination with other public safety and emergency personnel. It is imperative that EMS personnel provide prehospital notification to the receiving stroke facility that a suspected stroke patient is in route; this allows the receiving stroke facility to mobilize the appropriate resources prior to patient arrival and expedite care.

6.1.2 Currently, there is no certification for pediatric stroke facilities. Cook Children's Medical Center and Children's Health Dallas are regional pediatric hospitals with a stroke program that meets subspecialty and imaging capability to manage strokes in patients under 18 years old.

6.2 Committee Charged

6.2.1 Responsibilities charged to the NCTTRAC EMS and Stroke Committees

6.3 Objectives

6.3.1 The communication system is an integral part of a regional plan for the care of stroke patients. Networks should be geographically integrated and based on the functional need to enable routine and special large-scale operations for communications among EMS and other public safety agencies. Utilization of system status management technology should be considered for both areas with a high demand for mobile resources and for those areas where resources may not be readily available on a routine basis but would benefit from shifting resources from one geographic area to another.

6.3.2 EMS communication center(s) should be staffed with fully trained telecommunicators. The ideal telecommunication should have completed an Emergency Dispatch course, such as the Emergency Medical Dispatch: National Standard Curriculum as offered from the National Highway Traffic Safety Administration and the U.S. Department of Transportation.

6.3.3 NCTTRAC encourages 100% participation from all EMS agencies within the nineteen counties that comprise TSA-E. By enhancing participation, NCTTRAC can identify quality issues related to response times. NCTTRAC can then move toward resolving these issues through assessment, education, intervention, and evaluation through system process improvement (SPI) procedures.

6.3.4 EMS agencies should ensure that stroke management education is provided at least yearly and is integrated as a "core care competency" for EMS providers. It is recommended that a total of 4 hours of continuing credit be obtained from the 144 hours that are required during the 4-year recertification cycle with DSHS. This education should be developed and delivered in conjunction with regional stroke facilities and local/regional EMS partners. Stroke management education should include:

6.3.4.1 Adopt and train EMS providers on a single stroke screening tool and severity scale for identifying suspected acute stroke due to LVO.[1, 4, 11-12]

6.3.4.2 Adopt and train EMS providers to a destination plan based on stroke facility locations and capability, anticipated transport times, and patient acuity.[4, 13] The local algorithm should include consideration of air medical transport for longer transport distances.[5]

6.3.4.3 Regional interfacility transport agencies should be trained to safely and rapidly transport stroke patients, including patients who received thrombolytic therapy or require consideration for EVT.[1, 4]

6.3.4.4 EMS agencies should develop and train providers on prehospital stroke notification protocols with receiving stroke facilities. Pre-arrival notification enables pre-arrival activation of stroke teams, which facilitates direct transport of the patient to the CT scanner on ED arrival and rapid evaluation of the patient by the ED physician and stroke team.[1, 4]

6.3.5 All participating prehospital agencies should engage in QI programs coordinated with the SSOC, emphasizing dispatch, response, field triage, and care transitions. Agencies should assess adherence to recommended targets for prehospital performance in acute stroke care.[2]

7. MEDICAL OVERSIGHT

7.1 Goals

7.1.1 The development of a regional SSOC requires the active participation of qualified physician providers. Physicians should be clinically qualified in their area of practice and have expertise and competence in treating stroke patients.[1, 14-17] The regional SSOC will be developed under the direction of representatives of NCTTRAC medical staff throughout the region.

7.2 Committee Charged

7.2.1 Responsibilities are charged to the NCTTRAC Medical Directors Committee.

7.3 Objective

7.3.1 Provide consistent medical oversight to ensure regional guidelines align with national standards.

8. REGIONAL PREHOSPITAL MEDICAL CONTROL

8.1 Goals

8.1.1 The Regional Stroke System Plan will assist with identifying and educating on regional medical control resources and standardized guidelines and analyze the accessibility of medical control resources. Additionally, it will identify and educate NCTTRAC EMS Providers and serve as a source for medical direction.

8.2 Committees Charged

8.2.1 Responsibilities are charged to the NCTTRAC EMS, Medical Directors and Stroke Committees.

8.3 Objectives

8.3.1 All EMS Providers have a Medical Director for their service. The Medical Directors have signed a form verifying that they are following the NCTTRAC guidelines for the treatment of patients within their area. These forms are updated and maintained by the NCTTRAC administrative office.

8.3.2 NCTTRAC encourages coordinated medical control in our region and, to that end, has organized a Medical Directors Committee, which meets periodically to review the protocols and guidelines for EMS Providers within TSA-E. Several medical directors have multiple EMS Providers working with them to help consolidate and control the prehospital care of stroke patients, but this is not a mandatory requirement at this time. Through the efforts of the Medical Directors Committee, NCTTRAC will continue to work towards developing consistency and

standardization of the guidelines used within our region.

8.3.3 Physician Involvement in Regional Plan Development – The Medical Directors Committee meets quarterly to conduct its usual business and review and approve regional planning components, policies, and guidelines related to medical care. Each EMS Medical Director and at least one physician from each NCTTRAC hospital has the opportunity for representation in this standing working group. All physicians within TSA-E are invited to attend these meetings.

8.3.4 Medical Direction of Prehospital Care Providers – In accordance with DSHS guidelines, all NCTTRAC prehospital care providers function under medical control through a delegated physician practice. Regional EMS guidelines are available online to all EMS Providers for incorporation into local protocols. Annual reviews and updates are completed and distributed upon approval. EMS Medical Directors may adopt these guidelines with their emergency healthcare systems.

8.3.5 Regional Quality Improvement – The Medical Directors Committee meets quarterly to conduct business and conduct regional QI activities. (Please see the System PI section for more details).

8.3.6 EMResource – EMResource is the official means by which hospitals can update EMS Providers on their DSHS stroke designation level. It is the responsibility of the DSHS stroke facilities to maintain an accurate status reflecting the level of designation by law. Additionally, it is the responsibility of the EMS Providers to use EMResource to verify a hospital's DSHS designation and monitor if the facility is experiencing any issues that could affect the hospital's ability to provide appropriate stroke care.

8.3.6.1 A facility relinquishing stroke designation shall provide 30 days advance notice to the DSHS Department, NCTTRAC, EMS providers, and healthcare facilities which customarily transfer–out and/or transfer–in stroke patients.

8.3.6.1.1 The facility is responsible to continue providing stroke care services and ensure that stroke care continuity for the region remains in place for the 30 days following the notice of relinquishing its stroke designation.

8.3.6.2 A designated facility must provide written notification of a temporary event or decision impacting the ability of a stroke facility to comply with designation requirements to maintain the current designation status or to increase the stroke facility's capabilities that affect the region. The notice shall be provided as soon as possible within 24 hours to the EMS providers, healthcare facilities to which it customarily transfers–out and/or transfers–in stroke patients, NCTTRAC, and the DSHS Department.

8.3.7 Currently, there is no certification for pediatric stroke facilities. Cook Children's Medical Center and Children's Health Dallas are regional pediatric hospitals with a stroke program that meets subspecialty and imaging capability to manage strokes in patients under 18 years old.

9. PREHOSPITAL STROKE TRIAGE AND MANAGEMENT

9.1 Goals

9.1.1 The NCTTRAC SSOC provides triage guidelines to assist pre-hospital providers with the rapid identification, assessment, and triage of all suspected stroke patients, which aims to lower barriers to seeking emergency care for stroke and ensure that stroke patients receive care at appropriate facilities in a timely manner. Pediatric

Stroke patients (0<18 yo) will be transported to the nearest Pediatric Stroke Center: Children's Health or Cook Children's Medical Center.

9.2 Committees Charged

9.2.1 Responsibilities are charged to the NCTTRAC EMS, Stroke, Medical Directors, and Emergency Department Operations Committees.

9.3 Purpose

9.3.1 In consultation with EMS leaders, local, regional, and state agencies, as well as medical authorities, current national guideline statements, and local experts; NCTTRAC will develop triage guidelines that ensure that all patients with a known or suspected stroke are rapidly identified, assessed and triaged as outlined below.[1-6] Standardized approaches to prehospital stroke assessment, triage, management, and interfacility documentation, as outlined by the NCTTRAC Regional Stroke Plan, is encouraged for 9-1-1 call centers and EMS dispatchers.

9.3.2 The prehospital acute stroke triage and transport recommendations serve to direct the triage of adult patients (greater than or equal to 18 years of age) to the most appropriate facility, based on the duration and severity of symptoms. If EMS encounters an acute stroke patient under 18 years old, contact the closest pediatric facility or Medical Control for guidance. Multi-society endorsed guideline statements and recommendations,[1-6] as well as the consensus of expert opinion (Pediatric Neurologist, Vascular Neurologists, Neuroendovascular Surgeons, and Neurosurgeons) based on clinical experience and in conferment with NCTTRAC Medical Directors and Stroke Committee members are outlined in these recommendations. See Annex B: *NCTTRAC Acute Stroke Triage Algorithm*, from the American Heart Association Mission: Lifeline Stroke Algorithm.[7]

9.3.3 Regional stakeholders must collaborate to consider local prehospital and health care resources, individual stroke center performance, and geographic considerations to create an optimal SSOC and destination protocol to ensure effective and efficient stroke care.[1, 4] Ideal destination plans must factor in all available data sources, including traffic patterns, site-specific performance data, and associated clinical outcomes.[1, 4] EMS agencies should implement destination plans based upon both time and severity for patients with suspected LVO within 24 hours of last known well that prioritize a nearby CSC over other centers of lower capability when available within acceptable transport times (Annex B: *NCTTRAC Acute Stroke Triage Algorithm*).[4]

9.3.4 In response to the perceived need for greater access to thrombectomy, several of the accrediting agencies for stroke centers introduced a fourth level of certification for facilities that can effectively perform EVT but do not meet all the criteria of a CSC, the Thrombectomy Capable Stroke Center (TSC). The American Stroke Association 2019 SSOC Recommendations and the American Heart Association Mission: Lifeline Stroke outline that the TSC certification is intended for regions of the country that are not readily accessible to CSCs; CSC are the preferred destination for patients with suspected LVO when they are within acceptable transport times.[1] If no CSC is available, a TSC should be the preferred destination for these patients from among all nearby PSCs.[1-2, 4, 7]

9.3.5 In the absence of new data, it is reasonable to adopt the Mission: Lifeline algorithm to the community needs.[1-2, 4, 7]When several stroke center options exist within similar travel times, EMS should seek care at the facility capable of offering the highest level of stroke care.[1-2, 4, 7] No randomized trial data exist to support a definitive

recommendation on the acceptable additional time when considering triaging a patient with suspected LVO to a CSC. Therefore, the Mission: Lifeline Stroke Committee felt it was best to err on the side of caution and initially set the total transport time from scene to CSC at 30 minutes. However, patients eligible for IV thrombolysis (0-3 hours from last known well) should be routed to the nearest ASRN or PSC if transport to the nearest CSC or TSC would make them ineligible on arrival due to additional transport time. In suburban and rural setting, prehospital destination plans and interfacility transport policies should prioritize transport of suspected LVO patients to a facility with well-defined evaluation and stabilization protocols to minimize Door-In-Door-Out (DIDO) times for patients requiring transfer to a higher level of care.[4, 7] In rural communities or where large distances separate stroke centers, additional transport time, including air medical transport, of up to 30 additional minutes may be reasonable.[1, 4, 7]

9.4 Stroke System of Care Modification for Metropolitan, Non-Metropolitan and Frontier Communities

9.4.1 The following is adapted from the American Heart Association Mission: Lifeline Stroke recommendation for Emergency Medical Services for acute stroke triage and routing.[1-2, 4, 7] These modifications to transport time thresholds are suggested to help EMS agencies adjust their regional stroke triage protocols according to local resources in collaboration with key stakeholders.[4, 7]

9.4.1.1 A Metropolitan SSOC modification is appropriate for a metro region (RUCA code 1)[18] These areas have high population density (50,000+ inhabitants) and abundant healthcare resources, with access to one or more TSC/CSC within 30 min transport time by EMS ground.

9.4.1.2 A Non-Metropolitan SSOC modification is appropriate for large residential communities adjacent to an urban core (RUCA codes 2-3). These areas generally have a population density closer to the urban threshold and may have access to nearby community hospitals and suburban or urban advanced stroke centers within a 30–60-minute transport time by EMS air or ground. Patients with suspected LVO should be routed directly to a CSC if the additional transport time passed the nearest TSC does not exceed 30 minutes, and the maximum transport time from scene to CSC does not exceed 45 minutes. If no CSC is within 45 minutes, then EMS should go directly to a TSC if the additional transport time passed the nearest PSC or ASRH does not exceed 30 minutes, and the maximum total transport time from scene to TSC does not exceed 45 minutes. If no TSC or CSC exists within 45 minutes of total travel time, EMS should go to the nearest ASRH or PSC.

9.4.1.3 A Frontier SSOC modification is appropriate for a very small or non-metropolitan region (RUCA codes 4-10). These areas generally have low population density (<50,000 inhabitants), limited local general healthcare resources, few nearby ASRH or PSC, and often no TSC/CSC within 60 minutes transport time by EMS ground, although there may be one within 60 minutes by air. Patients with suspected LVO should be routed directly to a CSC if the additional transport time passed the nearest TSC does not exceed 30 minutes, and the maximum total transport time from scene to CSC does not exceed 60 minutes. If no CSC is within 60 minutes, then EMS should go directly to a TSC if the additional transport time passed the

nearest PSC or ASRH does not exceed 30 minutes, and the maximum total transport time from scene to TSC does not exceed 60 minutes.

9.4.2 The COVID-19 pandemic further emphasizes the need for flexible adaptation of prehospital triage and interfacility transport in response to local and regional factors. Preferential routing of suspected LVO patients to centers with thrombectomy capability may be of even greater importance when in-hospital, and interfacility delays are amplified in conditions such as the COVID-19 pandemic.[19]

9.5 Prehospital Triage of Stroke Patients – Basic Level

9.5.1 Assess and support ABCs according to UNIVERSAL CARE – ADULT:

9.5.1.1 A (Airway): Airway support and ventilator assistance are recommended for patients with acute stroke who have decreased consciousness or who have compromised airway. Ensure airway patency with suctioning and OPA or NPA, as needed.

9.5.1.2 B (Breathing): Supplemental oxygen should be provided to maintain oxygen saturation >94% (continuous monitoring).

9.5.1.3 C (Circulation): Evaluate, document, and treat signs/symptoms of shock according to the Shock Clinical Practice Guidelines (CPG).

9.5.1.4 D (Disability): Assess and document GCS, pupillary size, and reactivity.

9.5.1.5 E (Exposure/Environmental): Assess for evidence of traumatic injury, especially head injury.

9.5.2 Positioning/stabilization:

9.5.2.1 Place the patient in a supine position, head of the bed elevated 30 degrees.

9.5.2.2 Cardiac monitoring during transport is recommended. If there is evidence of shock, treat according to the Shock CPG.

9.5.2.3 If hypoglycemia is present (POC glucose <60 mg/gL), treat according to Diabetic Emergencies CPG.

9.5.2.4 If there is Seizure activity, treat according to the Seizure CPG.

9.5.3 Assessment

9.5.3.1 History - Interview patient, family members, and other witnesses to determine symptoms, time of symptom discovery and last known well, or last time patient without symptoms:

9.5.3.1.1 Obtain a mobile number of next of kin and witnesses.

9.5.3.1.2 NOTE: For “wake-up strokes,” the time documented is the time last known well, not the time the patient was found.

9.5.3.1.3 NOTE: Sudden onset of any of the following suggests the possibility of acute stroke:

9.5.3.1.3.1 Numbness or weakness of face, arm, and/or leg (especially on one side of the body)

9.5.3.1.3.2 Confusion

9.5.3.1.3.3 Trouble speaking or understanding language

9.5.3.1.3.4 Trouble seeing in one or both eyes or double vision

9.5.3.1.3.5 Trouble walking

9.5.3.1.3.6 Dizziness

9.5.3.1.3.7 Loss of balance or coordination 9.4.3.2.1.3.8 Sudden onset of severe headache with no known cause (suggests hemorrhagic stroke)

9.5.3.1.3.8 Any asymmetry of the neurological exam

9.5.4 Additional History:
- 9.5.4.1 Obtain patient history, including co-morbid conditions.
- 9.5.4.2 Items to Report: seizure at onset, head trauma, history of recent surgeries, history of bleeding problems, signs of possible brain hemorrhage [severe headache of sudden onset, nausea/vomiting with headache or loss of consciousness (LOC)].
- 9.5.4.3 Additional history: Past medical history, allergies (iodinated contrast).
- 9.5.4.4 Be alert to common stroke mimics*.
- 9.5.4.5 Determine if the patient has a substantial pre-existing disability (e.g., need for nursing home care or unable to walk independently).
- 9.5.4.6 Medications – obtain a list of all medications, including blood thinners such as direct thrombin inhibitors, factor Xa inhibitors, low molecular weight heparin, and unfractionated heparin [e.g., warfarin (Coumadin), rivaroxaban (Xarelto), dabigatran (Pradaxa), apixaban (Eliquis), edoxaban (Savaysa), enoxaparin (Lovenox)]. (If possible, record when the patient took the last dose.)
- 9.5.4.7 Device/implant history (e.g., left ventricular assist device, pacemaker, valve replacement)

9.5.5 Examination
- 9.5.5.1 Assess and record blood pressure, rate, rhythm, respiratory rate, and oxygen saturation.
- 9.5.5.2 Apply a validated and standardized instrument for stroke screening such as FAST (Face, Arm, Speech, Time), Los Angeles Prehospital Stroke Screen, or Cincinnati Prehospital Stroke Scale
- 9.5.5.3 In prehospital patients who screen positive for suspected stroke, apply a standard prehospital stroke severity assessment tool Cincinnati Stroke Triage Assessment Tool (CSTAT), Field Assessment Stroke Triage for Emergency Destination (FAST-ED), Rapid Arterial Occlusion Evaluation Scale (RACE) or Vision, Aphasia, Neglect (VAN) Assessment.

9.5.6 Management
- 9.5.6.1 EMS personnel should begin the initial management of stroke in the field as outlined in this document.
- 9.5.6.2 Prevent aspiration, HOB >30. Ensure airway patency with suctioning and OPA or NPA, as needed.
- 9.5.6.3 Provide supplemental oxygen if needed to keep oxygen saturation >94%
- 9.5.6.4 Treatment of hypertension is NOT recommended unless blood pressure >220/120 mmHg.
- 9.5.6.5 Treat hypotension. Evaluate, document, and treat signs/symptoms of shock according to the Shock CPG. If possible, obtain EKG during workup, as long as it does not delay transport to the appropriate stroke facility.
- 9.5.6.6 Avoid dextrose-containing fluids in non-hypoglycemic patients.
- 9.5.6.7 Perform and document a POC Glucose analysis and treat according to the ASA 2019 Guidelines for Management of Acute Ischemic Stroke.[2]
  - 9.5.6.7.1 Hypoglycemia (blood glucose <60 mg/dL) should be treated in patients suspected of acute ischemic stroke.
- 9.5.6.8 To facilitate expedited stroke workup in the ED, place at least one 18 or 20 gauge IV in the antecubital fossa or forearm (right preferable).
- 9.5.6.9 To facilitate the fastest Door-to-Needle and stroke care, when possible,

collect blood sample to provide the receiving facility, however, as long as it does not delay the transfer.

9.5.7 System Triage

9.5.7.1 Goal for on-scene time, 10-15 minutes or less. Encourage the family to go directly to the ED if not transported with the patient.

9.5.7.2 See Annex B: *NCTTRAC Acute Stroke Triage Algorithm* for the Acute Stroke Triage Algorithm.

9.5.7.3 Call stroke alert and pre-notify the receiving facility that a suspected stroke patient is in route so that the appropriate resources may be mobilized before patient arrival.

9.5.7.3.1 Pre-notification should include patient's name, LKW, vitals, blood glucose, stroke severity score, and the phone number for next of kin.

9.5.7.4 Goal: 30 seconds for EMS to ED triage nurse hand-off.

9.5.7.5 Bypass Exclusions:

9.5.7.5.1 If severe or life-threatening trauma is suspected in addition to stroke, transfer to the appropriate level trauma center.

9.5.7.5.2 Patients under hospice care or with Medical Orders for Scope of Treatment (MOST) that outlines no emergency measures should go to the nearest appropriate hospital.

9.5.7.5.3 Common ischemic stroke mimics: alcoholic intoxication, cerebral infections, drug overdose, hemorrhagic stroke, hypoglycemia, hyperglycemia, metabolic disorders, atypical migraines, neuropathies (e.g., Bell's palsy), seizure, post-ictal state, and tumors.

10. PEDIATRIC PREHOSPITAL STROKE TRIAGE AND MANAGEMENT

10.1 Goals

10.1.1 To increase awareness and identification of strokes in the pediatric population (infants and children less than 18 years of age), as well as increase rapid triage and transport to the nearest appropriate pediatric facility.

10.2 Committee Charged

10.2.1 Responsibilities are charged to the NCTTRAC EMS, Stroke, Pediatric, Medical Directors and Emergency Department Operations Committees.

10.3 Purpose

10.3.1 In consultation with EMS leaders, local, regional, and state agencies, as well as medical authorities, current national guideline statements, and local pediatric neurology experts; NCTTRAC will develop triage guidelines that ensure that all pediatric patients with a known or suspected stroke are rapidly identified, assessed and triaged as outlined below.[1-2, 4, 7, 14-17] Standardizing care to rapidly diagnose and provide appropriate treatment will improve outcomes.[14-17] The prehospital acute stroke triage and transport recommendations serve to direct the regional triage of pediatric patients with acute stroke to the most appropriate facility.

10.3.2 Pediatric stroke facilities should have the availability of personnel to care for pediatric stroke patients with a pediatric intensive care unit. Pediatric stroke facilities shall have a multidisciplinary team to care for pediatric stroke patients, have the capability to administer antiplatelet drugs, anticoagulants,

and thrombolytic therapies, as well as have the ability to treat complications. Pediatric stroke facilities should have the technical capabilities (including imaging capability, MRI if possible), policies and procedures to facilitate optimal care of the pediatric stroke patient.[14-17] Cook Children's Medical Center and Children's Health Dallas have a stroke program that meets subspecialty and imaging capability to manage strokes in patients under 18 years old. If EMS encounters an acute stroke in a pediatric patient (0 to <18 years), contact Cook Children's Medical Center or Children's Health Dallas for guidance. Pediatric hospitals that do not meet the above capabilities shall be able to identify, stabilize, consult, and transfer patients to a center that can provide the appropriate care and rehabilitative resources.[14-17]

10.4 Pediatric Prehospital Triage of Stroke Patient - Basic Level

10.4.1 Assess and support ABCs according to UNIVERSAL – PEDIATRIC:

10.4.1.1 A (Airway): Airway support and ventilator assistance are recommended for patients with acute stroke who have decreased consciousness or who have compromised airway. Ensure airway patency with suctioning and OPA or NPA, as needed.

10.4.1.2 B (Breathing): Supplemental oxygen should be provided to maintain oxygen saturation >94% (continuous monitoring).

10.4.1.3 C (Circulation): Evaluate, document, and treat signs/symptoms of shock according to the Shock Clinical Practice Guidelines (CPG).

10.4.1.4 D (Disability): Assess and document GCS, pupillary size, and reactivity.

10.4.1.5 E (Exposure/Environmental): Assess for evidence of traumatic injury, especially head injury.

10.4.2 Positioning/Stabilization:

10.4.2.1 Place the patient in a supine position, head of the bed elevated 30 degrees.

10.4.2.2 Cardiac monitoring during transport is recommended.

10.4.2.3 If there is evidence of shock, treat according to the Shock CPG.

10.4.2.4 If hypoglycemia is present (POC glucose <60 mg/gL), treat according to Diabetic Emergencies CPG.

10.4.2.5 If there is seizure activity, treat according to the Seizure CPG

10.4.3 Assessment

10.4.3.1 History

10.4.3.1.1 Consider stroke in any pediatric patient with new-onset headache and/or sudden new-onset focal neurological symptoms.

10.4.3.1.2 Causes include:

10.4.3.1.2.1 Congenital heart conditions/surgery

10.4.3.1.2.2 Sickle Cell Disease and other hematologic conditions, such as those causing abnormal blood clotting.

10.4.3.1.2.3 Infectious/inflammatory (vasculitis) and non-inflammatory blood vessel conditions

10.4.3.1.2.4 Metabolic conditions

10.4.3.1.2.5 Drug ingestion like cocaine or methamphetamine

10.4.3.2 Presentation: Seizures at presentation are more common than in the adult population and more common in children under the age 2 years.
- 10.4.3.2.1 Infants may present with focal weakness, altered level of consciousness, and seizures.
- 10.4.3.2.2 Children may present with new-onset headache, focal neurological deficit, altered level of consciousness, slurred speech or refusal to speak, and seizures.

10.4.3.3 Possible stroke-related focal neurological deficits:
- 10.4.3.3.1 Hemiparesis
- 10.4.3.3.2 Speech disturbance: aphasia/confusion, dysarthria, slurring of speech
- 10.4.3.3.3 Visual disturbance
- 10.4.3.3.4 Cranial neuropathies
- 10.4.3.3.5 Hemisensory loss
- 10.4.3.3.6 Ataxia-loss of balance
- 10.4.3.3.7 New-onset seizure: <2 years old have increased risk of stroke presenting as new-onset seizure
- 10.4.3.3.8 Lateralized tonic-colonic activity
- 10.4.3.3.9 Seizure with a post-ictal focal deficit that does not resolve quickly

10.4.3.4 Head and eye deviation indicate focal lesion. Interview patient, family members, and other witnesses to determine symptoms, time of symptom discovery and last known well (LKW), or last time patient without symptoms.

10.4.3.5 Obtain a mobile number of next of kin and witnesses.
- 10.4.3.5.1 NOTE: For “wake-up strokes,” the time documented is the time last known well, not the time the patient was found.
- 10.4.3.5.2 NOTE: Sudden onset of any of the following suggests the possibility of acute stroke:
  - 10.4.3.5.2.1 Numbness or weakness of face, arm, and/or leg (especially on one side of the body)
  - 10.4.3.5.2.2 Confusion
  - 10.4.3.5.2.3 Trouble speaking or understanding language
  - 10.4.3.5.2.4 Trouble seeing in one or both eyes or double vision
  - 10.4.3.5.2.5 Trouble walking
  - 10.4.3.5.2.6 Dizziness
  - 10.4.3.5.2.7 Loss of balance or coordination
  - 10.4.3.5.2.8 Sudden onset of severe headache with no known cause (suggests hemorrhagic stroke)
  - 10.4.3.5.2.9 Any asymmetry of the neurological exam.

10.4.3.6 Additional History
- 10.4.3.6.1 Obtain patient history, including co-morbid conditions.
- 10.4.3.6.2 Items to Report: seizure at onset, head trauma, history of recent surgeries, history of bleeding problems, signs of possible brain hemorrhage [severe headache of sudden onset, nausea/vomiting with headache or loss of

consciousness (LOC)].

10.4.3.6.3 Additional history: Past medical history, allergies (iodinated contrast).

10.4.3.6.4 Be alert to common stroke mimics*.

10.4.3.6.5 Determine if the patient has a substantial pre-existing disability (e.g., unable to walk independently).

10.4.3.6.6 Medications – obtain a list of all mediations, including blood thinners such as direct thrombin inhibitors, factor Xa inhibitors, low molecular weight heparin, and unfractionated heparin [e.g., warfarin (Coumadin), rivaroxaban (Xarelto), dabigatran (Pradaxa), apixaban (Eliquis), edoxaban (Savaysa), enoxaparin (Lovenox)]. (If possible, record when the patient took last dose.)

10.4.3.6.7 Device/implant history (e.g., left ventricular assist device, pacemaker, valve replacement).

10.4.4 Examination

10.4.4.1 Assess and record blood pressure, rate, rhythm, respiratory rate, and oxygen saturation.

10.4.4.2 Apply a validated and standardized instrument for stroke screening such as FAST (Face, Arm, Speech, Time), Los Angeles Prehospital Stroke Screen, or Cincinnati Prehospital Stroke Scale.

10.4.4.3 In prehospital patients who screen positive for suspected stroke, apply a standard prehospital stroke severity assessment tool Cincinnati Stroke Triage Assessment Tool (CSTAT), Field Assessment Stroke Triage for Emergency Destination (FAST-ED), Rapid Arterial Occlusion Evaluation Scale (RACE) or Vision, Aphasia, Neglect (VAN) Assessment.

10.4.4.4 Alternatively, the Pediatric Committee recommends the use of the Pediatric NIHSS (Annex C: *Pediatric NIHSS*) in the pediatric population. Rapid identification of pediatric patients with stroke using the NIH scale to evaluate stroke symptoms is the most important step in stroke care.[14-17]

10.4.5 Management

10.4.5.1 EMS personnel should begin the initial management of stroke in the field as outlined in this document.

10.4.5.2 Prevent aspiration, HOB >30. Ensure airway patency with suctioning and OPA or NPA, as needed.

10.4.5.3 Provide supplemental oxygen if needed to keep oxygen saturation >94%.

10.4.5.4 Normotension target systolic blood pressure between 50th and 90th percentile for age.

10.4.5.5 Pediatric Systolic Blood Pressure Parameters:

Systolic Blood Pressure Parameters- Female

Age	50%	95%	>15% above 95%	>20% above 95%
1-4 years	90	111	128	133
5 years	94	113	130	145
6-10 years	96	121	139	145
11-18 years	105	131	151	157

Systolic Blood Pressure Parameters- Male

Age	50%	95%	>15% above 95%	>20% above 95%
1-4 years	90	112	129	134
5 years	95	113	130	136
6-10 years	96	121	139	145
11-18 years	105	140	161	168

10.4.5.6 Treat hypotension. Evaluate, document, and treat signs/symptoms of shock according to the Shock CPG. If possible, obtain EKG during workup, as long as it does not delay transport to the appropriate facility.

10.4.5.7 Avoid dextrose-containing fluids in non-hypoglycemic patients.

10.4.5.8 Perform and document a POC Glucose analysis and treat according to the ASA 2019 Guidelines for Management of Acute Ischemic Stroke.

10.4.5.8.1 Hypoglycemia (blood glucose <60 mg/dL) should be treated in patients suspected of acute ischemic stroke.

10.4.5.9 To facilitate expedited stroke workup in the ED, place 2 peripheral IVs.

10.4.5.10 To facilitate the fastest Door-to-Needle and stroke care, when possible, collect blood sample to provide the receiving facility, however, as long as it does not delay transfer.

10.4.6 System Triage

10.4.6.1 Goal for on-scene time, 10-15 minutes or less. Encourage the family to go directly to the ED if not transported with the patient.

10.4.6.2 Destination decision-making for pediatric patients less than 18 years of age with possible stroke.

10.4.6.2.1 Transport the patient to or contact Cook Children's Medical Center or Children's Health Dallas for guidance.

10.4.6.2.2 Call stroke alert and pre-notify the receiving facility that a suspected stroke patient is in route so that the appropriate resources may be mobilized before patient arrival.

10.4.6.2.2.1 Pre-notification should include patient's name, LKW, vitals, blood glucose, stroke severity score, and the phone number for next of kin.

10.4.6.3 Goal: 30 seconds for EMS to ED triage nurse hand-off.

10.4.6.4 Common ischemic stroke mimics: alcoholic intoxication, cerebral

infections, drug overdose, hemorrhagic stroke, hypoglycemia, hyperglycemia, metabolic disorders, atypical migraines, neuropathies (e.g., Bell's palsy), seizure, post-ictal state, and tumors.

11. HELICOPTER ACTIVATION

11.1 Goals
- 11.1.1 Regional air transport resources may be appropriately utilized in order to reduce delays in providing optimal stroke care.

11.2 Committees Charged
- 11.2.1 Responsibilities are charged to the NCTTRAC Air Medical Committee with input from the EMS and Stroke Committees and guidance from the Medical Directors Committee.

11.3 Decision Criteria
- 11.3.1 Consider Air Medical Transport when:
  - 11.3.1.1 Helicopter activation/scene response may be considered when it can reduce transportation time or provide advanced life support.
  - 11.3.1.2 If ground transportation may take greater than 30 minutes, consider air medical transport.
- 11.3.2 Patients meeting the criteria for helicopter dispatch should be transported to the most appropriate designated stroke facility.
- 11.3.3 Pediatric patients should be transported to Cook Children's Medical Center or Children's Health Dallas.
- 11.3.4 Refer to Annex D: *Aircraft Utilization and Systems Performance Review*

12. FACILITY DIVERSION

12.1 Goals
- 12.1.1 NCTTRAC stroke facilities will communicate the availability of acute stroke patient care capability status promptly and clearly to the regional EMS and other facilities through EMResource to ensure that stroke patients are transported to the closest appropriate stroke facility. Pediatric patients should be transported to Cook Children's Medical Center or Children's Health Dallas.

12.2 Committees Charged
- 12.2.1 Responsibilities charged to the NCTTRAC EMS, Medical Directors and Stroke Committees.

12.3 System Objective
- 12.3.1 The system objective is to ensure that stroke patients will be transported to the closest appropriate facility.
- 12.3.2 As a result of a cooperative effort between NCTTRAC and the Dallas Fort Worth Hospital Council (DFWHC), there is no longer an official category of "divert" in Trauma Service Area (TSA) E. Facilities may communicate information to EMS that may be relevant in the decision to transport to their destination, such as ED saturation, but may not post a "divert" status or comment within EMResource. EMResource is the primary tool in TSA-E for hospitals to communicate with EMS providers about any facility issues that may be relevant to EMS patient destination decisions. EMResource is used to report on the saturation level of a facility's Emergency Department, the overall status of a facility's Emergency

Department, specific clinical service capabilities, facility bed availability, and interfacility transfer availability for MedSurg & ICU patients.

12.3.3 The Hospital Intake Status in EMResource is the official method for hospitals to communicate their ED status to pre-hospital partners.

12.3.3.1 If a hospital can accept incoming EMS traffic with no restrictions and without extended ambulance patient offload times, they should list their status as Open. If a facility's Hospital Intake Status is Open, they must update their status at least once every 24 hours.

12.3.3.2 Hospitals experiencing high levels of patient surge can change their Hospital Intake Status to Advisory – ED Surge; this notifies EMS agencies to anticipate extended patient off-load times and asks them to consider the hospital's current status when making patient destination decisions. When EMS sees that a potential destination hospital is on Advisory – ED Surge, they should consider whether the patient will be better served going to an alternate facility when deciding where to take the patient.

12.3.3.3 Hospitals unable to accept certain types of patients due to a clinical service closure can change their Hospital Intake Status to Advisory – Capability and list the types of patients they are unable to accept in the comments. When EMS sees that a potential destination hospital is on Advisory – Capability, they should reroute patients of the types listed in the comments to a facility that has the capability to treat that patient. Hospitals can pre-select if they are unable to accept Trauma, Stroke, or STEMI patients, and may utilize an "Other" category for all other patient types.

12.3.3.4 Hospitals experiencing an internal or external environmental disaster that prevents them from safely accepting any new patients can set their Hospital Intake Status to Closed. This should only be used when there is an external hazard at the facility that presents a danger to the patient (e.g., fire, flooding, active shooter); hospitals cannot go on Closed due to extreme patient surge or hospital staffing shortages.

12.3.4 In addition to Hospital Intake Status, NCTTRAC has integrated the use of National Emergency Department Over Crowding Study (NEDOCS) scoring within EMResource for hospitals to help determine emergency department saturation and reporting. Hospitals with emergency departments are required to update their NEDOCS once every 6 hours; if they do not, the system marks their NEDOCS as "Overdue". EMS providers are required to monitor the NEDOCS of facilities in their service area. This can be accomplished by either actively monitoring EMResource on the website or mobile application or by receiving notifications when the NEDOCS goes above a certain threshold. A high NEDOCS is generally associated with longer patient offload times for EMS.

12.3.5 A full listing of EMResource status types, policies, and procedures in TSA-E can be found in Annex E: *TSA-E EMResource Policies & Procedures*.

12.3.6 In addition to the statuses outlined above, there are four stroke-specific hospital statuses in EMResource. These statuses and their status options are detailed below.

12.3.7 Status: Stroke General Service

12.3.8 Status: Stroke NeuroIR

12.3.8.1 Reflects the current status of a facility's ability to provide NeuroIR services. Can only be updated by Level I and II designated facilities. Should be updated as needed.

12.3.9 A facility relinquishing stroke designation shall provide 30 days advance notice to the DSHS Department, NCTTRAC, EMS providers and facilities which customarily transfer–out and/or transfer–in stroke patients.

12.3.9.1 The facility is responsible to continue providing stroke care services and ensure that stroke care continuity for the region remains in place for the 30 days following the notice of relinquishing its stroke designation.

12.3.10 A designated facility must provide written notification of a temporary event or decision impacting the ability of a stroke facility to comply with designation requirements to maintain the current designation status, or to increase the stroke facilities capabilities that affect the region. The notice shall be provided as soon as possible within 24 hours to the EMS providers, healthcare facilities to which it customarily transfers–out and/or transfers–in stroke patients, NCTTRAC and the DSHS Department.

12.3.11 Designated stroke facilities failing to meet and /or maintain critically essential criteria, as outlined by the State of Texas and the accrediting agency (TJC, DNV-GL, etc.) shall provide notification about such failings within five days to the NCTTRAC, the DSHS office, regional EMS, and other healthcare facilities (from which it receives and to which it transfers stroke patients) through EMResource.

12.3.12 Currently, there is no certification for pediatric stroke facilities. Cook Children's Medical Center and Children's Health Dallas are regional pediatric hospitals with a stroke program that meets subspecialty and imaging capability to manage strokes in patients under 18 years old.

13. INTERFACILITY TRANSFER

13.1 Goals

13.1.1 The goal for establishing and implementing interfacility transfer criteria in NCTTRAC is to ensure that stroke patients requiring additional or specialized care and treatment beyond a facility's capability are identified and transferred to the most appropriate facility as quickly as possible. Regional facilities transferring stroke patients to a higher level of care, for the purposes of endovascular revascularization therapy (EVT), an urgent neurosurgical procedure or other urgent treatment, should establish a goal Door-In Door-Out (DIDO) time for patients arriving at the emergency department. For patients with an LVO needing transfer for mechanical thrombectomy, goal DIDO should be set to meet current ASA guidelines.[1-2, 4, 7]

13.2 Committee Charged

13.2.1 Responsibilities charged to the NCTTRAC Stroke Committee with input from Air Medical, Emergency Department Operations, EMS, and Medical Directors Committees.

13.3 Purpose

13.3.1 The interfacility transfer recommendation encourages the identification and expedited transfer of stroke patients requiring additional or specialized care and treatment beyond a facility's capability. Multi-society endorsed guideline statements and recommendations, as well as the consensus of expert opinion

(Pediatric Neurologist, Vascular Neurologists, Neuroendovascular Surgeons, and Neurosurgeons) based on clinical experience and in conferment with NCTTRAC Medical Directors and Stroke Committee members are outlined in these recommendations. [1-2, 4, 7, 14-17] Refer to the latest NCTTRAC Stroke Committee source documents; Interfacility Transfer Guideline and Interfacility EMS Transport Documentation.

13.4 Objectives

13.4.1 To ensure that all regional facilities caring for stroke patients within the NCTTRAC SSOC develop, adopt, and adhere to care protocols that reflect current care guidelines as established by national and international professional organizations along with state/federal agencies and laws.

13.4.1.1 Patients identified to have an acute ischemic stroke from an LVO and are less than 24 hours from the last known well should be considered for transfer to a Comprehensive Stroke Center (Level 1) if eligible for EVT.

13.4.1.2 Patients <18 years identified to have an acute ischemic stroke from an LVO and are less than 24 hours from last known well consider transfer to Cook Children's Medical Center or Children's Health Dallas.

13.4.2 To establish well-delineated guidelines for triage and transportation.

13.4.3 To outline a goal transfer time for TSA-E:

13.4.3.1 DIDO of 90 minutes for patients with an LVO (Emergency)

13.4.3.2 Picture to Door-Out of 90 minutes for patients with an LVO (Inpatient)

13.5 Facility Triage from Emergency Department and Inpatient Service

13.5.1 Prehospital triage as outlined in Annex B: *NCTTRAC Acute Stroke Triage Algorithm*

13.5.2 All facilities caring for stroke patients within the SSOC should develop, adopt, and adhere to care protocols that reflect current care guidelines established by national and international professional organizations and state and federal agencies and laws. Refer to the latest NCTTRAC Stroke Committee source document Interfacility Transfer Guideline for further detail.

13.5.3 Using telestroke and teleradiology networks in evaluating AIS patients can be effective for correct IV thrombolysis eligibility decision-making. Additionally, communication platforms with image sharing capability may be reasonable for triaging patients with AIS who may be eligible for interfacility transfer in consideration for mechanical thrombectomy.

13.5.4 Regional facilities that may transfer patients for a higher level of care should establish hand-off, transfer protocols, and procedures that ensure safe and efficient patient care within and between facilities.

13.5.5 Protocols for interfacility transfer of patients should be established and approved beforehand so efficient patient transfers can be accomplished at all hours of the day and night.

13.5.6 Regional facilities that may transfer patients for a higher level of care should establish transfer protocols, terminology (code stroke), agreements, and procedures that ensure safe and efficient patient care with EMS agencies capable of transportation via ground and air.5

13.5.7 Use of the NCTTRAC Stroke Committee endorsed interfacility stroke terminology to convey the level of stroke emergency is recommended:

13.5.7.1 Level 1 Stroke – Patient with an ischemic or hemorrhagic stroke in

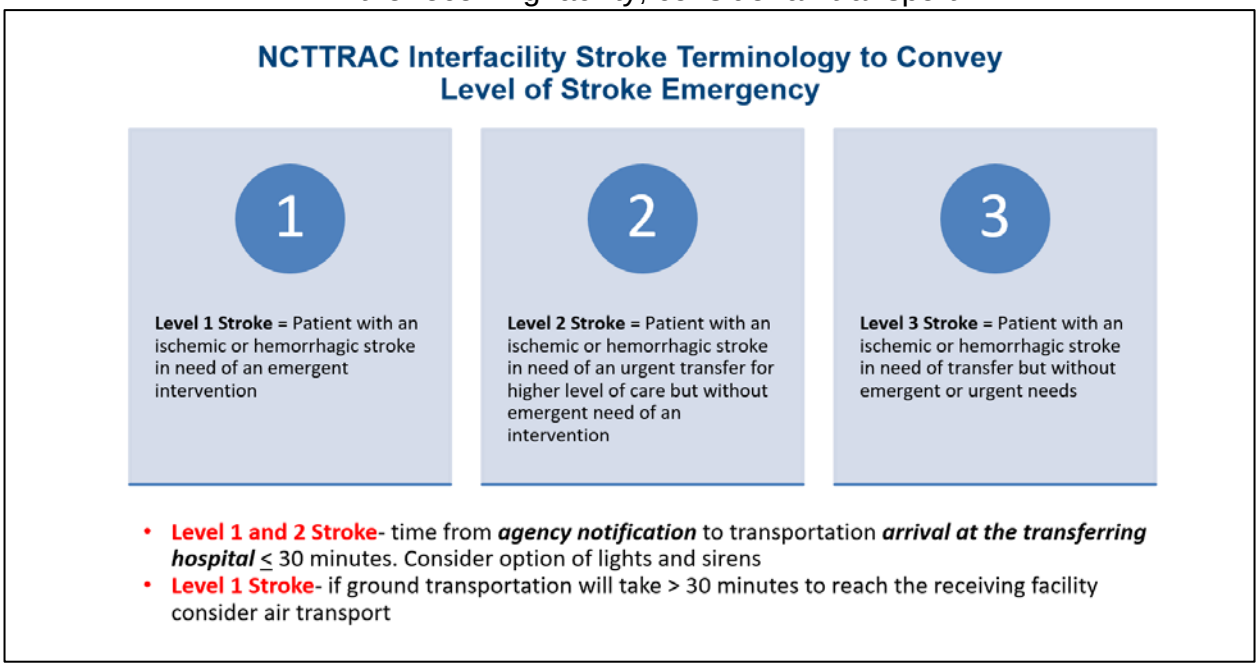
need of an emergent intervention.

13.5.7.2 Level 2 Stroke – Patient with an ischemic or hemorrhagic stroke in need of an urgent transfer for a higher level of care but without need of an emergent intervention.

13.5.7.3 Level 3 Stroke – Patient with an ischemic or hemorrhagic stroke in need of transfer but without emergent or urgent needs.

13.5.7.3.1 Level 1 and level 2 Strokes, time from agency notification to transportation arrival at the transferring hospital ≤30 minutes. Consider the option of lights and sirens.

13.5.7.4 Level 1 stroke, if ground transportation will take >30 minutes to reach the receiving facility, consider air transport.



13.5.7.5 In all patients within 24 hours from the last known well suspected of having an acute ischemic stroke, early identification of possible LVO is recommended.

13.5.7.5.1 Consider utilizing a stroke severity scale or NIHSS upon arrival to the emergency room to identify possible LVO, or the Pediatric NIHSS in the pediatric population (Annex C: *Pediatric NIHSS*)

13.5.7.5.2 Recommended stroke severity scale: Cincinnati Stroke Triage Assessment Tool (CSTAT), Field Assessment Stroke Triage for Emergency Destination (FAST-ED), Rapid Arterial Occlusion Evaluation Scale (RACE) or Vision, Aphasia, Neglect (VAN) Assessment.

13.5.8 Early Notification of CSC (Level 1) and activation of EMS transport team.

13.5.8.1 Notify CSC (Level 1) on arrival and dispatch EMS transport team (should be on standby for transfer prior to imaging) if LVO screen is positive and patient meets established criteria for transfer.

13.5.9 It may be useful for primary stroke centers and other healthcare facilities that provide initial emergency care, including administration of IV thrombolysis, to develop the capability of performing emergent noninvasive vascular and perfusion imaging to identify patients eligible for endovascular intervention.

Imaging programs with artificial intelligence and communication platforms may reduce the time to mechanical thrombectomy and revascularization.[1-2, 4]

13.5.9.1 0-6 hours from last known well: EVT eligibility will be based in part on NIHSS, CT ASPECT score, and demonstration of an LVO on CT angiogram of the head and neck.

13.5.9.2 6-24 hours from last known well: EVT eligibility will be based in part on NIHSS, CT ASPECT score, demonstration of an LVO on CT angiogram of head and neck, and target mismatch profile on CT perfusion, DW-MRI, or MRI perfusion (performed either at transferring or receiving facility).

13.5.9.3 0-24 hours from last known well in a pediatric patient: MRI is ideally used. MRI RAPID and MRI with arterial spin labeling are just a few tools considered for EVT eligibility. EVT in pediatric patients (0-<18 years) should only be considered at a pediatric center with an established stroke program, such as Cook Children's Medical Center or Children's Health Dallas.[14-17]

13.5.10 Regional facilities triaging stroke patients suspected of having an intracranial LVO (positive stroke severity screen) should consider concurrent vascular imaging with non-contrast head CT or MRI/MRA in patients <18 years of age (contact Cook Children's Medical Center or Children's Health Dallas for guidance).[2, 14-17]

13.5.10.1 6-24 hours from last known well consider CT perfusion, DW-MRI, or MRI perfusion if capable.[2]

13.5.11 In patients with AIS who awake with stroke symptoms or have an unclear time of onset >4.5 hours from last known well or at baseline state, an MRI to identify diffusion-positive FLAIR-negative lesions can be useful for selecting those who can benefit from IV thrombolysis administration within 4.5 hours of stroke symptom recognition.[2]

13.5.12 For patients who otherwise meet the criteria for EVT, a noninvasive intracranial vascular study is recommended during the initial imaging evaluation of the acute stroke patient but should not delay IV thrombolysis if indicated.[2]

13.5.12.1 For patients who qualify for IV thrombolysis according to guidelines from professional medical societies, initiating IV thrombolysis before noninvasive vascular imaging is recommended for patients who have not had noninvasive vascular imaging as part of their initial imaging assessment for stroke. Noninvasive intracranial vascular imaging should be obtained as quickly as possible or at the receiving facility if intracranial vascular imaging will add delay to transfer.[2]

13.5.12.2 It is not recommended to give IV thrombolysis to pediatric patients (0 to <18 years) prior to noninvasive vascular imaging. Contact Cook Children's Medical Center or Children's Health Dallas for guidance.[14-17]

13.5.13 Per ASA guidelines: in patients without a history of renal impairment, suspected of having an LVO, and who otherwise meet the criteria for EVT, it is reasonable to proceed with CTA before obtaining a serum creatinine concentration.[2] (Not applicable for pediatric patients.)

13.5.14 If an LVO is identified on imaging: immediate transfer with goal metrics as outlined above.

13.5.15 If no LVO is identified on imaging: notify receiving facility and transportation crew

if the transfer is canceled.

13.5.16 Patients with large territorial cerebral and cerebellar infarctions are at high risk for developing brain swelling and herniation. Therefore, consideration should be given to transferring the patient to a higher level of care if neurocritical care and neurosurgical needs cannot be met at the transferring facility.

13.5.17 All related documents should accompany all stroke patient transfers:

13.5.17.1 Diagnostics scans and reports if available

13.5.17.2 Hospital records

13.5.17.3 Medication Administration Record

13.5.18 Untimely transfers may be reported to the NCTTRAC SPI Committee for review.

13.6 EMS Transportation for Interfacility Care

13.6.1 Use of the NCTTRAC Stroke Committee endorsed interfacility stroke terminology to convey the level of stroke emergency is recommended:

13.6.1.1 Level 1 Stroke – Patient with an ischemic or hemorrhagic stroke in need of an emergent intervention.

13.6.1.2 Level 2 Stroke – Patient with an ischemic or hemorrhagic stroke in need of an urgent transfer for a higher level of care but without the emergent need of an intervention.

13.6.1.3 Level 3 Stroke – Patient with an ischemic or hemorrhagic stroke in need of transfer but without emergent or urgent needs.

13.6.1.3.1 Level 1 and level 2 Strokes, time from agency notification to transportation arrival at the transferring hospital $\leq$30 minutes. Consider the option of lights and sirens.

13.6.2 Level 1 stroke, if ground transportation takes >30 minutes to reach the receiving facility, consider air transport.

13.6.3 NCTTRAC Pediatric Committee recommends that a pediatric stroke patient or patient with findings that meet NCTTRAC stroke guidelines (age less than 18) is an emergent transfer despite level terminology and should be discussed with tertiary pediatric medical center and transferred as such.14-17

13.6.4 Refer to the latest NCTTRAC Stroke Committee endorsed Interfacility EMS Transport Documentation.

13.6.5 Stroke Patient Transport: Stroke patients in NCTTRAC are transported according to patient need, availability of air transport resources, and environmental conditions.5

13.6.5.1 Pediatric patients <18 years old, contact Cook Children's Medical Center or Children's Health Dallas for guidance

13.6.6 Ground transport capable of providing the appropriate level of care should be utilized based on patient needs. For instance, transportation via ALS or MICU ground ambulance should be considered for patients receiving IV thrombolysis.

13.6.7 All related documents should accompany all stroke patient transfers:

13.6.7.1 Diagnostics scans and reports, if available

13.6.7.2 Hospital records

13.6.7.3 Medication Administration Record

13.6.8 Transport teams should follow established transfer protocols and procedures to ensure safe and efficient patient care with the mindset that "time is brain." Because the time from onset of symptoms to treatment has a powerful impact on outcomes, there should be the same level of urgency during interfacility transfers as there in the prehospital setting.

13.7 Management

13.7.1 Prevent aspiration, HOB >30. Ensure airway patency with suctioning and OPA or NPA, as needed.

13.7.2 Transportation team will monitor vitals and perform neuro assessments, such as an NIHSS/Neuro Assessment, at a minimum of every 15 minutes.

13.7.3 Utilize continuous monitoring and supplemental oxygen to maintain oxygen saturation >94%.

13.7.4 Treat hypotension. Evaluate, document, and treat signs/symptoms of shock according to the Shock CPG.

13.7.5 Monitor and treat blood pressure using appropriate parameters (post IV thrombolysis, ICH, or SAH). See Annex F: *2019 ASA Blood Pressure Recommendation*.

13.7.5.1 Adult patients (>18 years old) blood pressure goal: patients receiving IV thrombolysis infusion BP <180/105; patients not eligible for IV thrombolysis BP <220/120 mmHg may be reasonable.

13.7.5.2 Pediatric patients (0 to <18 years-old) systolic blood pressure parameters:

Systolic Blood Pressure Parameters- Female

Age	50%	95%	>15% above 95%	>20% above 95%
1-4 years	90	111	128	133
5 years	94	113	130	145
6-10 years	96	121	139	145
11-18 years	105	131	151	157

Systolic Blood Pressure Parameters- Male

Age	50%	95%	>15% above 95%	>20% above 95%
1-4 years	90	112	129	134
5 years	95	113	130	136
6-10 years	96	121	139	145
11-18 years	105	140	161	168

13.7.6 Avoid dextrose-containing fluids in non-hypoglycemic patients.

13.7.7 If IV thrombolysis infusion completes during transport, the remaining drug within the tubing should be infused using an infusion of normal saline at the same rate as the thrombolysis infusion. Do not change the pump's original set volume to be infused (VTBI). The IV thrombolysis infusion completion time is when that the pump alarms the VTBI is complete.

13.7.8 Monitor for signs of orolingual angioedema. Contact Medical Control should any signs or symptoms develop. See Annex G: *2019 ASA Angioedema.* Recommendation for managing of orolingual angioedema associated with IV thrombolysis.

13.7.9 Monitor for signs and symptoms of neurological deterioration. Worsening of the neurological exam (NIHSS worsening of >4 points) could represent hemorrhagic conversion of the stroke or worsening ischemia. Contact Medical Control for guidance and send prenotification to the receiving facility.

13.7.9.1 Pediatric patients <18 years old, contact Cook Children's Medical Center or Children's Health Dallas for guidance.

14. SYSTEM PERFORMANCE IMPROVEMENT

14.1 Goals

14.1.1 As outlined by the ASA 2019 Update to AIS Guidelines, multicomponent QI programs to improve stroke care demonstrate clear utility in safely increasing thrombolysis use in the community hospital setting.[2] Establishing, and monitoring target time goals can be beneficial and enhance system performance. As such, the NCTTRAC Stroke Committee established the goal to monitor and evaluate the NCTTRAC stroke system's performance and the impact of the system's development. NCTTRAC regional facilities participating in the SSOC must have a separate performance improvement system for stroke patients. Continuous QI processes implemented by the stroke system as a whole will provide a means of improving patient care and outcomes.

14.2 Committees Charged

14.2.1 Responsibilities are charged to the NCTTRAC Stroke Committee.

14.3 Objectives

14.3.1 To provide a multidisciplinary forum for stroke care providers to evaluate stroke patient outcomes from a system perspective and to assure the optimal delivery of stroke care.

14.3.2 To facilitate the sharing of information, knowledge, and scientific data.

14.3.3 To provide a process for medical oversight of regional stroke operations.

14.3.4 Establish regional quality measures:

14.3.4.1 EMS Prenotification Triage Time

14.3.4.2 Use of Prehospital Stroke Screening and Stroke Severity Tools

14.3.4.3 Door-to-Needle – 75% within 45 minutes and 50% within 30 minutes

14.3.4.4 DIDO – 50% < 90 minutes

14.3.4.5 Door-to-Device - 50% within 60 minutes for transfers and 90 minutes for direct arriving patients

14.4 Discussion

14.4.1 To assess the impact of regional stroke development, system performance must be monitored and evaluated from an outcomes perspective. A plan for the evaluation of operations is needed to determine if system developments are meeting the stated goals.

14.4.2 In adherence to the ASA 2019 Update to AIS Guidelines, NCTTRAC participating stroke facilities must have multicomponent QI initiatives, including ED education and multidisciplinary teams with input from neurological experts, aimed at improving stroke care.[2]

14.4.2.1 Each Stroke facility shall demonstrate a written stroke QAPI plan as outlined by the Texas Administrative Code, Rule §157.133 Requirements for Stroke Facility Designation (Texas Administrative Code (state.tx.us)). Additionally, stroke facilities shall actively participate in the RAC Stroke Committee and transport plan; and submit data to the DSHS department as requested.

14.4.2.2 As part of the QAPI plan, stroke facility treatment processes, technical outcomes (reperfusion rates), complications, and patient clinical outcomes should be tracked. All certified stroke facilities should meet or exceed the standards outlined by the DSHS-approved stroke facility certifying agency.

14.4.3 The NCTTRAC Stroke Committee will organize a multidisciplinary QI Work

Group to review and monitor stroke care quality benchmarks, indicators, evidence-based practices, and outcomes within the region. Stroke facility participation in a stroke data registry, such as the Regional Data Collaborative, is recommended to promote consistent adherence to current treatment guidelines, allow continuous QI, and improve patient outcomes. Integrating prehospital records, including National EMS Information System (NEMISIS) data elements, into the stroke registries should enhance the total system performance. It is recognized that continuous QI processes, implemented by each component of a SSOC and the NCTTRAC system, can help improve patient care and outcomes.

14.4.4 The NCTTRAC Stroke Committee strongly encourages standardized data collection and reporting from healthcare entities and data sharing between them consistent with the exceptions to privacy laws governing routine healthcare operations and QI.[20-22] These systems should include elements from the provision of stroke care from stroke detection and 911 activation through hospital discharge.[7] Outcomes should be used to assess the effectiveness of the care systems.

14.4.5 Directions – The direction for the development of an NCTTRAC Regional QI program derived from the Texas EMS Rules: 25 TAC: Rule §157.123 (b)(2)(B)(XIV), Regional EMS Trauma Systems requires “a performance improvement program that evaluates processes and outcomes from a system perspective.” Additional support and direction for regional performance improvement program development specific to stroke facility designation can be found in 25 TAC: Rule §157.133 (d), Requirements for Stroke Facility Designation.

14.4.6 Authority - The authority and responsibility for regional QI rests with the Regional Advisory Council. This will be accomplished in a comprehensive, integrated manner through the work of the Medical Directors Committee as well as the Stroke and EMS Committees.

14.4.6.1 Scope & Process – The Stroke Committee, Stroke Committee System Performance Improvement (SPI) subgroup (within the Stroke Committee) and the Medical Directors Committee serve as the oversight committee for regional performance improvement. Referrals for follow-up and feedback to and from the EMS Committee and Providers ensure system-wide multidisciplinary performance improvement.

14.4.6.2 The Stroke Committee SPI subgroup will comprise the Stroke Committee Chair, Chair Elect, Medical Director/Co-Medical Directors and two elected or appointed members of the Stroke Committee to review SPI referrals, issues, or requests in a closed session.

14.4.6.3 Specific SPI activities may include the review of SPI events that fall outside the Stroke Committee’s approved SPI indicators.

14.4.6.4 The Stroke Committee SPI subgroup, in consultation with the Stroke Committee, will determine the type of data and manner of collection, set the agenda for the PI process within the regularly scheduled meetings of the committee, and identify the events and indicators to be evaluated and monitored. Indicator identification will be based on high risk, high volume, and problem prone parameters. Indicators will be objective, measurable markers that reflect stroke resources,

procedural/patient care techniques and/or systems/process outcomes.

14.4.6.5 Occurrences will be evaluated from a system outcomes perspective and sentinel events will be evaluated on a case-by-case basis. Activities and educational offerings will be presented to address knowledge deficits and case presentations, or other appropriate mediums will be designed to address systems and behavioral problems. All actions will focus on the opportunity to improve patient care and systems operation. The results from committee activities will be summarized and communicated to the RAC membership. Problems identified that require further action will be shared with the persons and entities involved for follow-up and loop closure. Committee follow-up and outcome reports will be communicated on a standard format.

14.4.6.6 The functions and effectiveness of NCTTRAC QI process will be evaluated on an annual basis in conjunction with the annual evaluation of the NCTTRAC Bylaws. All PI activities and committee proceedings are strictly confidential. Individuals involved in performance management activities will not be asked to review cases involving their facility or affiliated healthcare system.

14.4.6.7 Stroke Centers will provide individual follow-up on acute stroke transports directly to the EMS agency transporting the patient.

14.5 Data Collection

14.5.1 Participation in the RAC Data Collaborative is recommended to promote consistent adherence to current treatment guidelines, to allow continuous regional QI and to improve patient outcomes.

14.5.1.1 NCTTRAC may set minimum standards for what is considered active participation for the purposes of a Letter of Participation:

14.5.1.1.1 Gold Star Stroke Facility status is awarded to stroke facilities sharing performance measures with the RAC Data Collaborative, as part of the NCTTRAC quality initiative to improve regional stroke care in the NCTTRAC SSOC.

14.5.1.1.2 Gold Star Stroke Facility Plus status is awarded to stroke facilities providing transparent performance measures with the Regional Data Collaborative, as part of the NCTTRAC quality initiative to improve regional stroke care in the NCTTRAC SSOC.

14.5.2 Data will be shared with EMS by each certified/designated facility. Data sharing may occur within NCTTRAC.

14.5.3 Summary reports are submitted for each NCTTRAC facility and EMS provider.

14.5.4 Sentinel events will be used to focus attention on specific situations/occurrences of major significance to patient care outcomes and be reviewed by the Stroke Committee SPI subgroup.

14.5.5 Performance Improvement data is reviewed and updated annually.

14.5.6 Confidentiality - All information and materials provided and/or presented during closed SPI meetings are strictly confidential. Closed Stroke Committee SPI subgroup meeting participants will sign an NCTTRAC SPI Confidentiality Agreement prior to the start of each closed meeting.

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NORTH CENTRAL TEXAS TRAUMA REGIONAL ADVISORY COUNCIL, INC.
(NCTTRAC)

BYLAWS

Reviewed by the NCTTRAC Board of Directors
August 10, 2021

Approved by the NCTTRAC General Membership
December 14, 2021

Supersedes Bylaws approved September 19, 2019


NCTTRAC
NORTH CENTRAL TEXAS
TRAUMA REGIONAL ADVISORY COUNCIL

ANNOTATED INDEX


NCTTRAC
NORTH CENTRAL TEXAS
TRAUMA REGIONAL ADVISORY COUNCIL

ARTICLE I

Name

1.1 The official name of this organization shall be North Central Texas Trauma Regional Advisory Council, Inc. (NCTTRAC). For member and public education purposes, variations such as, but not limited to, North Central Texas Regional Advisory Council for Trauma, Acute, and Emergency Healthcare may be used in marketing or branding materials.

1.2 The principal place of business of NCTTRAC shall be 600 Six Flags Dr., Suite 160, Arlington, Texas 76011, in the State of Texas, unless and until determined otherwise by the NCTTRAC Board of Directors (Board).

1.3 NCTTRAC will establish and maintain a website for public access to include current information. (www.NCTTRAC.org)

ARTICLE II

Definitions

2.1 NCTTRAC is a 501(c)(3) nonprofit organization that functions according to its duly adopted charter, and federal and state law, including Texas Administrative Code Title 25 §157.2. The organization facilitates the development, implementation, and operation of comprehensive trauma, acute, and emergency healthcare systems based on accepted evidence-based standards of care principles to decrease morbidity and mortality.

2.1.1 The nineteen Texas counties comprising Trauma Service Area (TSA) - E include: Collin, Cooke, Dallas, Denton, Ellis, Erath, Fannin, Grayson, Hood, Hunt, Johnson, Kaufman, Navarro, Palo Pinto, Parker, Rockwall, Somervell, Tarrant, and Wise counties.

2.1.2 The composition of TSA-E may be changed if a county requests realignment into or out of TSA-E to another bordering TSA pursuant to requirements and approval of the Texas Department of State Health Services (DSHS).

2.1.3 NCTTRAC participants may include, but are not limited to, interested healthcare facilities, organizations, agencies, entities, advocates, and professional societies providing or involved in healthcare delivery, education, injury prevention, rehabilitation, and emergency preparedness within TSA-E.

ARTICLE III

Mission

3.1 The Mission of the North Central Texas Trauma Regional Advisory Council is to promote and coordinate a system of quality trauma, acute, and emergency healthcare and preparedness in North Central Texas.

Vision

3.2 To be recognized as a leader in promoting quality trauma, acute, and emergency healthcare and preparedness.

Philosophy

3.3 The philosophies of NCTTRAC are:

3.3.1 We PREPARE through research, data management, education, injury and illness prevention, and emergency management.

3.3.2 We SUPPORT through the development of Regional Plans and Guidelines, resources, communications, and advocacy.

3.3.3 We RESPOND to the needs of the regional emergency healthcare coalition and the State of Texas.

ARTICLE IV

Membership

4.1 Membership in NCTTRAC shall include Voting and Associate Members. The requirements and eligibility for membership in NCTTRAC include submission of a completed membership application, payment of applicable membership dues, and Board approval. Additional membership criteria can be found in the Membership & Active Participation Standard Operating Procedure (SOP).

4.1.1 Membership Categories

4.1.1.1 Members

4.1.1.1.1 Organizations, agencies, and entities providing health-related care, education, injury prevention, advocacy, rehabilitation, or preparedness within TSA-E shall be eligible for voting membership in NCTTRAC.

4.1.1.1.2 Each Member shall have one vote.

4.1.1.2 Associate Members

4.1.1.2.1 Individuals or corporate entities not identified above shall be eligible for associate membership.

4.1.1.2.2 Associate Members are non-voting.

4.1.1.2.3 Additional information on Associate Membership is available in the NCTTRAC Sponsorship & Guest Speaker SOP.

4.1.2 Final determination of Member or Associate Member status shall be approved by the Board.

4.2 NCTTRAC shall maintain equal opportunity and access to all its membership for fair representation and participation.

4.3 NCTTRAC shall assure that dues, fees, or other financial incentives do not determine the number of votes awarded to a Voting Member.

4.4 In order to retain voting privileges, Members shall maintain active and consistent participation according to the Membership & Active Participation SOP.

4.5 NCTTRAC shall assess dues and fees based on a rate schedule that has been approved by the General Membership.

ARTICLE V

Officers

5.1 The officers of NCTTRAC and its Board are: Chair, Chair-Elect, Secretary, and Treasurer and shall be known as the Officers. The remainder of the Board will be known as Directors as specifically described in Article VII.

5.2 Nomination and Election

5.2.1 Elections for Chair-Elect, Secretary, and Treasurer are routinely held at the General Membership Meeting at the end of each odd fiscal year.

5.2.2 Nominations for Officers are accepted in person or in writing until 21 days prior to the election.

5.2.3 Nominees must accept the nomination prior to the election.

5.2.4 Officers shall be elected at an NCTTRAC General Membership Meeting in accordance with the Voting & Elections SOP.

5.2.5 Any Officer may be removed by a majority vote of the NCTTRAC Membership.

5.3 Chair

5.3.1 Job Description

5.3.1.1 The Chair shall set the agenda and preside at all General Membership and Board Meetings and shall have the authority to call emergency or special Board Meetings in accordance with the Conducting Official Business Meetings SOP.

5.3.1.2 The Chair shall appoint a documented representative of an NCTTRAC Member in good standing as an interim officer or Committee Chair to fill any vacancy until a replacement is duly elected.

5.3.1.3 The Chair shall have the authority to appoint the Chairs and/or Leads of all ad-hoc or Committee, workgroups.

5.3.1.4 The Chair represents NCTTRAC at Governor's EMS and Trauma Advisory Council (GETAC) Meetings and other meetings as necessary.

5.3.1.5 The Chair is obligated to communicate appropriate information to whatever audience may be warranted, based on the information received.

5.3.1.6 The Chair shall have check signing privileges according to the Transactions of the Organization SOP.

5.3.1.7 The Chair, as an officer of the Board, participates in the hiring, termination, disciplinary actions, and/or performance evaluations of the Executive Director.

5.3.2 Term of Office

5.3.2.1 The duration of the Chair term shall be two years. The Chair ascends from Chair-Elect.

5.3.2.2 In the event the Chair is unable to fulfill the term, the Chair-Elect shall ascend to Chair. The term of the new Chair shall be the remainder of the unfulfilled term of the previous Chair. The Executive Committee will recommend to the Board for determination if the new Chair will additionally serve the two-year term that would have been served originally.

5.4 Chair-Elect

5.4.1 Job Description

5.4.1.1 The Chair-Elect shall, in the absence or disability of the Chair, perform the duties and exercise the powers of the Chair, and shall perform such other duties as the Board prescribes.

5.4.1.2 The Chair-Elect is a member of the Finance Committee.

5.4.1.3 The Chair-Elect may represent NCTTRAC at Governor's EMS and Trauma Advisory Council (GETAC) Meetings and other meetings as necessary.

5.4.1.4 The Chair-Elect is obligated to communicate appropriate information to whatever audience may be warranted, based on the information received.

5.4.1.5 The Chair-Elect shall have check signing privileges according to the Transactions of the Organization SOP.

5.4.1.6 The Chair-Elect, as an officer of the Board, participates in the hiring, termination, disciplinary actions, and/or performance evaluations of the Executive Director.

5.4.1.7 The Chair-Elect leads the annual bylaws and standard operating procedures review process to include review and continuation of Standing Committees/Subcommittees.

5.4.2 Term of Office

The duration of the Chair-Elect term shall be two years. Nominations for Chair-Elect shall come from the General Membership. The nominee for Chair-Elect must be a documented representative of an NCTTRAC member organization's good standing. The Chair-Elect shall ascend to Chair. In the event the Chair-Elect is unable to fulfill the term, there shall be an election at the next eligible General Membership Meeting to replace the Chair-Elect for the remainder of the unfulfilled term.

5.5 Secretary

5.5.1 Job Description

5.5.1.1 The Secretary works with staff to coordinate meeting notification correspondence and support to include meeting location, date, time, and agenda.

5.5.1.2 The Secretary is familiar with and refers to, for guidance, the most current edition of “Robert's Rules of Order".

5.5.1.3 The Secretary shall be responsible for determining a quorum at each Board and General Membership Meeting.

5.5.1.4 The Secretary shall be responsible for the minutes and records of all general membership and Board Meetings.

5.5.1.5 The Secretary provides oversight and certification, as appropriate, for all voting actions at each Board and General Membership Meeting.

5.5.1.6 The Secretary shall have check signing privileges according to the Transactions of the Organization SOP.

5.5.1.7 The Secretary may represent NCTTRAC at Governor’s EMS and Trauma Advisory Council (GETAC) Meetings and other meetings as necessary.

5.5.1.8 The Secretary is obligated to communicate appropriate information to whatever audience may be warranted, based on the information received.

5.5.1.9 The Secretary, as an officer of the Board, participates in the hiring, termination, disciplinary actions, and/or performance evaluations of the Executive Director.

5.5.2 Term of Office

The duration of the Secretary’s term shall be two years. Nominations for Secretary shall come from the General Membership. The nominee for Secretary must be a documented representative of an NCTTRAC member organization in good standing. In the event the Secretary is unable to fulfill the term, there shall be an election at the next eligible General Membership Meeting to replace the Secretary for the remainder of the unfulfilled term.

5.6 Treasurer

5.6.1 Job Description

5.6.1.1 The Treasurer oversees the financial records of NCTTRAC.

5.6.1.2 The Treasurer is a member of the Finance Committee.

5.6.1.3 The Treasurer shall make a current financial statement available on a scheduled basis, no less than every General Membership Meeting.

5.6.1.4 The Treasurer oversees the outside annual audit review.

5.6.1.5 The Treasurer shall have check signing privileges according to the Transactions of the Organization SOP.

5.6.1.6 The Treasurer may represent NCTTRAC at Governor's EMS and Trauma Advisory Council (GETAC) Meetings and other meetings as necessary.

5.6.1.7 The Treasurer is obligated to communicate appropriate information to whatever audience may be warranted, based on the information received.

5.6.1.8 The Treasurer, as an officer of the Board, participates in the hiring, termination, disciplinary actions, and/or performance evaluations of the Executive Director.

5.6.2 Term of Office

The duration of the Treasurer's term shall be two years. Nominations for Treasurer shall come from the General Membership. The nominee for Treasurer must be a documented representative of an NCTTRAC member organization in good standing. In the event the Treasurer is unable to fulfill the term, there shall be an election at the next eligible General Membership Meeting to replace the Treasurer for the remainder of the unfulfilled term.

5.7 Succession of Officers

5.7.1 In the event both the Chair and Chair-Elect are unable to fulfill their duties, the succession of responsibility will be first to the Secretary then to the Treasurer.

5.7.2 In the event all officers are unable to fulfill their duties, the Board shall elect a representative from the Board to fulfill the duties of the Chair.

ARTICLE VI

Executive Committee of the Board of Directors

6.1 The Executive Committee of the Board of Directors shall be known as The Executive Committee and will consist of:

6.1.1 Chair

6.1.2 Chair-Elect

6.1.3 Secretary

6.1.4 Treasurer

6.1.5 Finance Committee Chair

6.2 Election, Removal, and Vacancies of Executive Committee members

6.2.1 Each Executive Committee Member is confirmed as a member of the Board after election/appointment by their respective committee/organization or election by NCTTRAC Membership (as stated in Article V Section 5.2 Nominations and Elections) and ratification by the Board.

6.2.2 Each elected Executive Committee Member will hold office until whichever of the following occurs: (a) a successor is elected, (b) resignation, (c) removal from office by the Board or general membership, (d) removal from office by their respective committee, after ratification by the Board, (e) death, or (f) disability.

6.2.3 Officers, as a part of the Executive Committee, but elected by the General Membership, may be removed by a 2/3rds majority vote of the NCTTRAC membership as defined in the Voting & Elections SOP.

6.3 Duties of the Executive Committee

6.3.1 Each Executive Committee Member must be a documented representative of an NCTTRAC member organization in good standing as defined in the Membership & Participation SOP.

6.3.2 The Executive Committee shall participate in Closed Session investigations of a Director removal and provide recommendations to the Board.

6.3.3 The Executive Committee will take recommendations from service line committees that have system performance improvement functions for appropriate designation/accreditation of hospitals related to initial or changes to designation/accreditation. Recommendations will be reviewed and discussed in a closed Executive Committee session to determine the best course to be taken prior to consideration and action by the full board.

6.3.4 The RAC Chair, Chair-Elect, or other Board Officers/Directors recognize their responsibility to attend mandatory meetings called by DSHS. Failure to comply with mandatory attendance requirements without prior DSHS approval may be cause for removal.

ARTICLE VII

Board of Directors

7.1 The Board shall consist of:

7.1.1 Chair (only votes in the event of a tie)

7.1.2 Chair-Elect

7.1.3 Secretary

7.1.4 Treasurer

7.1.5 Air Medical Committee Chair / Chair-Elect

7.1.6 Cardiac Committee Chair / Chair-Elect

7.1.7 Emergency Department Operations Committee Chair / Chair-Elect

7.1.8 EMS Committee Chair / Chair-Elect

7.1.9 Finance Committee Chair / Chair-Elect

7.1.10 Hospital Executive – East

7.1.11 Hospital Executive – West

7.1.12 Medical Director Committee Chair / Chair-Elect

7.1.13 Pediatric Committee Chair / Chair-Elect

7.1.14 Perinatal Committee Chair / Chair-Elect

7.1.15 Regional Emergency Preparedness Committee Chair / Chair-Elect

7.1.16 Stroke Committee Chair / Chair-Elect

7.1.17 Trauma Committee Chair / Chair-Elect

7.1.18 Zones Representative

7.1.19 Immediate Past Chair (ex officio, non-voting)

7.2 Election, Removal, and Vacancies of Directors

7.2.1 Each Director is confirmed as a member of the Board after election/appointment by their respective committee/organization and ratification by the Board.

7.2.2 Any Director may be removed with or without cause at a Board Meeting by a majority vote of the Board after a Closed Executive Committee investigation and recommendation, provided that proper notice of the intention to act on the matter has been given in the notice calling the meeting.

7.2.3 Each elected Director will hold office until whichever of the following occurs: (a) a successor is elected, (b) resignation, (c) removal from office by the Board, (d) removal from office by their respective committee, after ratification by the Board, (e) death, or (f) disability.

7.3 Duties of the Board

7.3.1 The NCTTRAC Board shall act on behalf of the organization and has the principal responsibility for the organization's mission and legal accountability for its operations.

7.3.2 The Board shall determine NCTTRAC's mission and purpose.

7.3.2.1 The Board shall conduct periodic strategic planning to review and update the organization's mission and purpose for accuracy and validity.

7.3.2.2 Each Officer, Director, and Committee Chair-Elect should fully understand and support the organization's mission and associated obligations.

7.3.3 The Board shall ensure effective organizational planning.

7.3.3.1 The Board must actively participate with staff in the overall planning process and assist in implementing organizational goals.

7.3.3.2 The Board shall set policy through the development of strong organizational plans including, but not limited to, organizational bylaws, SOPs, and the strategic plan.

7.3.4 The Board shall ensure adequate resources for NCTTRAC to fulfill its mission and shall manage those resources effectively.

7.3.4.1 The Board shall ensure that adequate financial controls are in place to safeguard its resources and preserve the tax-exempt status of the organization.

7.3.4.2 The Board shall actively participate in the development of the annual budget.

7.3.5 The Board shall ensure that NCTTRAC's programs and services are consistent with the organization's mission and shall monitor their effectiveness.

7.3.6 The Board shall ensure legal and ethical integrity and maintain accountability.

7.3.6.1 The Board shall establish pertinent organizational policies and procedures.

7.3.6.2 The Board shall adhere to provisions of the organization's Bylaws and Articles of Incorporation.

7.3.7 The Board shall oversee the training of new Officers, Directors, and Committee Chairs Elect and assess Board participation and performance.

7.3.7.1 New Officers, Directors, and Committee Chairs Elect shall be provided with information related to their Board responsibilities as well as NCTTRAC's history, needs, and challenges.

7.3.7.2 The Board shall regularly evaluate its performance to recognize its achievements and determine areas that need to be improved.

7.3.8 The Board shall be responsible for NCTTRAC's statement of position in matters of activism, advocacy, and/or organizational endorsement. If time constraints do not allow for position development by full Board consensus the responsibility shall be delegated to the Executive Committee or Officers of the Board If time constraints are extreme.

7.3.9 Each Officer and Director shall perform his or her duties in good faith and in a manner he or she reasonably believes to be in the best interest of NCTTRAC.

7.3.9.1 Each Officer and Director shall perform his or her duties with such care as an ordinarily reasonable and prudent person in a like position with respect to a similar corporation would use under similar circumstances.

7.3.9.2 Each Officer, Director, and Committee Chair-Elect shall read and attest to the Conflict of Interest and Code of Ethics SOPs at least annually.

7.3.9.3 Each Officer, Director, and Standing Committee Chair-Elect shall complete training related to the roles and responsibilities of the Board.

7.4 Requirements of the Board

7.4.1 Each Officer and Director must be a documented representative of an NCTTRAC member organization in good standing as defined in the Voting & Elections SOP.

7.4.2 The Officers and Directors shall participate in accordance with the Membership & Active Participation SOP.

7.4.3 All Officers, Directors, and Standing Committee Chairs Elect are required to review and complete the DSHS Board Training requirement at least annually. This training and verification shall be completed within 30 days of elected or appointed participation on the Board.

7.5 Quorum

7.5.1 A quorum is defined as at least 50% of the voting members of the Board who are present at the call for a vote.

7.5.2 A simple majority vote of the quorum is required to act.

7.6 Meetings

7.6.1 Meeting times and locations shall be set by the Chair and posted on the NCTTRAC website calendar.

7.6.2 The NCTTRAC Chair is responsible for approving the Board agenda and making copies available at the meeting.

7.6.3 The Secretary is responsible for ensuring that minutes are acceptable for presentation at meetings.

7.7 Directors are volunteers and not compensated but may be reimbursed for direct expenses in accordance with the Officer / Committee Travel Reimbursement SOP.

7.8 All Officers and Directors are expected to attend all Board Meetings.

7.8.1 If an Officer or Director is absent for two consecutive regular Board Meetings, without accepted excuse, the Officer or Director will be notified by the Board Officers in writing of the consecutive absences.

7.8.1.1 Excused absence requests must be conveyed to the Executive Committee (or delegated Board Officer) for approval prior to the missed meeting.

7.8.1.2 Consensus of the Executive Committee will determine the approval of each excused absence request.

7.8.2 If, after being notified, the Officer or Director misses the next regular Board Meeting, the Chair should bring the situation to the Executive Committee's attention for discussion and resolution.

7.8.3 A cumulative attendance record greater than or equal to 50% of unexcused absences will be cause for removal.

7.8.4 Attendance rosters will be maintained on a rolling two-year or individual fiscal year basis as appropriate to Officers/Directors' terms of office.

7.9 The Chair has the authority to call or postpone ad-hoc, special, and closed Board Meetings in accordance with the Closing a Meeting SOP. If a special meeting is called, a notice of the purpose will be provided along with the notice of the time, date, and location as discussed in Section 8.2.3 herein.

ARTICLE VIII

Meetings

8.1 All meetings are open to the public and posted on the NCTTRAC website with exceptions for special, ad hoc, or closed meetings.

8.2 General Membership Meetings of all NCTTRAC Members are held in compliance with State contract requirements and will include but are not limited to Board and Standing Committee/Subcommittee reports to update the Members on NCTTRAC activities.

8.2.1 Voting will be conducted in accordance with the Voting & Elections SOP.

8.2.2 The Chair has the discretion to postpone or reschedule General Membership Meetings.

8.2.2.1 Except for a catastrophic event, a minimum of twenty-four (24) hours' notice shall be given.

8.2.3 Written or printed notice stating the place, day, and time of the General Membership Meeting will be delivered not less than fifteen (15) days nor more than sixty days (60) before the meeting. The notice will provide the meeting location and the electronic system access information. The notice will be delivered in person, by electronic transmission, or by mail. If a special meeting of Members is called, a notice of the purpose or purposes of the meeting will also be provided.

8.3 Board Meetings are held at least quarterly to take action on NCTTRAC's behalf.

ARTICLE IX

Committees

9.1 The Standing Committees established by NCTTRAC are limited to the: Air Medical Committee, Cardiac Committee, Emergency Department Operations Committee, Emergency Medical Services Committee, Finance Committee, Medical Directors Committee, Pediatric Committee, Perinatal Committee, Regional Emergency Preparedness Committee, Stroke Committee, and Trauma Committee. Subcommittees to Standing Committees may be established within these Bylaws. All administrative criteria applicable to Standing Committees, as outlined in this article, shall also apply to Subcommittees. Standing Committees and Subcommittees may be comprised of RAC Member and Non-Member organizations with voting rights as identified in approved Standing Committee SOPs. In addition, non-member agencies or organizations representing key partners in Trauma Service Area–E (TSA-E) are also encouraged to participate regardless of voting status.

9.1.1 Standing Committee/Subcommittee Meetings, apart from closed sessions as defined in the Closing a Meeting SOP, are open to any individual who wants to attend the meeting.

9.1.2 Standing Committees/Subcommittees shall meet at least quarterly.

9.1.3 Standing Committees shall establish and review on an annual basis a Standard Operating Procedure (SOP) that outlines committee makeup, responsibilities, goals, and products (at minimum). A Standing Committee SOP template is provided by NCTTRAC staff as a guide in addressing overarching Board of Directors' expectations and considerations on a fiscal year basis.

9.1.4 The business of a Standing Committee shall be decided by a majority of the eligible votes cast as defined in the Committee SOP. The business of Subcommittees will be defined in the affiliated Standing Committee SOP.

9.1.4.1 On each Standing Committee/Subcommittee, there may be formed either a broad member representation or a documented core group of committee representatives that will be the deciding body for that committee's activities. Such documentation will be established in the form of a Standing Committee SOP approved by the Board.

9.1.4.1.1 The core group, documented as the "voting representatives of the committee" may consist of both documented representatives of an NCTTRAC Member in good standing, as well as delegated representatives of identified and approved partner agencies or organizations.

9.1.4.1.2 The business of a Standing Committee/Subcommittee with an established core group will be directed by its Chair-derived consensus of attendees or a deliberate vote of its core group.

9.1.4.1.3 In the absence of an established core group for a Standing Committee/Subcommittee, the business of the committee will be directed by its Chair-derived consensus or deliberate vote of a documented representative of an NCTTRAC Member in good standing.

9.1.4.2 No NCTTRAC Voting Member or committee core group organization shall have more than one vote per action item in individual Standing Committee/Subcommittee Meetings.

9.1.4.3 The NCTTRAC Member's Primary Voting Representative may appoint a Standing Delegate to serve as a regular attendee to Standing Committees/Subcommittees for purposes of both subject matter representation and voting.

9.1.4.3.1 Standing Delegates shall be appointed in writing and/or by email originating from the NCTTRAC Member's Primary Voting Representative.

9.1.5 The Chair of a Standing Committee/Subcommittee

9.1.5.1 The Standing Committee/Subcommittee Chair term is one year. The Chair of a Standing Committee/Subcommittee ascends from the Committee Chair-Elect.

9.1.5.2 The Standing Committee/Subcommittee Chair must be a documented representative of an NCTTRAC Member organization in good standing.

9.1.5.3 The Standing Committee/Subcommittee Chair cannot hold more than one elected position with NCTTRAC at a time.

9.1.5.4 In the event the Standing Committee/Subcommittee Chair is unable to fulfill the term, the Chair-Elect shall ascend to Chair. The term of the new Chair shall be the remainder of the unfulfilled term of the previous Committee Chair. The Committee will recommend if the new Chair will additionally serve the one-year term that would have been served originally for review by the Executive Committee and ratification by the Board.

9.1.6 The Chair of each Standing Committee/Subcommittee has the following responsibilities:

9.1.6.1 The Chair of each Standing Committee is a voting member of the Board.

9.1.6.2 The Chair of each Standing Committee in collaboration with NCTTRAC staff is responsible for the development of and adherence to an SOP related to committee functions and membership. Guidance on specific SOP content is provided by NCTTRAC staff as approved by the Board. All committee SOPs will be reviewed annually with the intent of final Board approval prior to the start of the NCTTRAC fiscal year.

9.1.6.3 The Chair of each Standing Committee is responsible for presenting committee and subcommittee reports to the Board on a periodic basis as approved by the Board.

9.1.6.4 The Chair of each Standing Committee/Subcommittee is responsible for representing the collective vote or consensus of the members or core group of the Standing Committee/Subcommittee.

9.1.6.5 The Chair of each Standing Committee/Subcommittee shall vote only in the event of a tie vote of the Standing Committee/Subcommittee.

9.1.6.6 The Chair of each Standing Committee/Subcommittee has the authority to call or postpone Standing Committee/Subcommittee Meetings.

9.1.6.7 Any workgroup not identified in the approved SOP must be established by the NCTTRAC Chair in accordance with Section 5.3 of these Bylaws.

9.1.6.8 Further clarification of responsibilities regarding the conduct of meetings is found in the Conducting Official Business Meetings SOP.

9.1.7 The Chair-Elect of each Standing Committee/Subcommittee is chosen by vote of the present and eligible Voting Members or core group as stated in 9.1.4.1 and approved by a simple majority vote of the Board in accordance with the Voting & Elections SOP.

9.1.7.1 The Standing Committee/Subcommittee Chair Elect term shall be one year.

9.1.7.2 Nominations for Standing Committee/Subcommittee Chair-Elect shall come from its present and eligible Voting Members or core group.

9.1.7.3 The Standing Committee/Subcommittee Chair-Elect must be a documented representative of an NCTTRAC Member in good standing.

9.1.7.4 The Standing Committee/Subcommittee Chair-Elect cannot hold more than one elected position with NCTTRAC at a time.

9.1.7.5 In the event the Standing Committee/Subcommittee Chair-Elect is unable to fulfill the term, there shall be an election at the next Standing Committee/Subcommittee Meeting to replace the Chair-Elect for the remainder of the term.

9.1.8 The Chair-Elect of each Standing Committee/Subcommittee has the following responsibilities

9.1.8.1 The Chair-Elect assists the Chair with committee/subcommittee functions and assumes the Chair's responsibilities for Standing Committee/Subcommittee activity and meeting management in the temporary absence of the Chair.

9.1.8.2 The Chair-Elect of each Standing Committee is a voting member of the Board in the absence of the Standing Committee Chair.

9.1.8.3 The Chair-Elect of each Standing Committee/Subcommittee has the authority to call or postpone Standing Committee/Subcommittee Meetings in the absence of the Standing Committee Chair.

9.1.8.4 The Chair-Elect automatically ascends to the Chair position at the end of the current Chair's term.

9.1.8.5 The Standing Committee/Subcommittee Chair-Elect is chosen by vote of the present and eligible Voting Members or core group as stated in 9.1.3 and approved by a simple majority vote of the Board in accordance with the Voting & Elections SOP.

9.1.9 Call for removal of or complaint against any Chair or Chair-Elect of a Standing Committee/Subcommittee shall be delegated to the Executive Committee for investigation and recommendation. Recommendations shall be presented to the Board for action.

9.1.10 Purpose and responsibilities of Standing Committees/Subcommittees:

9.1.10.1 Air Medical Committee

9.110.1.1 Responsible for affecting and supporting safe air medical operations and high-quality clinical care provided by air medical transport and transfer services in TSA-E.

9.1.10.1.2 Establish standing agenda items and corresponding responsibilities (e.g., by individual appointment, workgroup, or subcommittee) to address, and document in the committee SOP, the following topics:

9.1.10.1.2.1 Professional Development

9.1.10.1.2.2 Injury / Illness Prevention and Public Education

9.1.10.1.2.3 System Performance Improvement

9.1.10.1.3 Provide guidance in the development and review of hospital and pre-hospital assessment tools, regional plans and treatment guidelines, and the Committee SOP.

9.1.10.1.4 Provide interface with other RAC committees, the Texas Association of Air Medical Service (TAAMS), and the Governor's EMS and Trauma Advisory Council (GETAC).

9.1.10.2 Cardiac Committee

9.1.10.2.1 Responsible for the development of an acute cardiac care system for TSA-E. This includes the development of guidelines for rapid transport to appropriate facilities for patients suffering ST-Elevation Myocardial Infarction (STEMI) and other acute cardiac conditions.

9.1.10.2.2 Establish standing agenda items and corresponding responsibilities (e.g., by individual appointment, workgroup, or subcommittee) to address, and document in the committee SOP, the following topics:

9.1.10.2.2.1 Professional Development

9.1.10.2.2.2 Injury / Illness Prevention and Public Education

9.1.10.2.2.3 System Performance Improvement

9.1.10.2.3 Provide guidance in the development and review of hospital and pre-hospital assessment tools, regional plans and treatment guidelines, and the Committee SOP.

9.1.10.2.4 Provide interface with other RAC committees, professional associations appropriate to the service line, and the Governor's EMS and Trauma Advisory Council (GETAC).

9.1.10.3 Emergency Department Operations Committee

9.1.10.3.1 Responsible for improving Emergency Department operations in TSA-E by engaging in and supporting the development and implementation of clinical guidelines and processes; and enhancing communication, collaboration, and alignment amongst the EDs, ED partners in care, and other NCTTRAC Committees in TSA-E.

9.1.10.3.2 Establish standing agenda items and corresponding responsibilities (e.g., by individual appointment, workgroup, or subcommittee) to address, and document in the committee SOP, the following topics:

9.1.10.3.2.1 Professional Development

9.1.10.3.2.2 Injury / Illness Prevention and Public Education

9.1.10.3.2.3 System Performance Improvement

9.1.10.3.3 Provide guidance in the development and review of hospital and pre-hospital assessment tools, regional plans and treatment guidelines, and the Committee SOP

9.1.10.3.4 Provide interface with other RAC committees, professional associations appropriate to the service line, and the Governor's EMS and Trauma Advisory Council (GETAC).

9.1.10.4 Emergency Medical Services (EMS) Committee

9.1.10.4.1 Responsible for coordinating and improving the clinical care provided by all levels of prehospital providers within TSA-E.

9.1.10.4.2 Establish standing agenda items and corresponding responsibilities (e.g., by individual appointment, workgroup, or subcommittee) to address, and document in the committee SOP, the following topics:

9.1.10.4.2.1 Professional Development

9.1.10.4.2.2 Injury / Illness Prevention and Public Education

9.1.10.4.2.3 System Performance Improvement

9.1.10.4.3 Provide guidance in the development and review of pre-hospital assessment tools, regional plans and treatment guidelines, Committee SOP

9.1.10.4.4 Provide interface with other RAC committees, professional associations appropriate to the service line, and the Governor's EMS and Trauma Advisory Council (GETAC) and keep members informed on latest developments in prehospital transportation and care.

9.1.10.5 Finance Committee

9.1.10.5.1 Responsible for planning, monitoring, and overseeing the organization's financial resources, including, but not limited to, budgeting, financial reporting, and the creation and monitoring of internal controls and financial policies as well as oversight of the annual independent audit.

9.1.10.5.2 Provide interface with other RAC committees, professional associations, and state agencies appropriate to RAC/Member funding considerations.

9.1.10.6 Medical Director Committee

9.1.10.6.1 Responsible for recommending a minimum standard of practice for providers participating in the trauma, acute, emergency healthcare and disaster response system of TSA-E.

9.1.10.6.2 The committee will be comprised of the elected committee medical directors of the following committees: Air Medical, Cardiac, Emergency Department Operations, Emergency Medical Services, Pediatric, Perinatal, Regional Emergency Preparedness (Disaster), Stroke, and Trauma.

9.1.10.6.3 Provide guidance in the development and review of hospital and pre-hospital assessment tools, regional plans and treatment guidelines, and Committee SOP.

9.1.10.6.4 Provide interface with other RAC committees, professional associations appropriate to their service lines, and the Governor's EMS and Trauma Advisory Council (GETAC).

9.1.10.7 Pediatric Committee

9.1.10.7.1 Responsible for promoting pediatric expertise through advocacy and education.

9.1.10.7.2 Establish standing agenda items and corresponding responsibilities (e.g., by individual appointment, workgroup, or subcommittee) to address, and document in the committee SOP, the following topics:

9.1.10.7.2.1 Professional Development

9.1.10.7.2.2 Injury / Illness Prevention and Public Education

9.1.10.7.2.3 System Performance Improvement

9.1.10.7.3 Serve as the resource for information regarding pediatric care, pediatric emergency preparedness, and identify needs or trends in the management of injured and acutely ill children.

9.1.10.7.4 Provide guidance in the development and review of hospital and pre-hospital assessment tools, regional plans and treatment guidelines, and the Committee SOP

9.1.10.7.5 Provide interface with other RAC committees, professional associations appropriate to the service line, and the Governor's EMS and Trauma Advisory Council (GETAC).

9.1.10.8 Perinatal Committee

9.1.10.8.1 Responsible for the development of a Perinatal Care Region (PCR) in TSA-E including the Perinatal Care Regional System Plan. This plan identifies all resources available in the PCR-E for perinatal care including resources for emergency and disaster preparedness.

9.1.10.8.2 Establish standing agenda items and corresponding responsibilities (e.g., by individual appointment, workgroup, or subcommittee) to address, and document in the committee SOP, the following topics:

9.1.10.8.2.1 Professional Development

9.1.10.8.2.2 Injury / Illness Prevention and Public Education

9.1.10.8.2.3 System Performance Improvement

9.1.10.8.3 Provide guidance in the development and review of hospital and pre-hospital assessment tools, regional plans and treatment guidelines, and the Committee SOP.

9.1.10.8.4 Provide interface with other RAC committees, professional associations appropriate to the service line, and the Governor's EMS and Trauma Advisory Council (GETAC).

9.1.10.9 Regional Emergency Preparedness Committee (REPC)

9.1.10.9.1 Responsible for jointly identifying and recommending plans and solutions that support improvements in TSA-E emergency/disaster preparedness and response between medical emergency preparedness stakeholders.

9.1.10.9.1.1 The Emergency Medical Task Force (EMTF)–2 Subcommittee is tasked with providing subject matter expertise in regional and state planning, mobilization, recruiting, training, operations, recovery, and fiscal responsibilities.

9.1.10.9.2 Serves as the steering committee that provides recommendations and support to the NCTTRAC Board and staff regarding execution of the Texas Hospital Preparedness Program contract as administered by the Texas DSHS for EMTF-2, and TSAs C, D, and E.

9.1.10.9.3 Establish standing agenda items and corresponding responsibilities (e.g., by individual appointment, workgroup, or subcommittee) to address, and document in the Committee SOP, the following topics:

9.1.10.9.3.1 Professional Development

9.1.10.9.3.2 Injury / Illness Prevention and Public Education

9.1.10.9.3.3 System Performance Improvement

9.1.10.9.4 Provide guidance in the development and review of hospital and pre-hospital assessment tools, regional plans and treatment guidelines, and the Committee SOP

9.1.10.9.5 Provide interface with other RAC committees, professional associations appropriate to the service line, and the Governor's EMS and Trauma Advisory Council (GETAC).

9.1.10.10 Stroke Committee

9.1.10.10.1 Responsible for the development of an acute stroke care system for TSA-E, including the development of guidelines for acute stroke care in Level I, II, and III Stroke Centers as specified in the Regional Stroke Plan.

9.1.10.10.2 Establish standing agenda items and corresponding responsibilities (e.g., by individual appointment, workgroup, or subcommittee) to address, and document in the Committee SOP, the following topics:

9.1.10.10.2.1 Professional Development

9.1.10.10.2.2 Injury / Illness Prevention and Public Education

9.1.10.10.2.3 System Performance Improvement

9.1.10.10.3 Provide guidance in the development and review of hospital and pre-hospital assessment tools, regional plans and treatment guidelines, and the Committee SOP

9.1.10.10.4 Provide interface with other RAC committees, professional associations appropriate to the service line, and the Governor's EMS and Trauma Advisory Council (GETAC).

9.1.10.11 Trauma Committee

9.1.10.11.1 Responsible for the oversight of the trauma system for TSA-E, including the TSA-E Regional Trauma System Plan (Plan). This Plan includes strategies to focus diverse resources in a collective strategy to reduce morbidity and mortality due to trauma.

9.1.10.11.1.1 The Professional Development Subcommittee is tasked with identifying and meeting professional development needs for all levels of providers throughout TSA-E.

9.1.10.11.1.2 The Public Education / Injury Prevention (PEIP) Subcommittee is tasked promoting injury and illness prevention and public awareness through advocacy and education.

9.1.10.11.1.3 The System Performance Improvement (SPI) Subcommittee is tasked with shared oversight of emergency healthcare system performance improvement activities with individual service line committees of NCTTRAC.

9.1.10.11.2 Provide guidance in the development and review of hospital and pre-hospital assessment tools, regional plans and treatment guidelines, and the Committee SOP

9.1.10.11.3 Provide interface with other RAC committees, professional associations appropriate to the service line, and the Governor's EMS and Trauma Advisory Council (GETAC).

9.2 Trauma Service Area –E is divided into geographic areas referred to as Zones. NCTTRAC is supportive of member efforts to organize and meet at the local level on specific issues affecting them. The Zones Liaison to the Board of Directors (Zones Liaison) and a Zone Representative for each of the eight (8) geographic zones represent a grassroots discussion of issues affecting the trauma and emergency healthcare systems in that area.

9.2.1 The current Zones are:

9.2.1.1 Zone 1 – Cooke, Grayson, and Fannin counties.

9.2.1.2 Zone 2 – Denton and Wise counties.

9.2.1.3 Zone 3 – Palo Pinto and Parker counties.

9.2.1.4 Zone 4 – Ellis, Kaufman, and Navarro counties.

9.2.1.5 Zone 5 – Collin, Hunt, and Rockwall counties.

9.2.1.6 Zone 6 – Erath, Hood, Johnson, and Somervell counties.

9.2.1.7 Zone 7 – Tarrant County; and

9.2.1.8 Zone 8 – Dallas County.

9.2.2 Zone Meetings are open to any individual who wants to attend the meeting.

9.2.3 Zone Meetings shall occur at least quarterly and follow the guidance provided by the Zones Communications & Reporting SOP.

9.2.4 Each Zone Representative is chosen by vote of the present and eligible voting members of the Zone.

9.2.4.1 Nominations for each Zone Representative shall come from the Zone membership.

9.2.5 Each Zone Representative has the following responsibilities:

9.2.5.1 Serve as the primary liaison between the zone membership, the Zones Liaison, the Board, NCTTRAC Committee, and staff.

9.2.5.2 Report grassroots activity to the Zones Liaison at least quarterly.

9.2.5.3 Represent the collective vote of the members in the Zone.

9.2.5.4 Call or postpone Zone Meetings.

9.2.5.4.1 Further clarification of responsibilities regarding conduct of meetings is found in the Conducting Official Business Meetings SOP.

9.2.5.5 Ensure that timely Zone Representative elections are held as described in the Zone Communication & Reporting SOP.

9.2.6 The Zones Liaison has the following responsibilities:

9.2.6.1 Serve as the primary liaison between each of the eight (8) Zone Representatives and the Board of Directors, NCTTRAC Committees, and staff.

9.2.6.2 Report grassroots activity to the Board of Directors and NCTTRAC's General Membership on a periodic basis as approved by the Board.

9.2.6.3 Represent the collective vote of the Zone Representatives.

9.2.7 Call for removal of, or complaint against, any Zone Representative shall be delegated to the Executive Committee for investigation and recommendation. The recommendation shall be presented to the Board for action.

9.2.8 Zone Representatives shall biannually elect one Zones Liaison to serve on the Board as a voting member. That voting member cannot simultaneously serve as an Officer or Standing Committee/Subcommittee Chair.

9.2.8.1 The Zones Liaison must be a documented representative of a NCTTRAC Member organization in good standing.

ARTICLE X

Fiscal Policies

NCTTRAC shall maintain current, true, and accurate financial records, including all income and expenditures. All records, books, and annual reports of the financial activity of NCTTRAC shall be kept at the principal office of NCTTRAC.

10.1 The fiscal year for NCTTRAC is defined as the first day of September through the last day of August of the following year.

10.2 NCTTRAC shall maintain financial records in accordance with Generally Accepted Accounting Principles (GAAP).

10.3 NCTTRAC provides financial reports in accordance with contract or grant guidance or as otherwise required by law.

10.4 NCTTRAC is a nonprofit organization under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended, as recognized by the Internal Revenue Service. As such, no one individual or entity may profit from the activities of NCTTRAC.

10.5 The Finance Committee in collaboration with NCTTRAC staff prepares an annual budget. The budget is presented for approval to the Board.

10.6 The Board may accept any contribution, gift, bequest, or device for the general purpose or for any special purpose of NCTTRAC in accordance with the Financial Policies and Procedures Manual.

10.7 NCTTRAC may be wound up and terminated by a vote of at least 2/3rds of the voting membership present and voting in accordance with the Texas Business Organizations Code (TBOC). Upon winding up and termination, any eligible existing funds of NCTTRAC shall be distributed to an appropriate organization or entity that shall utilize the funds to continue the mission of NCTTRAC.

10.8 Indemnity and Insurance

10.8.1 NCTTRAC will indemnify its Officers, Directors, employees, and agents to the fullest extent permitted by the TBOC and may, if and to the extent authorized by the Board, indemnify any other person whom it has the power to indemnify against liability, reasonable expense, or any other matter.

10.8.2 As may be provided by specific action of the Board, NCTTRAC may purchase and maintain insurance on behalf of any person who is or was an Officer, Director, employee or agent of NCTTRAC against any liability asserted against him or her and incurred by such person in such a capacity or arising out of his or her status, whether or not NCTTRAC would have the power to indemnify him or her against the liability under this Section.

10.9 Limitation of Liability – An Officer/Director of NCTTRAC shall not be liable to NCTTRAC or its Members for monetary damages arising as a result of an act or omission committed by the Director while acting within his or her capacity as a Director, except that this Section shall not eliminate or limit the liability of a Director for:

10.9.1 Breach of an Officer/Director's duty of loyalty to NCTTRAC or its Members.

10.9.2 An act or omission not in good faith that constitutes a breach of duty of the Officer/Director to NCTTRAC or that involves intentional misconduct or a knowing violation of the law.

10.9.3 A transaction from which an Officer/Director received an improper benefit, whether or not the benefit resulted from an action taken within the scope of the Director's office; or

10.9.4 An act or omission for which the liability of an Officer/Director is expressly provided for by statute.

10.10 Annual Audit – The NCTTRAC Finance Committee shall ensure that an annual audit of NCTTRAC financial records be performed every year by a qualified agency or individual within four months of the end of the fiscal year. The NCTTRAC Finance Committee is responsible for providing full audit findings to the Board of Directors annually.

ARTICLE XI

Parliamentary Authority

11.1 The most current edition of "Robert's Rules of Order" shall be used as a general guide to parliamentary procedure for meetings.

ARTICLE XII

Amendment of Bylaws

12.1 NCTTRAC Bylaws shall be reviewed at least annually.

12.1.1 A Bylaws workgroup, led by the Chair-Elect, shall be assembled for the annual review.

12.1.2 Proposed Bylaws amendments shall be presented at a General Membership Meeting by the Bylaws Workgroup in accordance with the Bylaws.

12.1.3 Copies of proposed Bylaws amendments shall be made available to Members at least 21 days prior to the meeting in which they shall be considered for adoption.

12.1.4 Bylaws amendments, as contained in the notice of such meeting, may be adopted according to the NCTTRAC Membership & Participation SOP.

ARTICLE XIII

Signatures

13.1 These Bylaws shall be effective immediately upon approval by the General Membership and signed and dated by the Secretary unless a later effective date is specified and approved.

ARTICLE XIV

Proxies

14.1 A Voting Member can be represented by proxy.

14.1.1 Such proxy shall be originated and/or signed by the Member's documented Primary Voting Representative and filed with NCTTRAC at least 24 hours prior to the vote as outlined in the Voting & Elections SOP.

14.1.2 Such proxy shall be limited to an individual that represents the same Member organization, agency, or its parent corporation as the Voting Member's Primary Representative assigning proxy.

14.1.3 No individual shall hold more than one proxy at a time unless granted between Members within the same corporation.

14.1.4 No such proxy shall be valid after the expiration of ninety (90) days from the date of its execution or as otherwise specified.

14.2 Voting by proxy is not available for Board Meetings.

ARTICLE XV

Financial Books and Records

15.1 NCTTRAC shall keep true and complete books and records of accounts, together with minutes of the proceedings of the Board.

15.2 The Board shall maintain current, true, and accurate financial records with full and correct entries made with respect to all financial transactions of NCTTRAC, including all income and expenditures.

15.3 All records, books, and annual reports of the financial activity of NCTTRAC shall be kept on NCTTRAC property.

ARTICLE XVI

Transactions of the Organization

16.1 The Executive Director has the authority to enter into contracts or execute and deliver any instrument in the name of and on behalf of NCTTRAC in accordance with the Transactions of the Organization SOP.

16.2 NCTTRAC shall maintain depository accounts to meet the business needs of NCTTRAC including depositing funds as authorized by the Executive Director.

16.3 Check signing authority shall be established in accordance with the Transactions of the Organization SOP.

16.4 The Board may make gifts or contributions on behalf of NCTTRAC in accordance with the Transactions of the Organization SOP and the Financial Policies and Procedures Manual.

16.5 NCTTRAC Officers, Directors, and Committee Chairs Elect shall sign a Code of Ethics acknowledgment and a Conflict-of-Interest statement annually and update as needed.

16.5.1 Individuals are required to disclose any conflict of interest to the Executive Committee of the Board at the time that the conflict is identified as outlined in the Conflict-of-Interest SOP.

16.6 NCTTRAC Members, officers, and staff shall conduct the business of the organization in a manner that is not otherwise prohibited by statute, by the Articles of Incorporation of NCTTRAC, or by these Bylaws.

16.7 Expenditure authority is defined by the Transactions of the Organization SOP.

CERTIFICATE BY SECRETARY

The undersigned, being the Secretary of North Central Texas Trauma Regional Advisory Council, Inc. hereby certifies that the foregoing Bylaws were duly adopted by the Members of said corporation effective on the 14th day of December 2021.

In Witness Whereof, I have signed this certification on this the 14th day of December 2021.

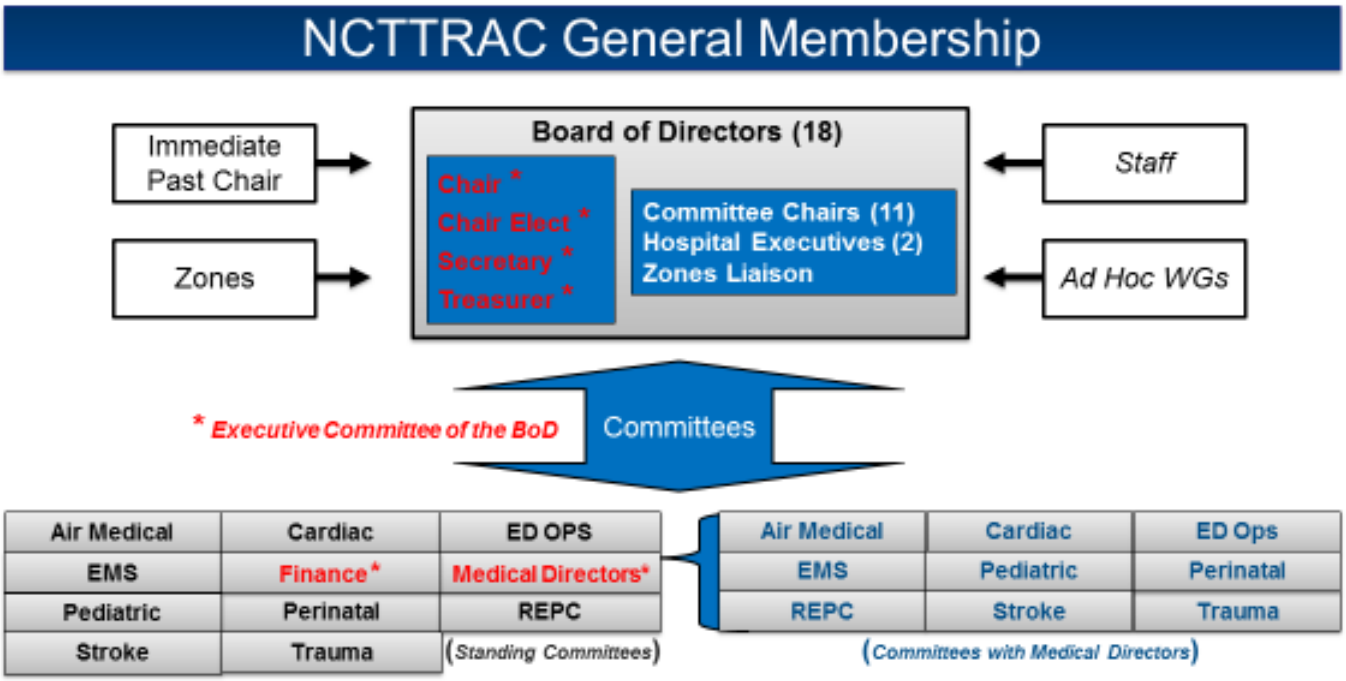
Original Signed by

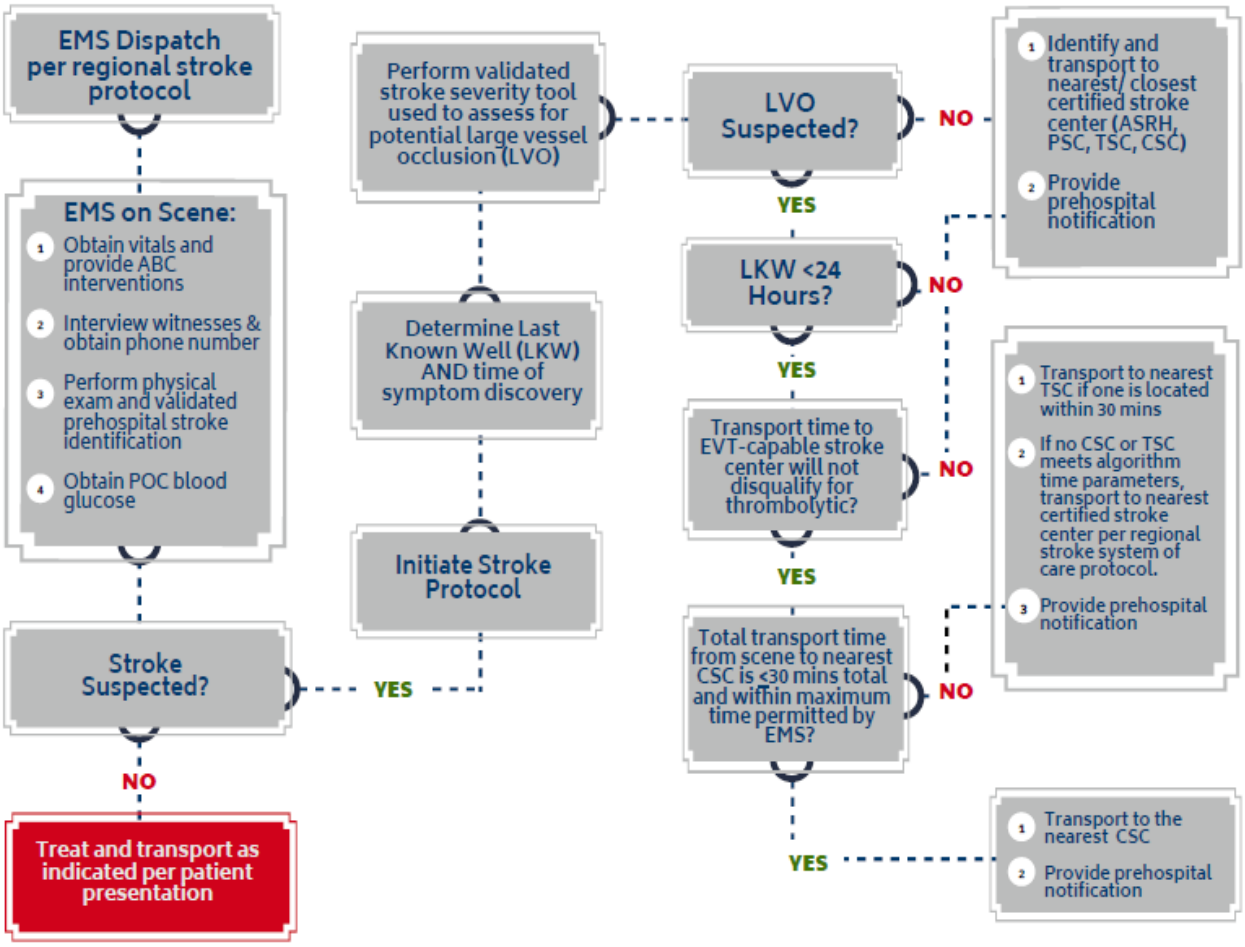
_____
Nakia Rapier, Secretary

NCTTRAC
NORTH CENTRAL TEXAS
TRAUMA REGIONAL ADVISORY COUNCIL

Attachment 1
Governance & Organization Chart

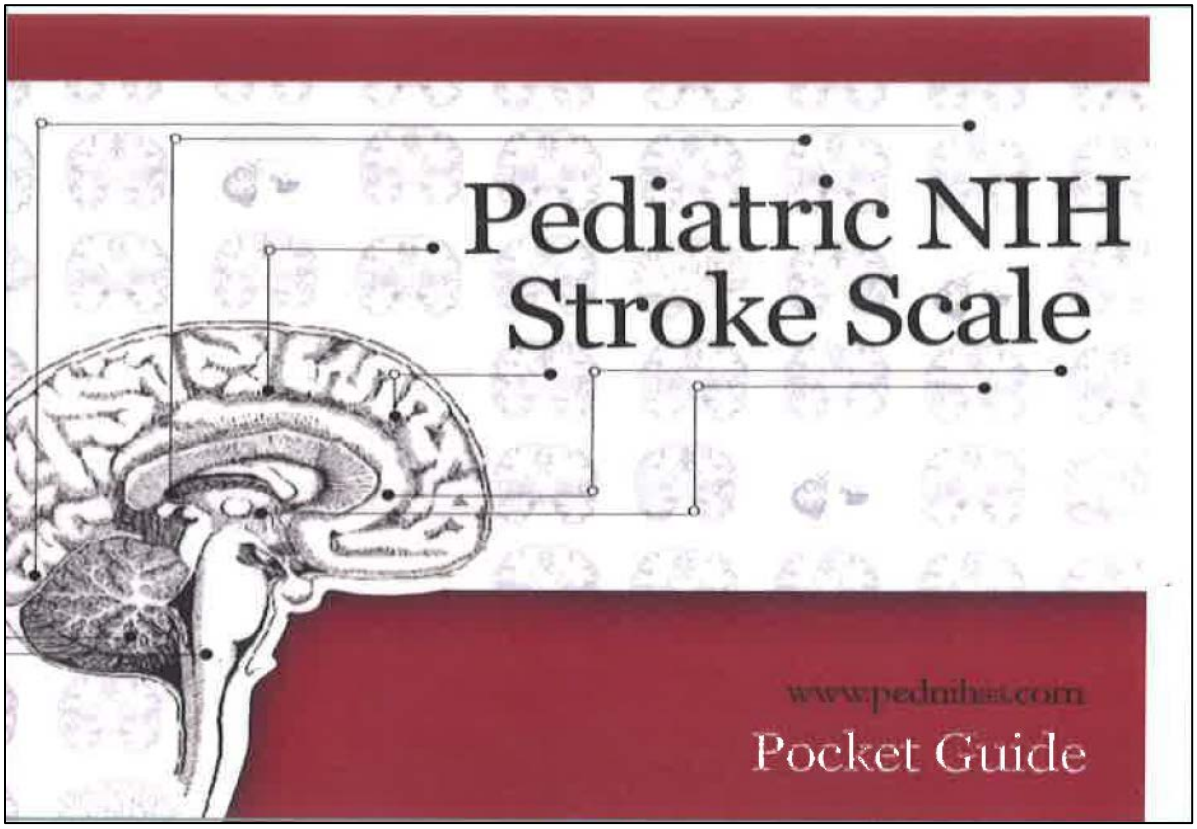
Governance Structure

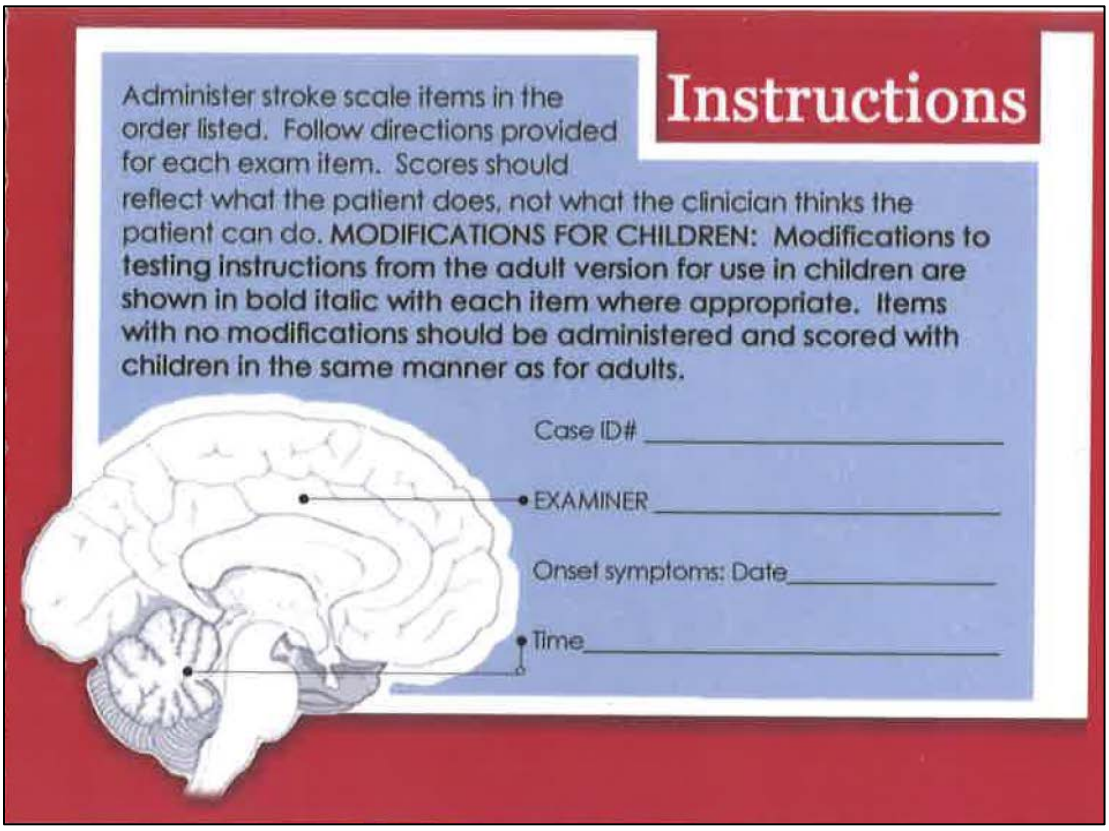


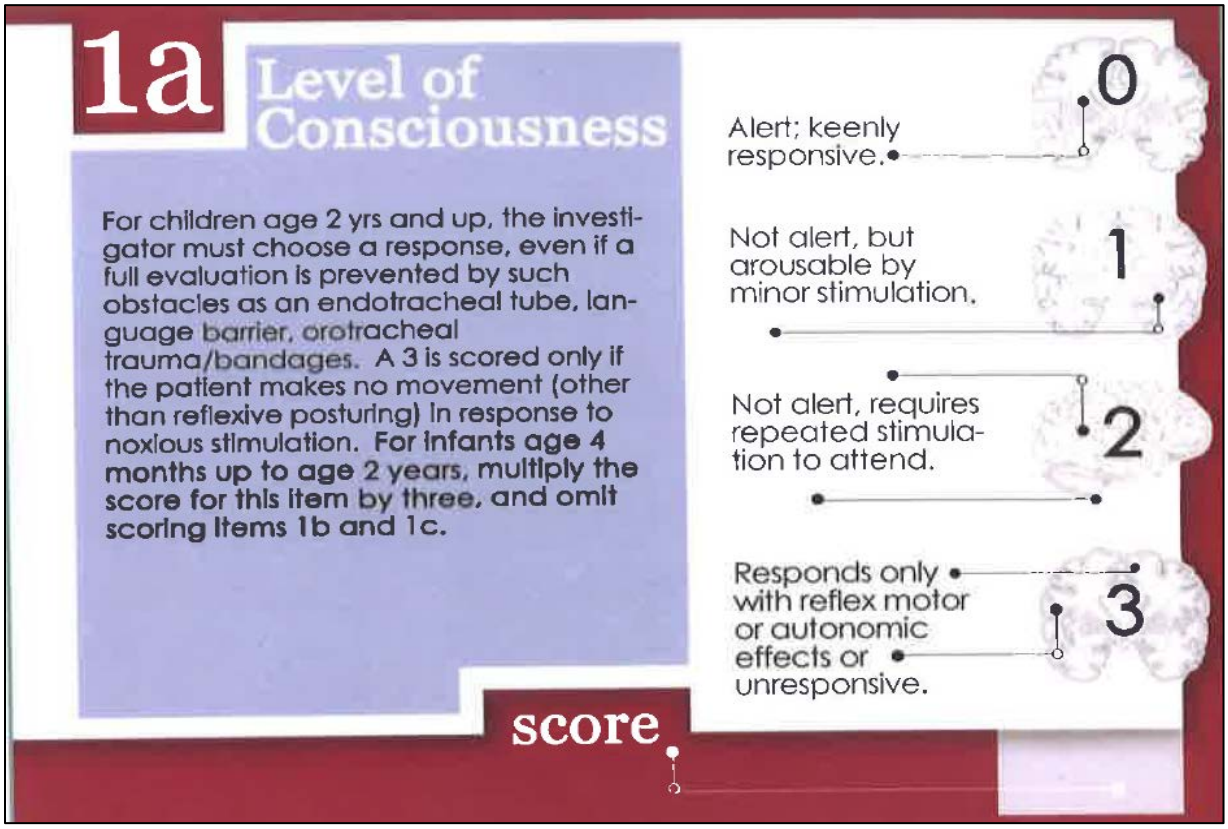


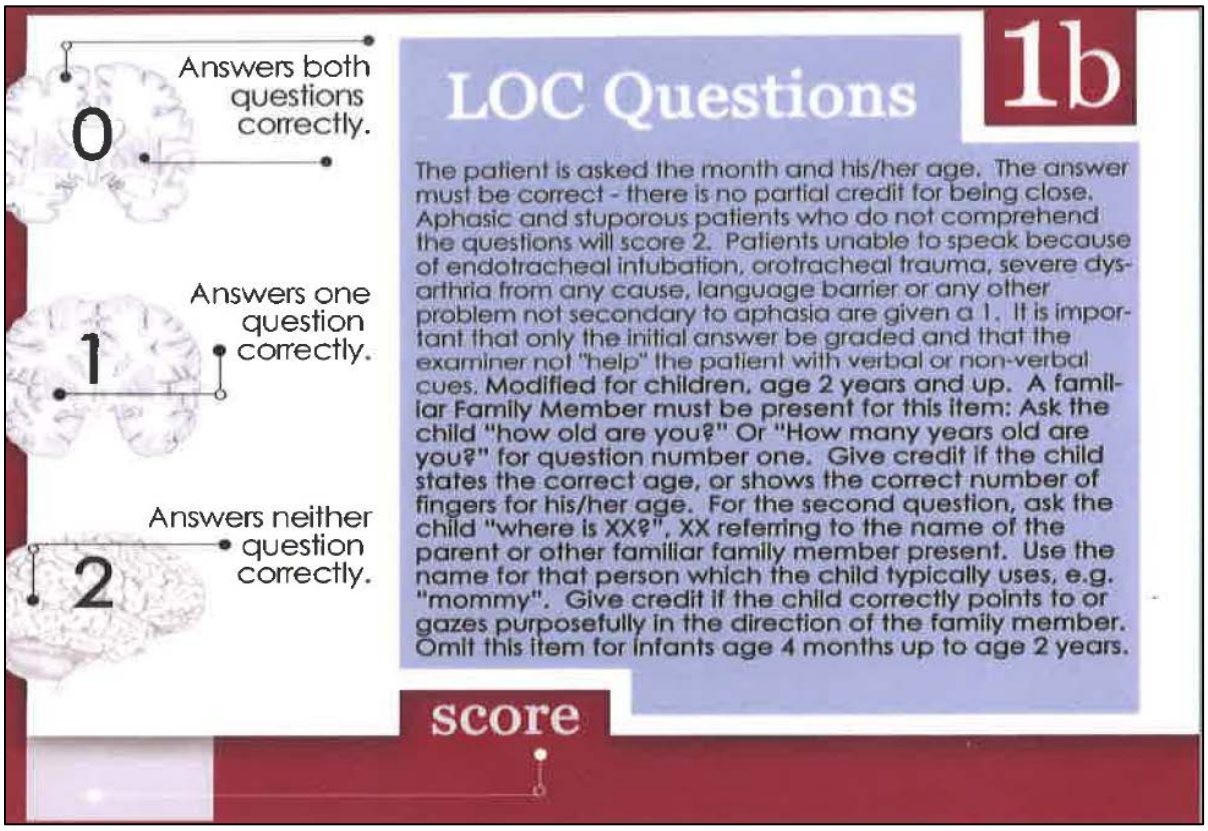
LVO = Large Vessel Occlusion; EVT = Endovascular Thrombectomy; ASRH = Acute Stroke Ready Center; PSC = Primary Stroke Center; TSC = Thrombectomy Stroke Center; Comprehensive Stroke Center; LKW = Last Known Well

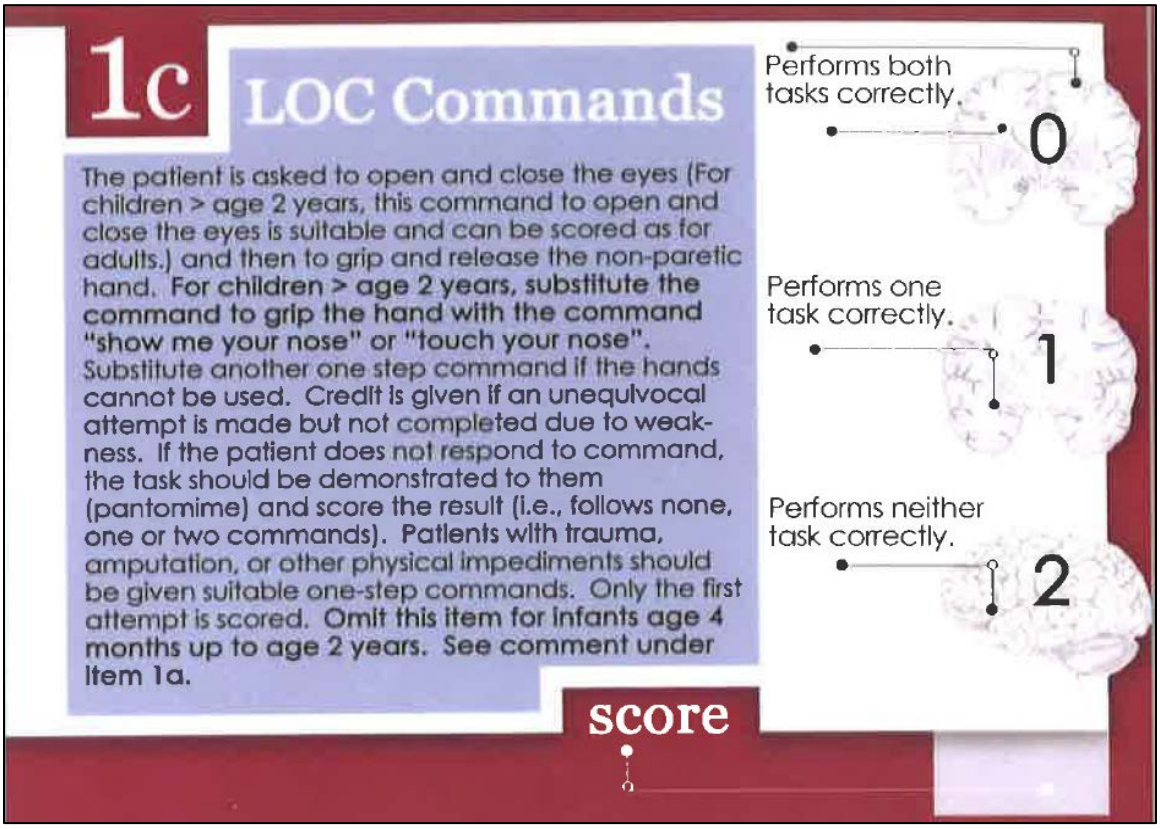
◊ American Heart Association, Mission: Lifeline Stroke

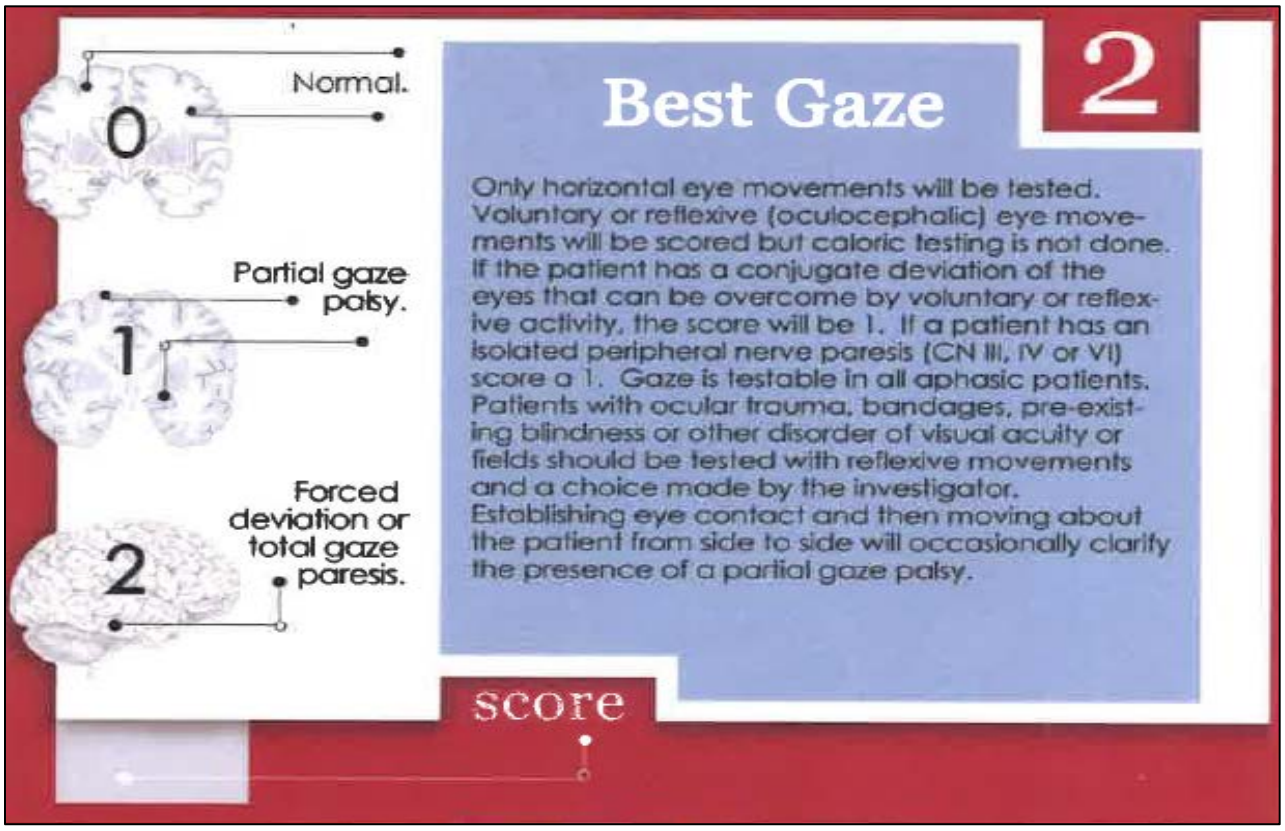

Pediatric NIH
Stroke Scale
www.pednihss.com
Pocket Guide

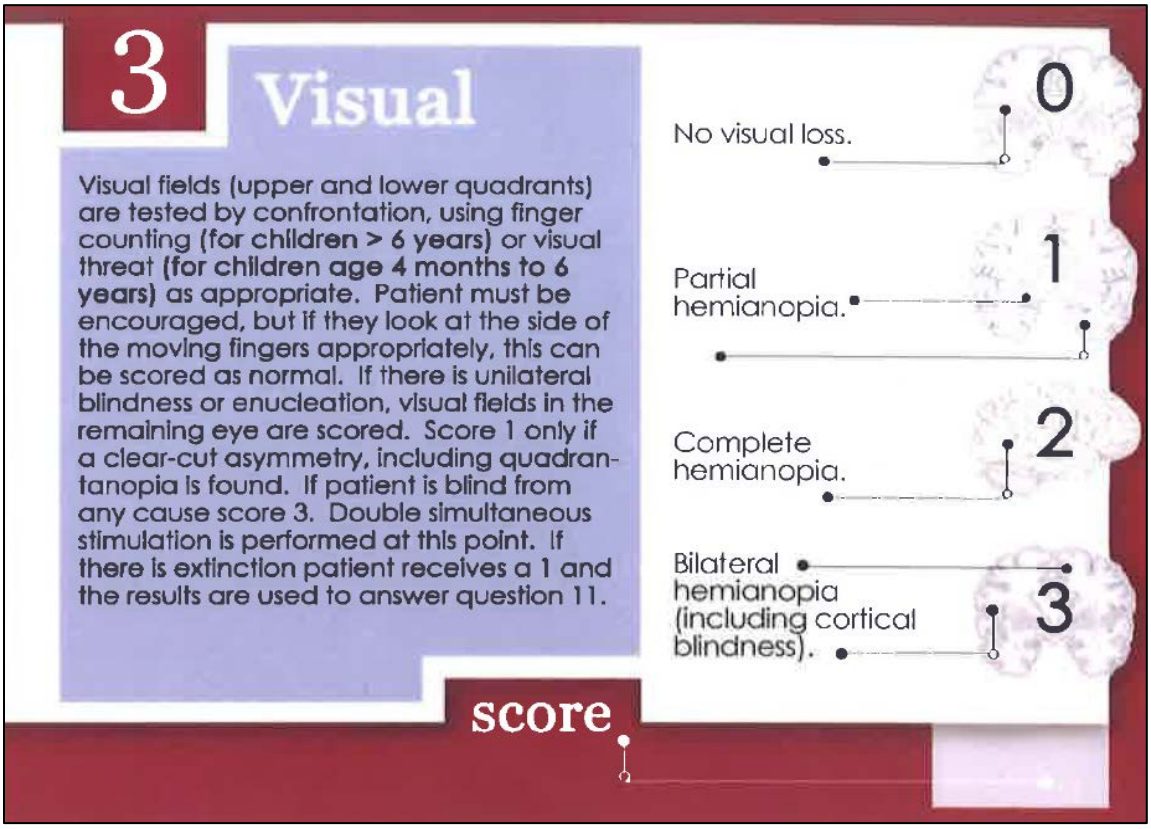

Instructions
Administer stroke scale items in the order listed. Follow directions provided for each exam item. Scores should reflect what the patient does, not what the clinician thinks the patient can do. MODIFICATIONS FOR CHILDREN: Modifications to testing instructions from the adult version for use in children are shown in bold italic with each item where appropriate. Items with no modifications should be administered and scored with children in the same manner as for adults.
Case ID# _____
EXAMINER _____
Onset symptoms: Date _____
Time _____

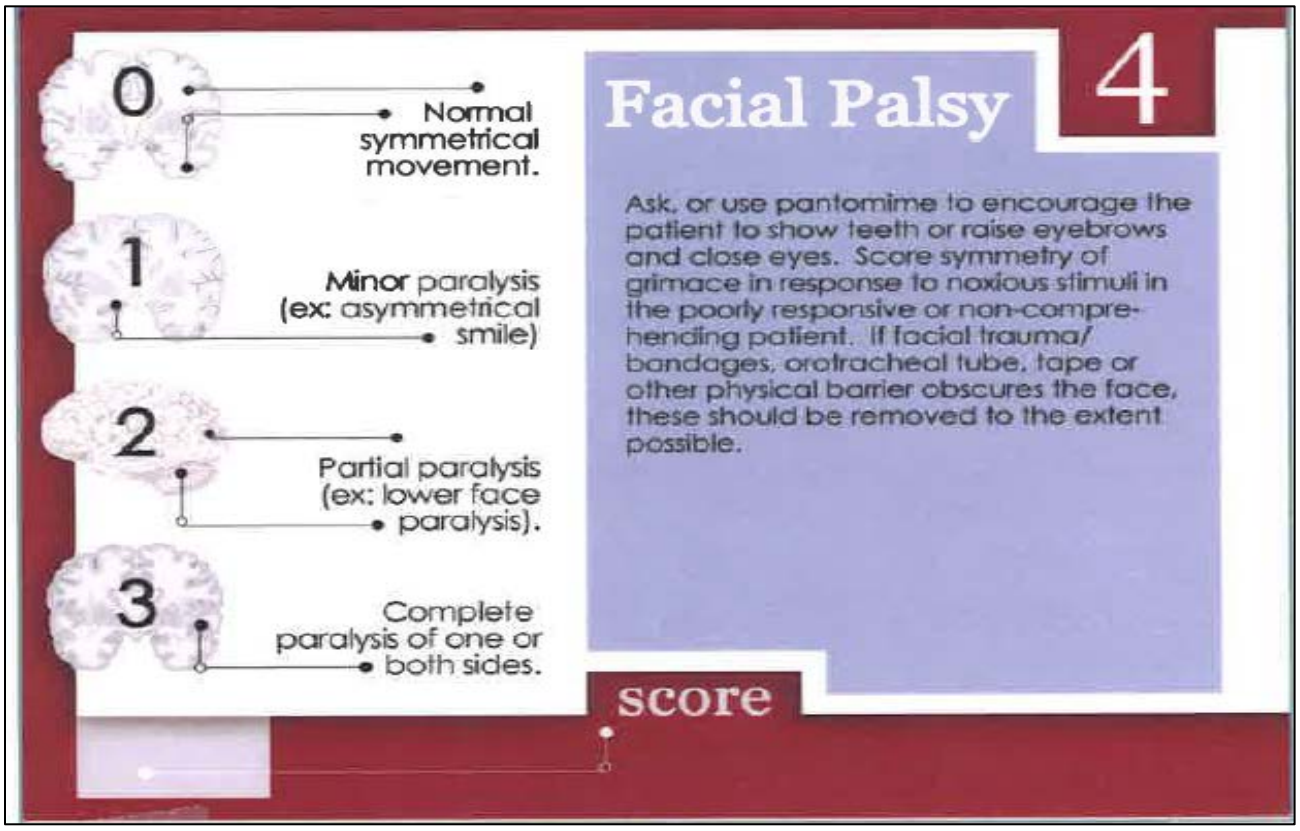

1a
Level of Consciousness
For children age 2 yrs and up, the investigator must choose a response, even if a full evaluation is prevented by such obstacles as an endotracheal tube, language barrier, orotracheal trauma/bandages. A 3 is scored only if the patient makes no movement (other than reflexive posturing) in response to noxious stimulation. For infants age 4 months up to age 2 years, multiply the score for this item by three, and omit scoring items 1b and 1c.
Alert; keenly responsive. 0
Not alert, but arousable by minor stimulation. 1
Not alert, requires repeated stimulation to attend. 2
Responds only with reflex motor or autonomic effects or unresponsive. 3
score

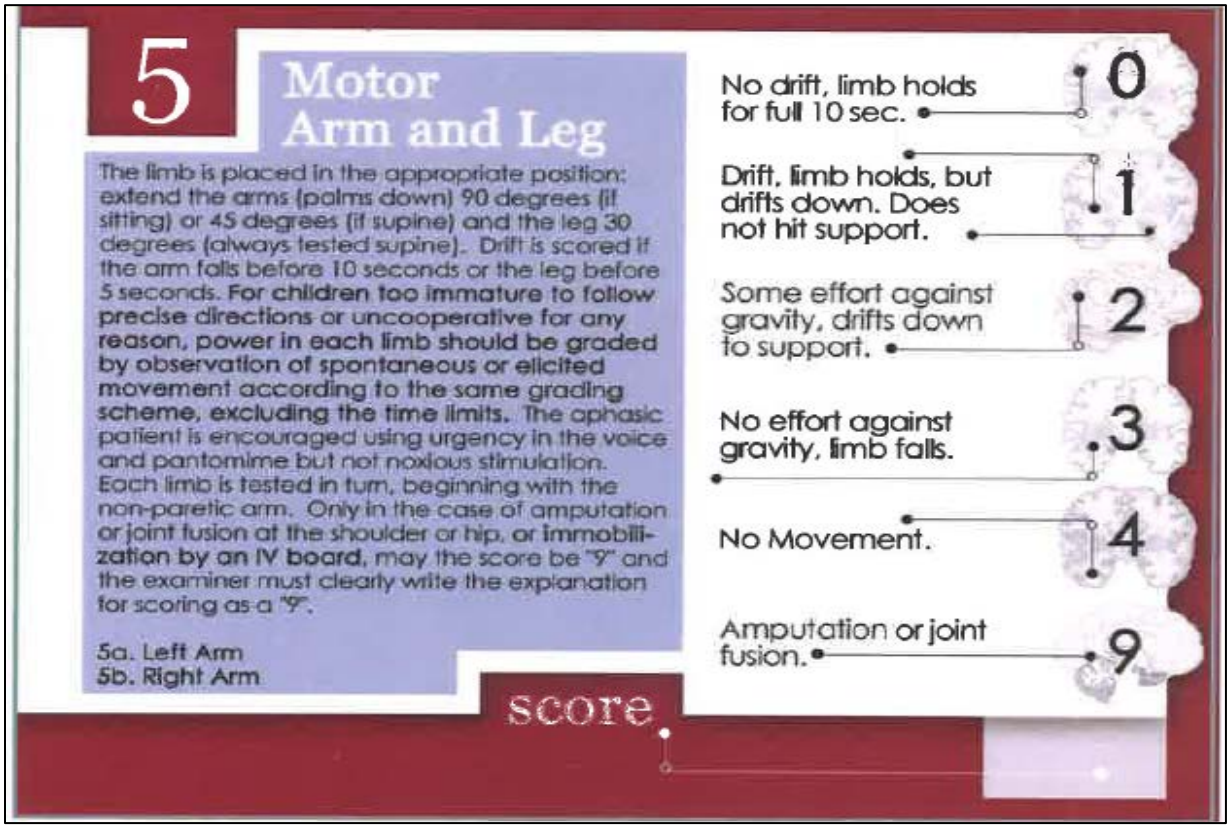

1b
LOC Questions
The patient is asked the month and his/her age. The answer must be correct - there is no partial credit for being close. Aphasic and stuporous patients who do not comprehend the questions will score 2. Patients unable to speak because of endotracheal intubation, orotracheal trauma, severe dysarthria from any cause, language barrier or any other problem not secondary to aphasia are given a 1. It is important that only the initial answer be graded and that the examiner not "help" the patient with verbal or non-verbal cues. Modified for children, age 2 years and up. A familiar Family Member must be present for this item: Ask the child "how old are you?" Or "How many years old are you?" for question number one. Give credit if the child states the correct age, or shows the correct number of fingers for his/her age. For the second question, ask the child "where is XX?", XX referring to the name of the parent or other familiar family member present. Use the name for that person which the child typically uses, e.g. "mommy". Give credit if the child correctly points to or gazes purposefully in the direction of the family member. Omit this item for infants age 4 months up to age 2 years.
0 Answers both questions correctly.
1 Answers one question correctly.
2 Answers neither question correctly.
score


1c
LOC Commands
The patient is asked to open and close the eyes (For children > age 2 years, this command to open and close the eyes is suitable and can be scored as for adults.) and then to grip and release the non-paretic hand. For children > age 2 years, substitute the command to grip the hand with the command "show me your nose" or "touch your nose". Substitute another one step command if the hands cannot be used. Credit is given if an unequivocal attempt is made but not completed due to weakness. If the patient does not respond to command, the task should be demonstrated to them (pantomime) and score the result (i.e., follows none, one or two commands). Patients with trauma, amputation, or other physical impediments should be given suitable one-step commands. Only the first attempt is scored. Omit this item for infants age 4 months up to age 2 years. See comment under Item 1a.
Performs both tasks correctly.
0
Performs one task correctly.
1
Performs neither task correctly.
2
score

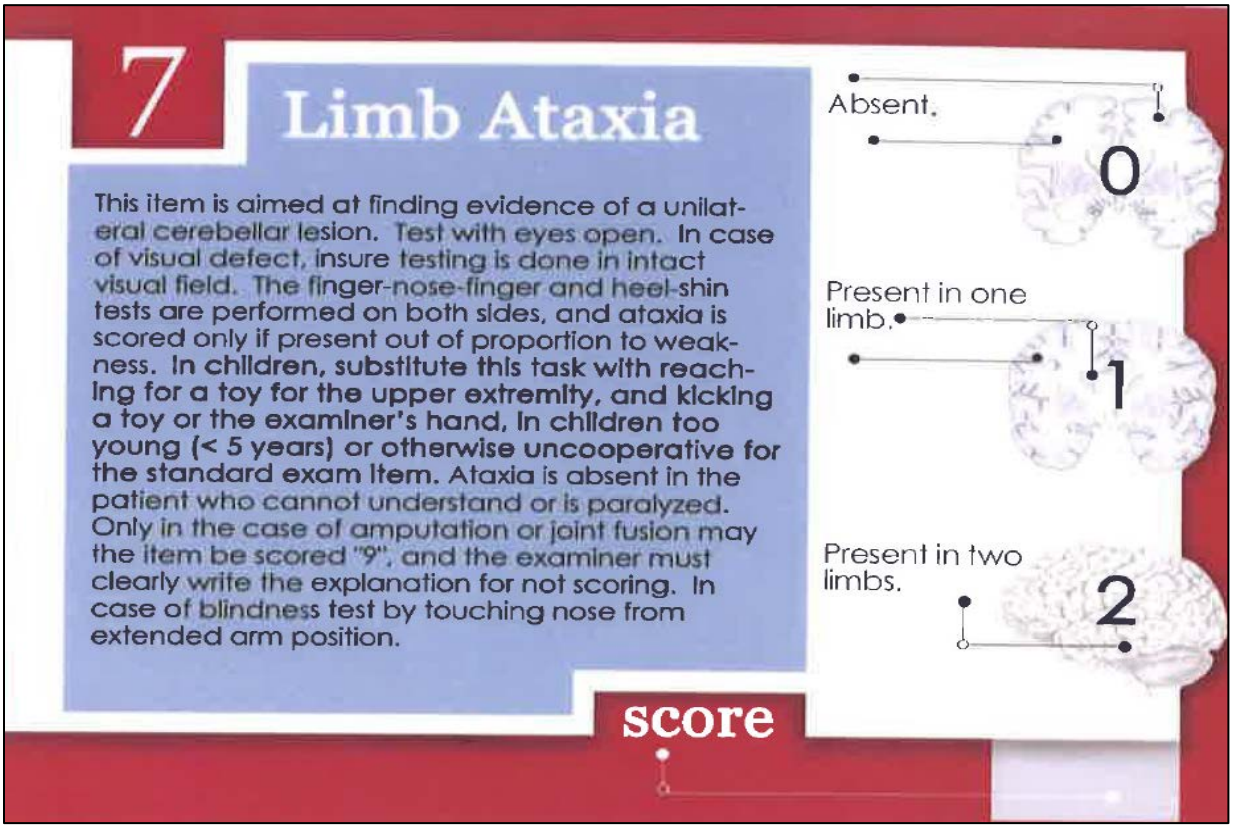

Normal.
0
Partial gaze palsy.
1
Forced deviation or total gaze paresis.
2
Best Gaze
2
Only horizontal eye movements will be tested. Voluntary or reflexive (oculocephalic) eye movements will be scored but caloric testing is not done. If the patient has a conjugate deviation of the eyes that can be overcome by voluntary or reflexive activity, the score will be 1. If a patient has an isolated peripheral nerve paresis (CN III, IV or VI) score a 1. Gaze is testable in all aphasic patients. Patients with ocular trauma, bandages, pre-existing blindness or other disorder of visual acuity or fields should be tested with reflexive movements and a choice made by the investigator. Establishing eye contact and then moving about the patient from side to side will occasionally clarify the presence of a partial gaze palsy.
score

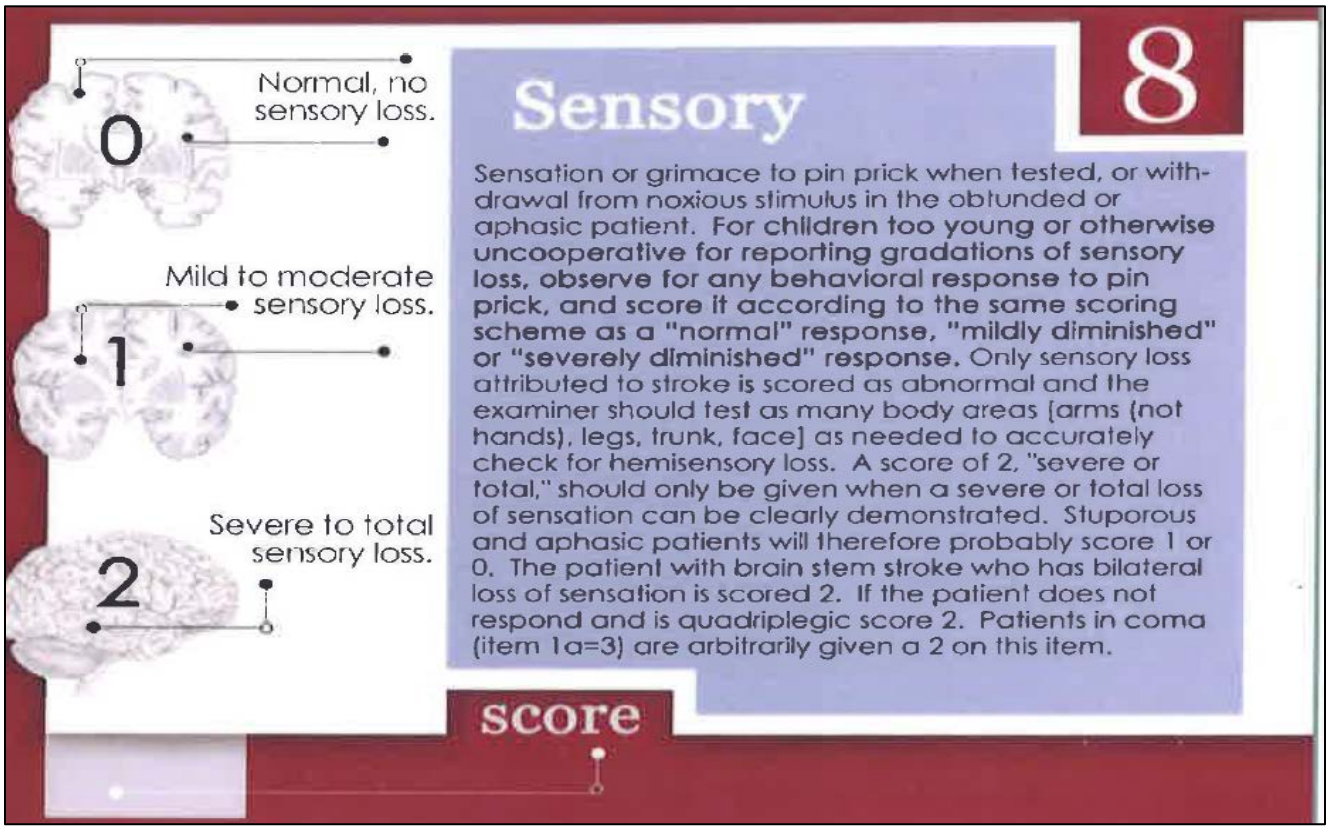

3
Visual
Visual fields (upper and lower quadrants) are tested by confrontation, using finger counting (for children > 6 years) or visual threat (for children age 4 months to 6 years) as appropriate. Patient must be encouraged, but if they look at the side of the moving fingers appropriately, this can be scored as normal. If there is unilateral blindness or enucleation, visual fields in the remaining eye are scored. Score 1 only if a clear-cut asymmetry, including quadrantanopia is found. If patient is blind from any cause score 3. Double simultaneous stimulation is performed at this point. If there is extinction patient receives a 1 and the results are used to answer question 11.
No visual loss. 0
Partial hemianopia. 1
Complete hemianopia. 2
Bilateral hemianopia (including cortical blindness). 3
score


0 Normal symmetrical movement.
1 Minor paralysis (ex: asymmetrical smile)
2 Partial paralysis (ex: lower face paralysis).
3 Complete paralysis of one or both sides.
Facial Palsy
4
Ask, or use pantomime to encourage the patient to show teeth or raise eyebrows and close eyes. Score symmetry of grimace in response to noxious stimuli in the poorly responsive or non-comprehending patient. If facial trauma/ bandages, orotracheal tube, tape or other physical barrier obscures the face, these should be removed to the extent possible.
score

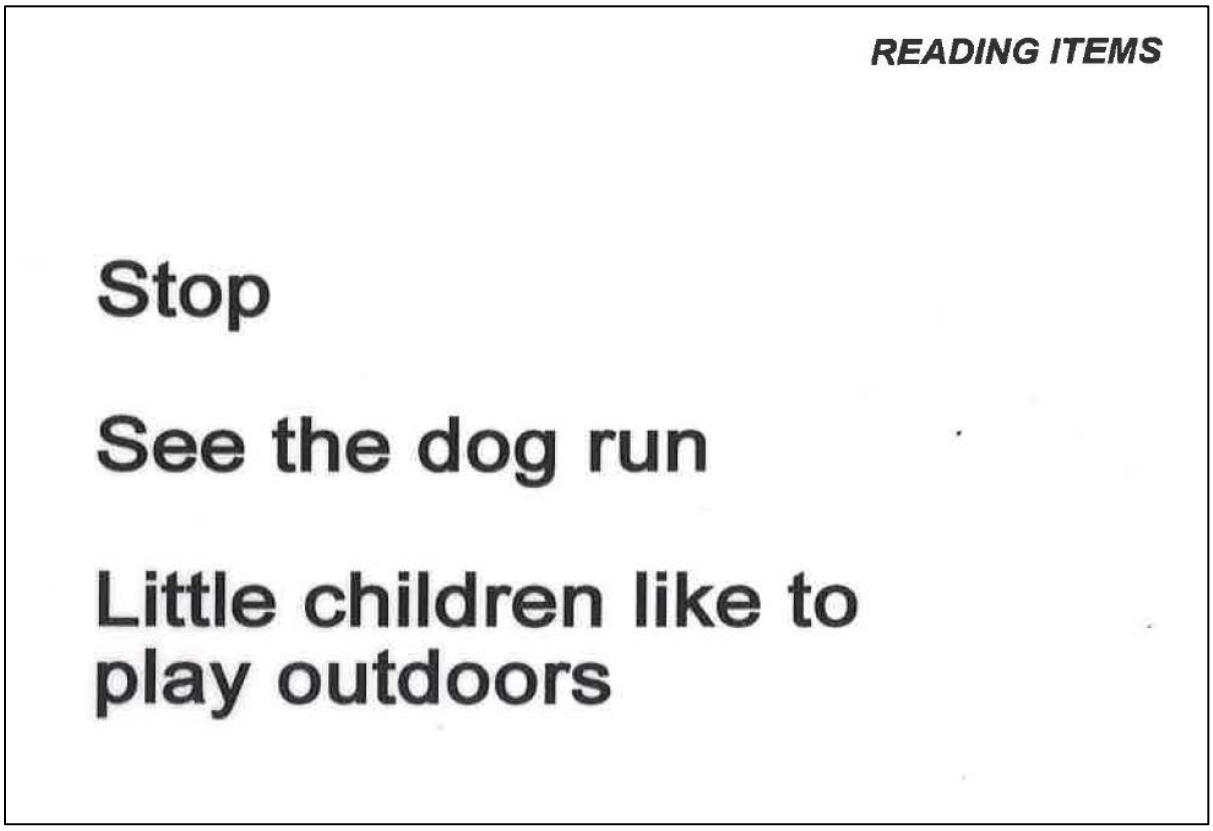

5
Motor
Arm and Leg
The limb is placed in the appropriate position: extend the arms (palms down) 90 degrees (if sitting) or 45 degrees (if supine) and the leg 30 degrees (always tested supine). Drift is scored if the arm falls before 10 seconds or the leg before 5 seconds. For children too immature to follow precise directions or uncooperative for any reason, power in each limb should be graded by observation of spontaneous or elicited movement according to the same grading scheme, excluding the time limits. The aphasic patient is encouraged using urgency in the voice and pantomime but not noxious stimulation. Each limb is tested in turn, beginning with the non-paretic arm. Only in the case of amputation or joint fusion at the shoulder or hip, or immobilization by an IV board, may the score be "9" and the examiner must clearly write the explanation for scoring as a "9".
5a. Left Arm
5b. Right Arm
No drift, limb holds for full 10 sec. 0
Drift, limb holds, but drifts down. Does not hit support. 1
Some effort against gravity, drifts down to support. 2
No effort against gravity, limb falls. 3
No Movement. 4
Amputation or joint fusion. 9
score


0 No drift, leg holds 30 degrees for full 5 sec.
1 Drift, leg falls, but does not hit bed.
2 Some effort against gravity, falls and hits bed.
3 No effort against gravity, leg falls immediately.
4 No Movement.
9 Amputation or joint fusion.
Motor
Arm and Leg
6
The limb is placed in the appropriate position: extend the arms (palms down) 90 degrees (if sitting) or 45 degrees (if supine) and the leg 30 degrees (always tested supine). Drift is scored if the arm falls before 10 seconds or the leg before 5 seconds. For children too immature to follow precise directions or uncooperative for any reason, power in each limb should be graded by observation of spontaneous or elicited movement according to the same grading scheme, excluding the time limits. The aphasic patient is encouraged using urgency in the voice and pantomime but not noxious stimulation. Each limb is tested in turn, beginning with the non-paretic arm. Only in the case of amputation or joint fusion at the shoulder or hip, or immobilization by an IV board, may the score be "9" and the examiner must clearly write the explanation for scoring as a "9".
6a. Left Leg
6b. Right Leg
score


7
Limb Ataxia
This item is aimed at finding evidence of a unilateral cerebellar lesion. Test with eyes open. In case of visual defect, insure testing is done in intact visual field. The finger-nose-finger and heel-shin tests are performed on both sides, and ataxia is scored only if present out of proportion to weakness. In children, substitute this task with reaching for a toy for the upper extremity, and kicking a toy or the examiner's hand. In children too young (< 5 years) or otherwise uncooperative for the standard exam item. Ataxia is absent in the patient who cannot understand or is paralyzed. Only in the case of amputation or joint fusion may the item be scored "9", and the examiner must clearly write the explanation for not scoring. In case of blindness test by touching nose from extended arm position.
Absent.
0
Present in one limb.
1
Present in two limbs.
2
score


8
Sensory
Sensation or grimace to pin prick when tested, or withdrawal from noxious stimulus in the obtunded or aphasic patient. For children too young or otherwise uncooperative for reporting gradations of sensory loss, observe for any behavioral response to pin prick, and score it according to the same scoring scheme as a "normal" response, "mildly diminished" or "severely diminished" response. Only sensory loss attributed to stroke is scored as abnormal and the examiner should test as many body areas (arms (not hands), legs, trunk, face) as needed to accurately check for hemisensory loss. A score of 2, "severe or total," should only be given when a severe or total loss of sensation can be clearly demonstrated. Stuporous and aphasic patients will therefore probably score 1 or 0. The patient with brain stem stroke who has bilateral loss of sensation is scored 2. If the patient does not respond and is quadriplegic score 2. Patients in coma (item 1a=3) are arbitrarily given a 2 on this item.
0
Normal, no sensory loss.
1
Mild to moderate sensory loss.
2
Severe to total sensory loss.
score


9
Best Language
A great deal of information about comprehension will be obtained during the preceding sections of the examination. For children age 6 years and up with normal language development before onset of stroke: The patient is asked to describe what is happening in the attached, to name the items on the attached naming sheet (see pictures used in the STOP study, attached), and to read from the attached list of sentences (see the list of words/phrases from the STOP study; or who premorbid were known to be unable to read). Comprehension is judged from responses here as well as to all of the commands in the preceding general neurological exam. If visual loss interferes with the tests, ask the patient to identify objects placed in the hand, repeat, and produce speech. The intubated patient should be asked to write. The patient in coma (question 1a=3) will arbitrarily score 3 on this item. The examiner must choose a score in the patient with stupor or limited cooperation but a score of 3 should be used only if the patient is mute and follows no one step commands. For children age 2 yrs to 6 yrs (or older children with premorbid language disability), score this item based on observations of language comprehension and speech during the preceding examination. For infants age 4 months to 2 years, score for auditory alerting and orienting responses.
score
Children 2y and up:
Infants 4m to 2y:
No aphasia, normal.
Alerts to sound and orients visually.
0
Mild to moderate aphasia.
1
Severe aphasia.
Alerts to sound, but without spacial orientation.
2
Mute, global aphasia.
Does not alert to sound.
3

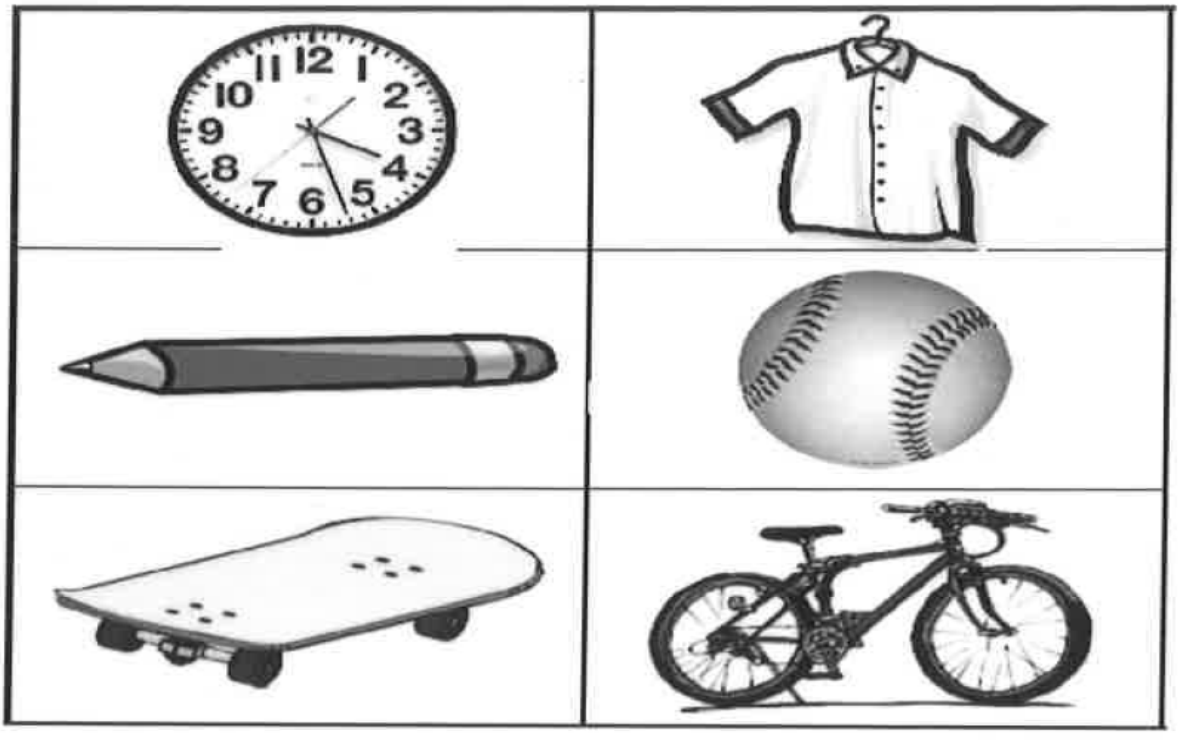

READING ITEMS
Stop
See the dog run
Little children like to play outdoors

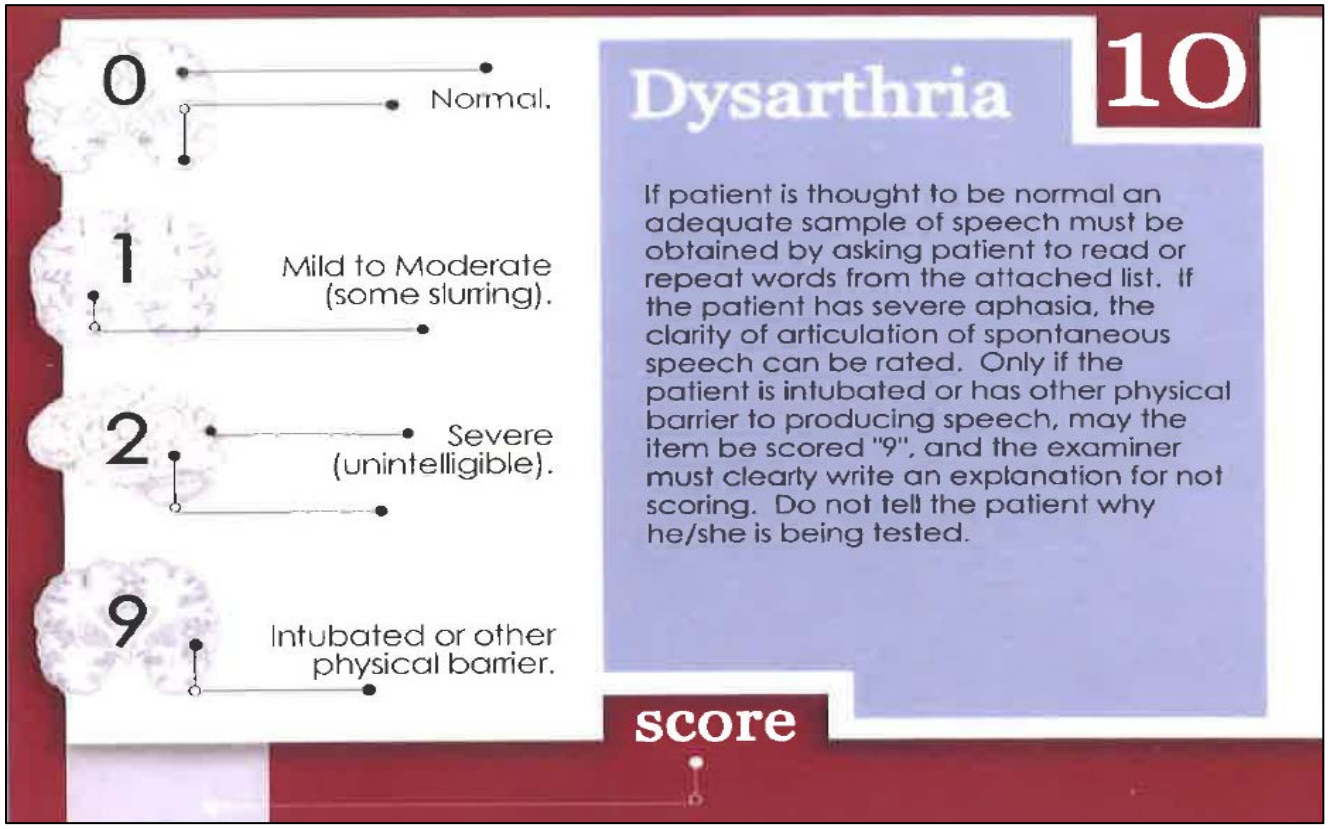
REPETITION ITEMS

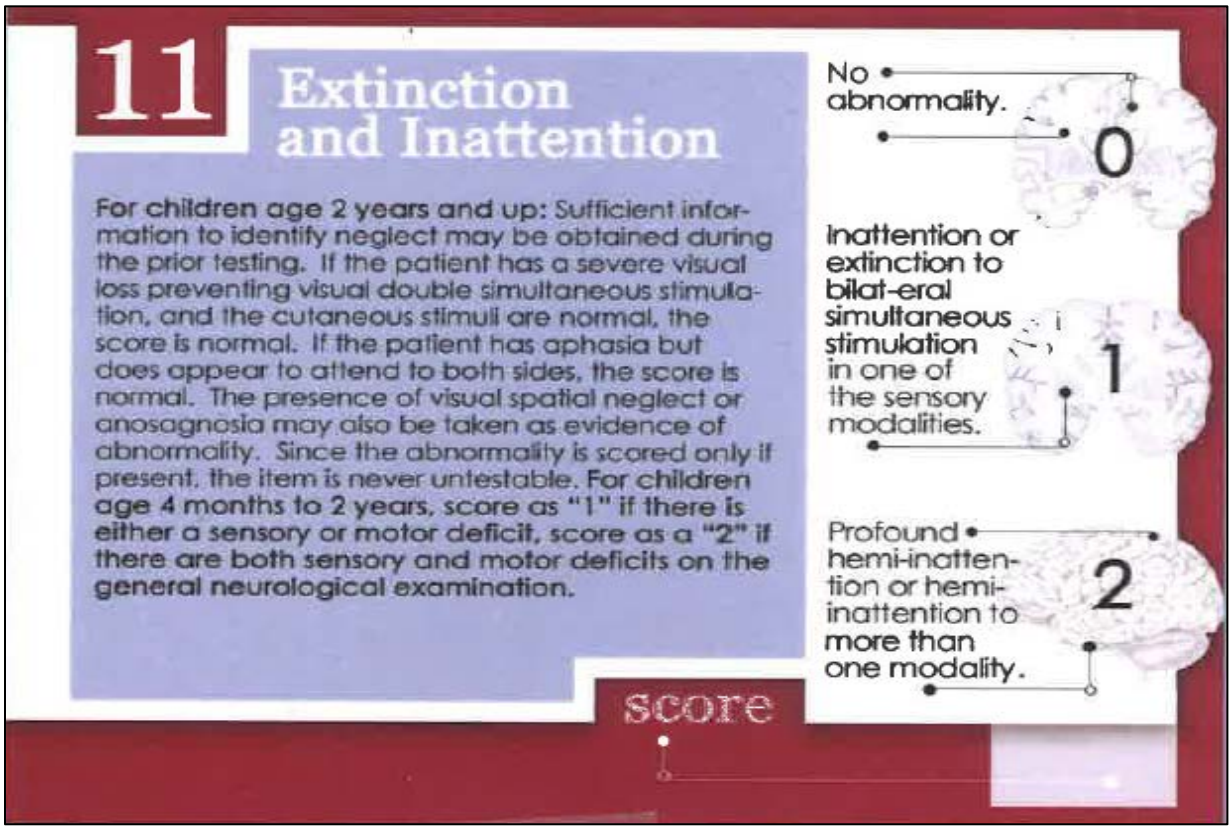
STOP
STOP AND GO
IF IT RAINS WE PLAY INSIDE
LITTLE CHILDREN LIKE TO PLAY OUTDOORS

MAMA
TIP-TOP
FIFTY-FIFTY
THANKS
HUCKLEBERRY
BASEBALL PLAYER

NAMING ITEMS



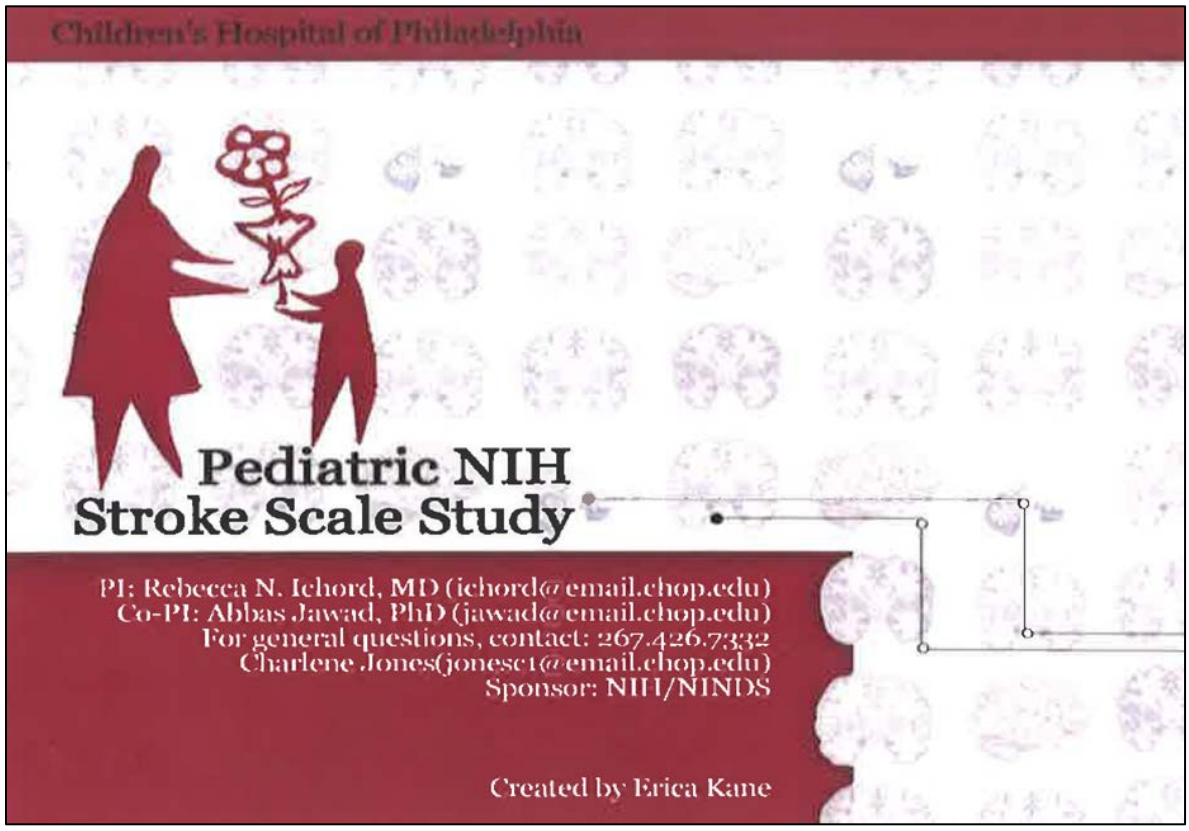

10
Dysarthria
If patient is thought to be normal an adequate sample of speech must be obtained by asking patient to read or repeat words from the attached list. If the patient has severe aphasia, the clarity of articulation of spontaneous speech can be rated. Only if the patient is intubated or has other physical barrier to producing speech, may the item be scored "9", and the examiner must clearly write an explanation for not scoring. Do not tell the patient why he/she is being tested.
0 Normal.
1 Mild to Moderate (some slurring).
2 Severe (unintelligible).
9 Intubated or other physical barrier.
score


11
Extinction and Inattention
For children age 2 years and up: Sufficient information to identify neglect may be obtained during the prior testing. If the patient has a severe visual loss preventing visual double simultaneous stimulation, and the cutaneous stimuli are normal, the score is normal. If the patient has aphasia but does appear to attend to both sides, the score is normal. The presence of visual spatial neglect or anosagnosia may also be taken as evidence of abnormality. Since the abnormality is scored only if present, the item is never untestable. For children age 4 months to 2 years, score as "1" if there is either a sensory or motor deficit, score as a "2" if there are both sensory and motor deficits on the general neurological examination.
No abnormality. 0
Inattention or extinction to bilat-eral simultaneous stimulation in one of the sensory modalities. 1
Profound hemi-inatten-tion or hemi-inattention to more than one modality. 2
score

PedNIHSS Scoring Guidelines for Coma or Death

- Coma due to illness: Score as per the table, 9 means not testable, do not include in final total score
- Iatrogenic coma due to sedatives: Perform and score the exam according to directions per item. Annotate the data to indicate the patient is comatose.
- Coma due to paralytics or pharmacologic-induced coma to EEG burst suppression: Everything should be marked as not testable, and should not be marked as 0 (indicates a normal score)
- Death: Impute the maximal score of 42.

Item#	Give this score:
1a	3
1b	2
1c	2
2	Evaluate and score
3	3
4	3
5a	4
5b	4
6a	4
6b	4
7	0
8	2
9	3
10	9
11	0
Total	Btw 34-36 depending on best gaze



1. Background

1.1 The North Central Texas Trauma Regional Advisory Council (NCTTRAC) is an organization designed to facilitate the development, implementation, and operation of a comprehensive trauma care system based on accepted standards of care to decrease morbidity and mortality. The Air Medical Committee for the North Central Texas Trauma Regional Advisory Council is a standing committee that provides recommendations and guidance for air medical operations in the Trauma Service Area - E (TSA-E). It is the mission of the Air Medical Committee to promote safe, ethical, and high-quality patient care during air medical transport for the citizens of Texas.

1.2 The purpose of a Regional Advisory Council (RAC) is to develop, implement, and monitor a regional emergency medical service trauma system plan within a TSA. A RAC is an organized group of healthcare entities and other concerned citizens who have an interest in improving and organizing trauma care within a specified Trauma Service Area. RAC membership may include hospitals, physicians, nurses, EMS providers, rehabilitation facilities, dispatchers, as well as other community groups. The Regional Advisory Council's objectives are to reduce the incidence of trauma through education, data collection and analysis, and performance improvement. This is accomplished by providing educational programs and conducting performance improvement efforts that provide every provider guidance and motive to reduce the incidence of trauma as well as improve the outcome of trauma patients.

2. Purpose

2.1 The purpose of this document is to:

- 2.1.1 Define the system established by the TSA-E Air Medical programs to assist EMS ground providers and facilitate requesting the closest appropriate aircraft for the patient in need
- 2.1.2 Describe the review request process and specific indicators for systems performance improvement
- 2.1.3 Improve patient care, and collaboration, and foster a community partnership for all stakeholders within the RAC

3. Desired Outcomes

3.1 The desired outcome is to request the closest appropriate aircraft and integrate air medical providers into the RAC System Performance Improvement (SPI) process. This provides a platform for concerns regarding air medical services to be identified, addressed, and provided a mechanism for loop closure within the Regional Advisory Council. This should occur when they are unsuccessful in being addressed among corporate entities. The intent is not to replace interworking collaboration among Air Medical and EMS services or care facilities.

- 3.1.1 Concerns regarding the air medical service(s) may include safety, patient care, dispatching, or membership services.
- 3.1.2 The Air Medical Committee recommends that the evaluation of the appropriate use of a helicopter rest with the requesting organization.
- 3.1.3 Performance improvement may include, educational initiatives, process improvement plans, and/or recommendations from the NCTTRAC and/or GETAC Air Medical Committees.

4. Process to Locate, Request, Communicate, And Improve Air Medical Services

4.1 EMResource is a software system that will publish all aircraft in TSA-E, their location, and availability. You can view this in a list or map view.

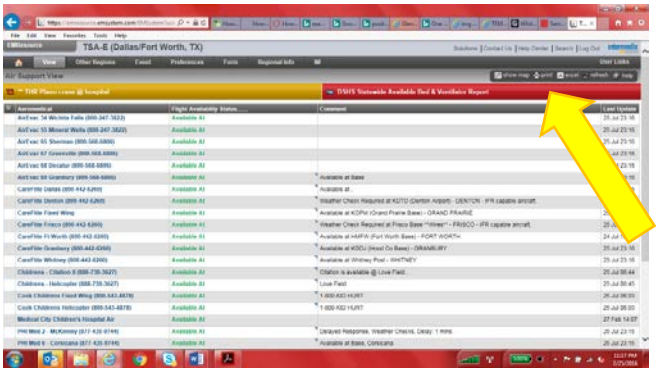
4.2 Obtain a facility or personal login by creating a support ticket with NCTTRAC
- 4.2.1 Go to https://www.ncttrac.org/
- 4.2.2 On the bottom right select Create A Helpdesk Ticket
- 4.2.3 Start a Ticket
- 4.2.4 Choose "Support – Other"
- 4.2.5 Then fill in the needed fields and state that your agency needs a log in for EMResource

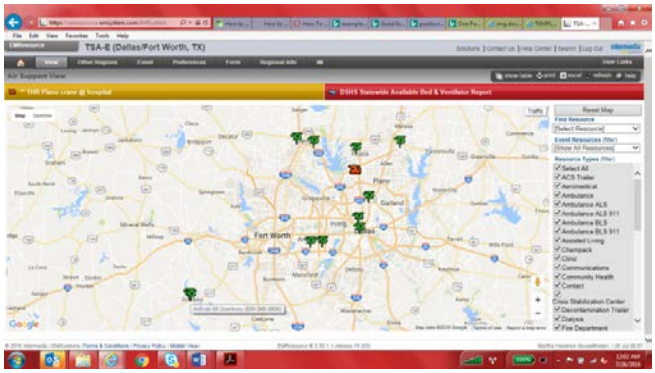
4.3 Once Log In is attained, go to https://emresource.emsystem.com/login.htm

4.4 You will see a list of area helicopters, hospitals, EMS and their status (set up a preferred view and notifications so the system is what you need).

4.5 Find the table view and list of helicopters (pictured below on the left). It will state in GREEN "Available at" if available for a call and the location (usually "at base") or RED "Unavailable" if on a flight or out of service for a Maintenance Event.

4.6 Change and set the helicopter map view as your preference (yellow arrow indicates where to change the view, the map view is pictured below on the right). It is a very quick view with the helicopters mapped in their locations (hovering over or clicking on the icon will identify the aircraft). They are colored for their availability:
- GREEN=Available
- RED=Unavailable for a patient flight





4.7 All aircraft in your area can be viewed and you will be able to identify the closest available aircraft to your location and call the appropriate provider.

4.8 Radio communication for Ground to Air, will occur utilizing the preferred contact method and channel as designated by the requesting ground agency, either at the time of the activation or through prearranged channel designation with the Air Provider. In the event of a disaster or MCI situation, the Texas Statewide Interoperability Channel Plan should be implemented. This plan states that radio communication from Ground to air, authorized by the Texas Government Code and regulated by the FCC, is to be performed on radio channel VMED 28. (see below)

Label	Receive	Transmit	Station Class	CTCSS RX /TX	Use
VMED28	155.3400	155.3400	FBT / MO	CSQ / 156.7	Tactical Channel (and for Air-to-Ground use)

4.9 Air Medical Indicators to be referred to SPI Committee if not met:
- 4.9.1 Air Medical Services will provide a launch location of the aircraft responding
- 4.9.2 Air Medical Providers participating in the NCTTRAC are operating on EMResource tracking map, updating and refreshing the aircraft current positions at least every 3 minutes.
- 4.9.3 ETE (flight time only) will not exceed 5 minutes past time given
- 4.9.4 ETA (includes lift time) will not exceed 5 minutes past time given
- 4.9.5 Air Medical Services scene times will not exceed 20 minutes (does not include specialty teams)
- 4.9.6 Air Medical Services inter-facility transfer times will not exceed 40 minutes (does not include specialty teams)
- 4.9.7 Provide air medical transport response for inter-facility trauma patients within 60 minutes of the time of the request

4.10 If an indicator falls outside of the above parameters, the event may be submitted to the NCTTRAC SPI Committee for review, and it may be referred from SPI to the appropriate Committee and Individual Provider for action.

4.11 Process for requesting reviews and/or reporting concerns to the SPI Committee:
- 4.11.1 Go to https://www.ncttrac.org/
- 4.11.2 On the bottom right select Create A Helpdesk Ticket
- 4.11.3 Start a Ticket
- 4.11.4 Choose “Member – SPI Referral Form Request”
- 4.11.5 Then fill in the necessary fields. Be as specific as possible to allow for a sufficient review.

1. Introduction

1.1 Purpose

1.1.1 The TSA-E Regional EMResource Policies and Procedures document dictates EMResource use in Trauma Service Area E. It defines relevant terms, lays out how resources are organized, describes how the application is administered, defines the status types and their status options, and identifies system performance measures for both individual organizations and regional use.

1.2 Administrative Support

1.2.1 The TSA-E Regional EMResource Policies and Procedures document will be reviewed and updated annually. All revisions and review activities will be noted in the Record of Changes in the front of the document.

2. EMResource Overview

2.1 EMResource General Concept of Operations

2.1.1 EMResource serves as the primary day-to-day information sharing platform in the emergency healthcare system within Trauma Service Area E. It has 3 central functions:

2.1.1.1 Capabilities Database

2.1.1.2 Daily Status Updates

2.1.1.3 Event Notifications

2.2 Capabilities Database

2.2.1 EMResource allows healthcare facilities and EMS agencies to list their normal operating capabilities. For healthcare facilities, these typically involve clinical service provision – can this facility take burn patients, does it have inpatient psychiatric capabilities, etc. For EMS agencies, these typically involve response capabilities – can this EMS agency provide critical care transport services, can it perform swift water rescues, etc. Service capabilities are generally updated on an as-needed basis as opposed to on a regular schedule.

2.3 Daily Status Updates

2.3.1 EMResource allows hospitals to update certain statuses daily (or more frequently as needed). This ensures that EMS agencies transporting patients and other healthcare facilities looking to transfer patients can make well-informed patient destination decisions. Statuses with daily (or more frequent) update requirements are listed below.

2.3.1.1 Hospital Intake Status – hospitals report on the current status of their Emergency Department's ability to take patients. An "Open" status should be updated every 24 hours; an "Advisory - Capability" status should be updated every 4 hours; a "Closed" status or "Advisory – ED Surge" status should be updated every 2 hours.

2.3.1.2 NEDOCS – hospitals use the National Emergency Department Overcrowding Score to provide regional partners with a quantifiable ED saturation level. The higher the NEDOCS, the busier the ED, and generally the longer that EMS will have to wait to offload a patient. NEDOCS should be updated every 6 hours.

2.3.1.3 ED Psych Holds – hospitals report the number of psych holds in their Emergency Department. This allows emergency response units transporting psychiatric patients to make informed patient destination decisions that ensure the psychiatric patient receives treatment in a timely manner. The more ED Psych Holds, the longer it will take for that psychiatric patient to receive proper treatment.

2.3.1.4 Bed Availability Reporting – hospitals report the number of available beds in their facility according to the state and federal hospital bed reporting requirements. These numbers should be updated at least once every 24 hours – since March 2020, there have been federal and state requirements for hospitals to update this information every 24 hours.

2.3.1.5 Flight Availability Status – air medical units report on their availability and location. Air Evac, PHI, and Careflite have linked their CAD systems with EMResource to ensure that these updates occur in real-time.

2.4 Event Notifications

2.4.1 EMResource allows any user to publish an event notification that sends email and text alerts to other EMResource users. These are most commonly used for events that affect the emergency healthcare system in TSA-E (such as hospital construction requiring ambulance traffic to take an alternate route), but are also used in emergencies to notify the emergency healthcare system about mass casualty incidents, region wide or statewide bed reports, or severe weather.

2.5 EMResource Funding

2.5.1 EMResource is funded at the state level through the Hospital Preparedness Program (HPP) as managed by the Department of State Health Services (DSHS). DSHS charges HPP grantees in each Trauma Service Area (TSA) with regional EMResource administrative duties (NCTTRAC is the HPP grantee for TSA-E). Additional EMResource enhancements in TSA-E are funded on a case-by-case basis, but generally, the HPP is the first funding stream considered for regional EMResource enhancements.

2.6 EMResource Administration

2.6.1 EMResource is administered regionally by NCTTRAC. NCTTRAC employs one primary EMResource Regional Administrator and multiple secondary EMResource Regional Administrators. Questions about regional EMResource administration should be directed to NCTTRAC_EMCC@ncttrac.org. Regional EMResource use is overseen by the NCTTRAC Board of Directors, who may create an EMResource Workgroup as needed to tackle specific tasks. Additional EMResource oversight is provided by the Regional Emergency Preparedness Committee (REPC) and all NCTTRAC clinical committees.

2.6.2 EMResource is administered at the statewide level by the Department of State Health Services (DSHS). DSHS maintains a team of multiple EMResource Statewide Administrators who help coordinate EMResource use throughout Texas. DSHS may require certain data elements to be added to EMResource and/or they may set reporting requirements based on federal or state guidance; in such cases, NCTTRAC will work to identify common data elements to reduce redundant reporting requirements whenever possible.

2.6.3 EMResource is owned by the private company Juvare. Certain administrative actions are only available to Juvare employees. Juvare employs Client Success Managers to support the EMResource Statewide Administrators and the EMResource Regional Administrator.

2.7 EMResource Access

2.7.1 Any individual who is associated with an emergency healthcare facility or organization can access EMResource using a unique username and password. Individuals who need to have an EMResource account created should follow these steps:

2.7.1.1 Go to http://support.ncttrac.org/Main/frmTickets.aspx

2.7.1.2 Click "Start Ticket"

2.7.1.3 In the "Department" drop-down menu, select "Crisis Applications – New Account Request (TSA-E/DFW Region).

2.7.1.4 Fill in the required fields and click "Submit".

2.7.2 NCTTRAC staff will create user accounts based on the information provided in the support ticket. After an account is created, NCTTRAC staff will send an email to the individual containing their username, password, and links to basic training resources. Individuals must provide an email address that is associated with an emergency healthcare facility or organization - @gmail.com, @outlook.com, etc. will not be accepted.

2.7.3 All users must have a unique username and password and should not share that information with anyone else. The only exception to this policy is for EMS dispatch centers, who may have one generic log-in with view-only access. The password to such an account must be changed at least once per year. EMS agencies are still expected to have at least one user with permission to update statuses and create events on staff at all times.

3. EMResource Regional Participation Standards

3.1 In order to improve EMResource utilization and ensure data validity, TSA-E has adopted the following participation standards:

3.2 Hospitals

3.2.1 Healthcare facilities must ensure that at least one person with EMResource access is on-site 24/7.

3.2.2 Hospitals must update their "Hospital Intake Status" at least once every 24 hours if the status is "Open", once every 4 hours if the status is "Advisory – Capability", and every 2 hours if the status is "Closed" or "Advisory – ED Surge".

3.2.3 Hospitals must update their "Psych ED Holds" number at least once every 6 hours.

3.2.4 Hospitals must update their "NEDOCS" status at least once every 6 hours.

3.2.5 Hospitals must update their Bed Availability numbers at least once every 24 hours.

3.2.6 Hospitals must update specific service line status types as needed. If a hospital sets a service line status type to "Unavailable" (or any other equivalent indicating a temporary outage or issue), the hospital must update that service line status every 4 hours.

3.2.7 Hospitals must update their EMResource point of contact information annually or as the contact information changes.

3.2.8 Hospitals must review the list of EMResource users associated with their facility and contact NCTTRAC with information on any necessary changes. Hospitals must complete this process annually or as users change over.

3.3 EMS Agencies

3.3.1 EMS Agencies must ensure that at least one person with EMResource access is on-shift 24/7.

3.3.2 EMS Agencies must have a method to monitor EMResource for hospital status information. This can include active monitoring of EMResource via computer or mobile application, or it can include relevant status change notifications being sent to EMS Agency staff.

3.3.2.1 EMS Agencies must review their service line statuses and make any necessary changes at least annually

3.3.3 EMS Agencies must update their EMResource point of contact information annually.

3.3.4 EMS Agencies must review the list of EMResource users associated with their agency and contact NCTTRAC with information on any necessary changes. EMS Agencies must complete this process annually.

3.4 Status Update Matrix

Every 2 Hours	Every 4 Hours	Every 6 Hours	Every 24 Hours	As Needed
Hospital Intake Status: Closed	Hospital Intake Status: Advisory - Capability	NEDOCS	Hospital Intake Status: Open	Service Line Statuses
Hospital Intake Status: Advisory – ED Surge	Service Line Statuses marked “Unavailable”	Psych ED Holds	All Bed Availability Categories	
	Service Line Statuses marked “Unavailable”			

4. EMResource Organization & Views

4.1 General Organization

4.1.1 All resources in EMResource are assigned a Resource Type. Resource Type is determined by a resource’s county of residence and by how a resource is licensed according to the Department of State Health Services (DSHS) Licensure Lists. DSHS Licensure Lists can be found at https://www.dshs.texas.gov/facilities/find-a-licensee.aspx for medical facilities and at https://www.dshs.texas.gov/emstraumasystems/formsresources.shtm#OpenRecords for EMS agencies/First Responder Organizations (FROs).

4.1.2 Resource Types use the following naming convention: Z# - Name County Provider Type. The # is the NCTTRAC zone that the county falls into, County is the resource’s county of residence, and the Provider Type is a resource’s provider type as licensed by DSHS.

4.1.3 For example, hospitals in Collin County are listed in Resource Type "Z5 – Collin County Hospitals". NCTTRAC zones and their composite counties are listed on the following page.

Zone 1
- -Cooke County
- -Fannin County
- -Grayson County

Zone 2
- -Denton County
- -Wise County

Zone 3
- -Palo Pinto County
- -Parker County

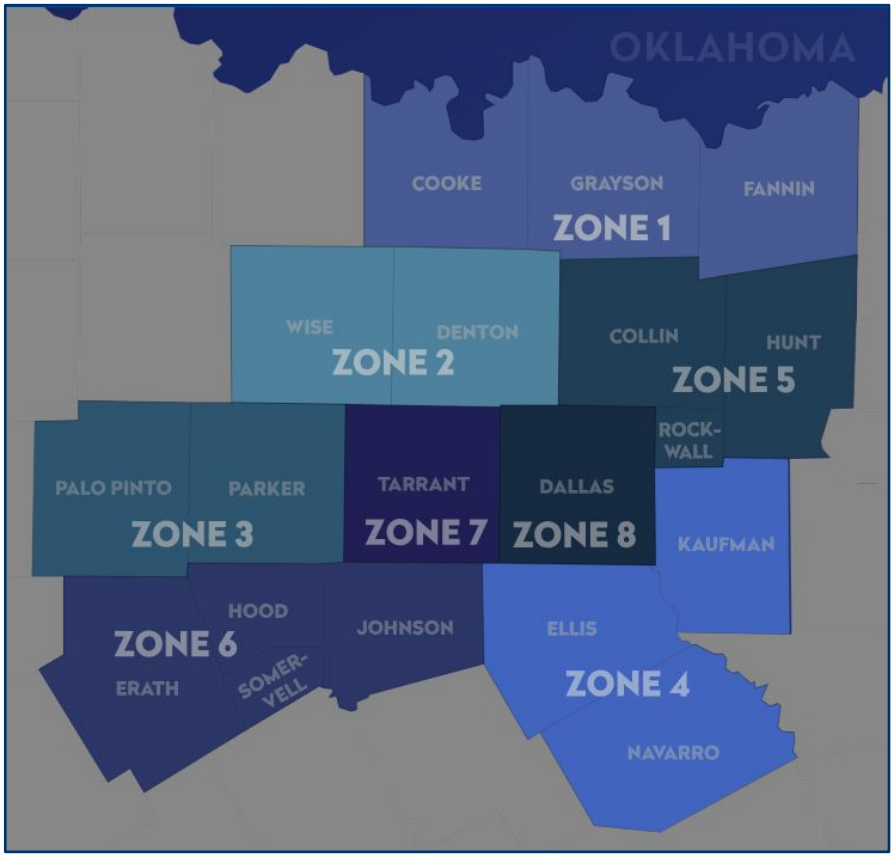
Zone 4
- -Ellis County
- -Kaufman County
- -Navarro County

Zone 5
- -Collin County
- -Hunt County
- -Rockwall County

Zone 6
- -Erath County
- -Hood County
- -Johnson County
- -Somervell County

Zone 7
- -Tarrant County

Zone 8
- -Dallas County



4.1.4 Each county has five Resource Types. For example, Dallas County has the following Resource Types: "Z8 - Dallas County Hospitals"; "Z8 – Dallas County Special Facilities"; "Z8 – Dallas County LTC"; "Z8 – Dallas County EMS"; and "Z8 – Dallas County FROs". An explanation of how resources are divided into their county-based Resource Type can be found below.

4.1.4.1 County Hospitals

4.1.4.1.1 The "County Hospitals" Resource Types is composed of facilities that appear in the DSHS "Directory of General and Specialty Hospitals" that have both "General Hospital" and "Emergency Department" in their "Designation/Services/Accreditation" column.

4.1.4.2 County Specialty Facilities

4.1.4.2.1 The "County Specialty Facilities" Resource Types is composed of facilities that meet one or more of the following criteria:

4.1.4.2.2 Facilities that appear in the DSHS "Directory of General and Specialty Hospitals" that have the following listed in their "Designation/Services/Accreditation column":
4.1.4.2.3 "Special Hospital" and "Mental Health Services"
4.1.4.2.4 "Comprehensive Medical Rehabilitation"
4.1.4.2.5 "Comprehensive Rehab Services" WITHOUT "General Hospital" and "Emergency Department"
4.1.4.2.6 "Long-Term Acute Care"
4.1.4.2.7 "Pediatric" WITHOUT "General Hospital" and "Emergency Department"
4.1.4.2.8 "Special Hospital"
4.1.4.2.9 Facilities that appear in the DSHS "Directories of Ambulatory Surgical Centers"
4.1.4.2.10 Facilities that appear in the DSHS "Directory of Private Psychiatric Hospitals"

4.1.4.3 County Long-Term Care Facilities
4.1.4.3.1 The "County Long-Term Care Facilities" is composed of Assisted Living Facilities (ALF), Skilled Nursing Facilities (SNF), and ICF/IID facilities.

4.1.4.4 County EMS Agencies
4.1.4.4.1 The "County EMS Agencies" Resource Types is composed of agencies that appear in the DSHS "EMS Providers Agencies" list.

4.1.4.5 County FROs
4.1.4.5.1 The "County FROs" Resource Types is composed of agencies that appear in the DSHS "EMS First Responder Organizations" list.

4.1.5 There are also Resource Types for individual vehicles or assets. These Resource Types are listed below:

4.1.5.1 Aeromedical
4.1.5.1.1 The "Aeromedical" Resource Type is composed of individual air medical units located within TSA-E. Air medical units that are based outside of TSA-E but provide services within TSA-E will also be included in the "Aeromedical" Resource Type whenever possible.

4.1.5.2 AMBUS
4.1.5.2.1 The "AMBUS" Resource Type is composed of individual AMBUS units located within TSA-E. AMBUSes are part of the Emergency Medical Task Force (EMTF) program, and AMBUS host agencies update EMResource with changes in AMBUS deployment status.

4.1.5.3 Mass Fatality Trailers
4.1.5.3.1 The "Mass Fatality Trailers" Resource Type is composed of individual Mass Fatality Trailers (MFTs) located within TSA-E that were purchased with Hospital Preparedness Program (HPP) funds. A Mass Fatality Trailer is a refrigerated trailer that can hold up to 20 deceased bodies during a Mass Fatality event.

4.1.5.4 MERC Trailers

4.1.5.4.1 The “MERC Trailers” Resource Type is composed of individual Mobile Emergency Response Communications (MERC) Trailers that were purchased with HPP funds. A MERC Trailer is a towable trailer that contains a variety of communications equipment to be used during a communications failure.

4.1.6 Resources that do not fit any of the criteria above will be assigned the Resource Type that best fits. This will be determined by the EMResource Regional Administrator with input from the EMResource Workgroup (when meeting), the Regional Emergency Preparedness Committee (REPC), and the NCTTRAC Emergency Department Operations Committee.

4.2 Region Default View

4.2.1 The Region Default view is the standard view for EMResource in TSA-E. When new users log in, the Region Default view is the first thing they see. The Region Default view Resource Type structure is listed below.

- Aeromedical
- Z8 – Dallas County Hospitals
- Z7 – Tarrant County Hospitals
- Z6 – Erath County Hospitals
- Z6 – Hood County Hospitals
- Z6 – Johnson County Hospitals
- Z6 – Somervell County Hospitals
- Z5 – Collin County Hospitals
- Z5 – Hunt County Hospitals
- Z5 – Rockwall County Hospitals
- Z4 – Ellis County Hospitals
- Z4 – Kaufman County Hospitals
- Z4 – Navarro County Hospitals
- Z3 – Palo Pinto County Hospitals
- Z3 – Parker County Hospitals
- Z2 – Denton County Hospitals
- Z2 – Wise County Hospitals
- Z1 – Cooke County Hospitals
- Z1 – Fannin County Hospitals
- Z1 – Grayson County Hospitals

4.2.2 The Region Default View Status Types structure is listed below.

4.2.2.1 The “Aeromedical” Resource Type shows the following Status Types as columns on the Region Default view:

- Flight Availability Status
- Comments
- Last Update Time

4.2.2.2 The “County Hospitals” Resource Types show the following Status Types as columns on the Region Default view:

- Hospital Intake Status
- NEDOCS
- Psych ED Holds
- Phone: Transfer Line

- DSHS Trauma Designation
- DSHS Stroke Designation
- Status: MedSurg
- Status: ICU
- Status: 24/7 STEMI
- Status: OB/L&D
- Status: SAFE-Ready
- Status: Bariatric CT/MRI
- Comment

4.3 Resource Detail View

4.3.1 The Resource Detail view shows each status associated with an individual resource. It also shows basic resource information (such as name, point of contact, and address), contains a map that shows the resource's location, and has a list of all users who are associated with that resource.

4.4 Map

4.4.1 The EMResource Map view shows each resource in the system plotted on a map. Events that have been created with addresses will also appear on the map. Users can filter out which resources they want to see using the "Standard Resource Type" filters on the right side of the screen. By default, the TSA-E EMResource Map view shows Aeromedical resources. After setting their own filters, users can then save their map so that those filters appear each time the user opens the map.

4.4.2 Resource icons on the Map change colors based on that resource's current status in their Default Status Type. For example, Aeromedical resource icons will appear green if the unit is "Available At", red if the unit is "Unavailable", and yellow if the unit is "Delayed At" or "Limited Availability".

4.5 TSA-E: Deployable Assets View

4.5.1 The TSA-E: Deployable Assets view shows the deployment status of each deployable resource that was purchased with HPP funds. The Resource Type and Status Type structures are detailed below.

4.5.1.1 AMBUS

- Deployment Status
- 24/7 Point of Contact
- Comments
- Last Update Time

4.5.1.2 Mass Fatality Trailers

- Deployment Status
- 24/7 Point of Contact
- Comments
- Last Update Time

4.5.1.3 MERC Trailers

- Deployment Status
- 24/7 Point of Contact
- Comments
- Last Update Time

4.6 Custom Views

4.6.1 Each EMResource user has the ability to create a custom view that only applies to their individual user account. Within this custom view, users can decide what resources and what statuses they need to see and organize them in whichever way they see fit. Instructions on how to set up an individual custom view can be found in the "Basic Orientation – Custom Views" video found on the NCTTRAC website at the following link: https://ncttrac.org/programs/healthcare-coalition-hpp/tsa-e/emcc/crisis-applications/.

4.7 Additional Views

4.7.1 Details regarding additional EMResource views can be found in Section VIII, Additional Views, at the end of this document.

5. Status Types and Definitions

5.1 Healthcare Facilities Status Types

5.1.1 COVID-19 Hospital Data Reporting Fields/Statuses

5.1.1.1 Since March 2020, the state and federal governments have imposed a wide variety of COVID-19 reporting requirements on hospitals. In Texas, hospitals report data to meet these requirements in EMResource. To find the most current version of the required COVID-19 Hospital Data Reporting fields, please visit the COVID-19 page on the NCTTRAC website.

5.1.1 Hospital Intake Status

5.1.1.1 Reflects the current status of a hospital's Emergency Department. Should be updated at least once every 24 hours if the status is "Open", at least once every 4 hours if the status is "Advisory – Capability", and at least once every 2 hours if the status is "Advisory – ED Surge" or "Closed". Is also used by facilities without Emergency Departments to indicate overall facility status.

5.1.1.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.1.2.1 Open: The ED is open and accepting patients with no limitations.

5.1.1.2.2 Advisory - Capability: Hospital is advising EMS about a clinical service closure so that EMS can make an informed decision regarding patient destinations. Hospitals may still receive EMS patients in order to provide immediate stabilization. The reason for the Advisory and an ETA to normal operations is mandatory for the comments section. NEDOCS should be updated at the same time. This status option must be updated at least once every 4 hours. Hospitals must select one or more of the following status reasons: "Trauma", "Stroke", "STEMI", or "Other – see comments". Other examples of when this status is appropriate include (but are not limited to) the following: lack of CT due to a tube failure, Trauma surgeon unavailable, no, OR available for emergent cases, and Cath lab unavailable.

5.1.1.2.3 Advisory – ED Surge: Hospital is advising EMS about extended off-load times due to the current census and throughput status of the EDso that EMS can make an informed decision regarding patient destinations. This is the status that hospitals should select if they

are dealing with patient numbers that exceed their capacity. Hospitals may still receive EMS patients. This status option must be updated at least once every 2 hours. Comments are mandatory and NEDOCS should be updated at the same time. Examples for when this status is appropriate to include (but are not limited to) the following: the ED has a NEDOCS in a Severe or Disaster status for a prolonged period of time, the ED is holding multiple inpatients requiring monitoring and average EMS offload times are greater than 20 minutes, a large influx of patients in a short amount of time has drastically increased EMS offload times.

5.1.1.2.4 Closed: The ED is experiencing an internal disaster or facility emergency that is preventing them from safely receiving patients. This facility cannot accept EMS patients. This status option is not to be used for patient surges and should not be used to address internal staffing issues. Comments are mandatory. This status option must be updated at least once every 2 hours. Examples of when this status is appropriate to include (but are not limited to) the following: fire, flooding, power outage, water shortage, structural damage, internal disaster, and external disaster.

5.1.2 NEDOCS

5.1.2.1 The National Emergency Department Overcrowding Score (NEDOCS) is the global standard for measuring patient throughput, helping hospitals measure capacity and reduce overcrowding. This saturation score takes a variety of factors into account to calculate the final score. Update every 6 hours.

5.1.2.2 Hospitals enter the following factors to calculate their NEDOCS. These variables are defined by the NEDOCS Organization and can be found at the following link: https://www.nedocs.org/News/Article/NEDOCS-Variables-and-Definitions

5.1.2.2.1 Number of ED Patients: The total number of patients in the ED. Includes all patients who have walked in the door but have not been discharged. Includes patients in the waiting rooms, and waiting admits in the ED.

5.1.2.2.2 Number of ED Admits: Count all admits waiting for a bed in the ED. Patients moved away from ED to inpatient holding areas should not be counted. Count all ED admits/rollovers/holdovers waiting in ED care for an inpatient bed.

5.1.2.2.3 Last Door-to-Bed Time (hours; ex 1.25): Door-to-bed time for the last patient to receive a bed. For example: if you're measuring at 1300 hrs. and the last patient to be placed in a bed was at 1255 hrs., count that patient's door – bedtime. When measuring NEDOCS at 1400 hrs., count the person who received the bed last, between 1300 – 1400 hrs. If no one was placed in a bed during 1300 and 1400 hrs., count the patient who received bed at 1255 hrs. Always count the most recent patient's door-bed time. 15-minute increments; for example, enter 2.25 for 2 ¼ hours.

5.1.2.2.4 Number of Critical Care Patients in ED: Count the number of patients in 1:1 care. Includes ventilators, ICU admits, critical care patients, trauma patients, and sometimes includes psych holds. Typically, a site-specific variable, which should include all patients who require one-to-one nurse care.

5.1.2.2.5 Longest ED Admit (hours; ex. 1.25): Count the longest holdover, admit waiting for an inpatient bed in the ED. If four patients are waiting for an inpatient bed, count the patients waiting longest. Time to admit starts upon the decision to admit. The decision to admit is typically a joint decision between ED and admitting physician. 15-minute increments; for example, enter 2.25 for 2 ¼ hours

5.1.2.2.6 Number of ED Beds: Total number of gurneys, chairs, and other treatment benches in use, or staffed. Includes hallways and chairs that are opened up. Do not include un-staffed beds, such as beds in closed areas at night, or un-staffed beds at slow times.

5.1.2.2.7 Number of Inpatient Beds (excluding PEDS and OB): Count all inpatient beds regularly staffed. Can differ from licensed IP beds, if some licensed beds virtually not staffed, or staffed in disaster. Count holding beds, including observation beds.

5.1.2.3 The final NEDOCS falls into one of 5 categories based on severity. These categories and their score ranges are listed below.

- Normal (0 – 50)
- Busy (51 – 100)
- Overcrowded (101 – 140)
- Severe (141 – 180)
- Disaster (181 or higher)

5.1.3 Phone: Emergency Department - the direct phone line to contact this facility's emergency department.

5.1.4 Phone: House Supervisor - the direct phone line to contact this facility's house supervisor.

5.1.5 Command Center Activation Status

5.1.5.1 Reflects the current activation status of a facility's command center. All activations must list a command center point of contact in the comments. Should be updated as needed.

5.1.5.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.5.2.1 Activated: This facility's command center is currently activated. You must list a command center point of contact in the comments. This status option must be updated once every 24 hours.

5.1.5.2.2 Partially Activated: This facility's command center is currently partially activated. You must list a command center point of contact in the comments. This status option must be updated once every 24 hours.

5.1.5.2.3 Not Activated: This facility's command center is currently not activated.

5.1.6 Critical Utilities Availability
- 5.1.6.1 Reflects the current status of a facility's critical utilities. If a utility failure occurs, specific details must be noted in the comments. Should be updated as needed.
- 5.1.6.2 Facilities can select from the following status options. Definitions for each status option are provided.
  - 5.1.6.2.1 Available: This facility has all critical utilities fully available and has no needs.
  - 5.1.6.2.2 Partial Failure: This facility is experiencing a partial utility failure. Specifics should be noted in the comments. This status option must be updated at least once every 24 hours.
  - 5.1.6.2.3 Total Failure: This facility is experiencing a total utility failure. Specifics should be noted in the comments. This status option must be updated at least once every 24 hours.

5.1.7 DSHS Maternal Designation
- 5.1.7.1 Reflects the facility's current DSHS Maternal Level of Care Designation as shown on the DSHS Level of Care Designation list. This status can only be changed by an EMResource Regional Administrator. The EMResource Regional Administrator will validate this status for all facilities on a monthly basis. Facilities should contact support@ncttrac.org if they think that their current designation status is in error.
- 5.1.7.2 The following status options are available:
  - I: Basic
  - II: Specialty
  - III: Subspecialty
  - IV: Comprehensive

5.1.8 DSHS Neonatal Designation
- 5.1.8.1 Reflects the facility's current DSHS Neonatal Designation as shown on the DSHS Neonatal Designation list. This status can only be changed by an EMResource Regional Administrator. The EMResource Regional Administrator will validate this status for all facilities on a monthly basis. Facilities should contact support@ncttrac.org if they think that their current designation status is in error.
- 5.1.8.2 The following status options are available:
  - I: Well Nursery
  - II: Special Care Nursery
  - III: Intensive Care
  - IV: Adv. Intensive Care

5.1.9 DSHS Stroke Designation
- 5.1.9.1 Reflects the facility's current DSHS Stroke Designation as shown on the DSHS Stroke Designation list. This status can only be changed by an EMResource Regional Administrator. The EMResource Regional Administrator will validate this status for all facilities on a monthly basis. Facilities should contact support@ncttrac.org if they think that their current designation status is in error.
- 5.1.9.2 The following status options are available:

- I: Comprehensive
- II: Primary
- III: Support

5.1.10 DSHS Trauma Designation

5.1.10.1 Reflects the facility's current DSHS Trauma Designation as shown on the DSHS Trauma Designation list. This status can only be changed by an EMResource Regional Administrator. The EMResource Regional Administrator will validate this status for all facilities on a monthly basis. Facilities should contact support@ncttrac.org if they think that their current designation status is in error.

5.1.10.2 The following status options are available:

- I: Comprehensive
- II: Major
- III: Advanced
- IV: Basic

5.1.11 Facility Type

5.1.11.1 Shows the type of facility for each resource. Can only be updated by the EMResource Regional Administrator.

5.1.11.2 The following status options are available:

- General Hospital
- Free-Standing ED
- Psychiatric Facility
- ASC
- Long-Term Acute Care
- Rehab Facility
- Specialty Facility
- Nursing Home
- Assisted Living Facility
- ICF/IID
- Specialty – Pediatric
- Specialty – Cardiac
- Specialty – Orthopedics

5.1.12 Available Staffed Bed Categories

5.1.12.1 Available Staffed bed categories indicate the current number of available beds of a particular type with the staffing, supplies, and equipment necessary to take care of a patient. In other words, "This is the number of this type of patient that my facility can currently accept."

5.1.12.3

5.1.12.3.1 Available Staffed ED Beds – Number of staffed available beds in the Emergency Department. Do not include occupied beds.

5.1.12.3.2 Available Staffed Med/Surge – Number of staffed available adult MedSurg beds capable of treating adult patients who do not require intensive care. Do not include occupied beds.

5.1.12.3.3 Available Staffed Telemetry Beds – Number of staffed available telemetry beds. Do not include occupied beds. Do

not double count beds that were reported as available in other categories.

5.1.12.3.4 Available Staffed Adult ICU – Number of staffed available adult ICU beds capable of supporting critically ill patients, including patients with or without ventilator support. Do not include occupied beds.

5.1.12.3.5 Available Staffed Pediatric Beds – Number of staffed available pediatric MedSurg beds capable of treating pediatric patients who do not require intensive care. Do not include occupied beds. This count excludes NICU, newborn nursery beds, and outpatient surgery beds.–

5.1.12.3.6 Available Staffed Pediatric ICU (PICU) – Number of staffed available pediatric ICU beds capable of supporting critically ill pediatric patients, including patients with or without ventilator support. Do not include occupied beds. This count excludes NICU, newborn nursery beds, and outpatient surgery beds. Note: all pediatric ICU beds should be considered regardless of the unit on which the bed is housed. This includes ICU beds located in non-ICU locations, such as mixed acuity units.

5.1.12.3.7 Available Staffed NICU Beds – The number of telemetry-capable Neonatal ICU beds with the staffing, supplies, and equipment currently available to treat ill or premature newborn infants. Should not include beds that are currently occupied.

5.1.12.3.8 Available Staffed Burn Beds – Number of staffed available burn beds (approved by the American Burn Association or self-designated). These beds should not be included in other ICU bed counts. Do not include occupied beds.

5.1.12.3.9 Available Staffed Psychiatric Beds – Number of staffed available beds on a psychiatric unit. Do not include occupied beds.

5.1.12.3.10 Available Staffed Neg Pressure Isolation – Number of staffed available beds that can provide respiratory isolation through negative pressure airflow. Do not include these beds in other bed availability categories. Do not include occupied beds.

5.1.12.3.11 Available Staffed Outpatient Beds – Number of staffed available outpatient beds. Do not include occupied beds.

5.1.12.3.12 Available Staffed Observation Beds – Number of staffed available observation beds. Do not include occupied beds.

5.1.12.3.13 Overflow and Surge Beds – Additional staffed beds that can be utilized if necessary, within the walls of the hospital. Could also be called Available Staffed Surge Beds Located in Inpatient and/or Overflow Areas. Do not double-count beds; if you reported an overflow or surge bed in another available bed field, do not report it here.

5.1.12.3.14

5.1.12.3.15
5.1.12.3.16
5.1.12.3.17
5.1.12.3.18
5.1.12.3.19

5.1.12.5 MCI Patient Surge Capacities
- 5.1.12.5.1 MCI Green - The facility's capacity for additional victims with minor needs.
- 5.1.12.5.2 MCI Yellow - The facility's capacity for additional victims with delayed needs.
- 5.1.12.5.3 MCI Red - The facility's capacity for additional victims with immediate needs.
- 5.1.12.5.5 MCI Black - The facility's capacity for additional deceased victims.

5.1.12.6 Ventilator/BiPAP Availability
- 5.1.12.6.1 Available Adult Vents – Total number of adult ventilators available, to include adult ventilators that are capable of ventilating a pediatric patient. Any device used to support, assist, or control respiration through the application of positive pressure to the airway when delivered via an artificial airway.
- 5.1.12.6.2 Available Pedi Vents – Total number of pediatric specific ventilators available, not to include pediatric ventilators that can also be used as adult ventilators. Any device used to support, assist, or control respiration through the application of positive pressure to the airway when delivered via an artificial airway.
- 5.1.12.6.3

5.1.13 NICU Transfer Line
- 5.1.13.1 Shows the phone number to call if you need to transfer a NICU patient to this facility.
- 5.1.13.2 This is a text-entry field.

5.1.14 OB Transfer Line
- 5.1.14.1 Shows the phone number to call if you need to transfer an OB patient to this facility.
- 5.1.14.2 This is a text-entry field.

5.1.15 Psych ED Holds
- 5.1.15.1 Reflects the current number of psych holds in a facility's emergency department. Psych holds are defined as patients who have undergone a medical screening exam and mental health evaluation and are awaiting transfer or admission for inpatient psychiatric care.
- 5.1.15.2 This status is a numeric entry field.
- 5.1.15.3 The "Psych ED Holds" status should be updated at least once every 24 hours. It will be marked "Overdue" after 24 hours without an update.

5.1.16 Psych: Adult
- 5.1.16.1 Reflects the current status of a facility's ability to provide inpatient adult psychiatric services. Should be updated as needed.

5.1.16.2 Facilities can select from the following status options. Definitions for each status option are provided.
- 5.1.16.2.1 Available: This facility currently has inpatient adult psychiatric availability.
- 5.1.16.2.2 Unavailable: This facility temporarily has no inpatient adult psychiatric availability. Comments are mandatory. This status option must be updated every 4 hours.
- 5.1.16.2.3 Not Provided: This facility does not provide inpatient adult psychiatric services.

5.1.17 Psych: Adolescent
- 5.1.17.1 Reflects the current status of a facility's ability to provide inpatient adolescent psychiatric services. Should be updated as needed.
- 5.1.17.2 Facilities can select from the following status options. Definitions for each status option are provided.
  - 5.1.17.2.1 Available: This facility currently has inpatient adolescent psychiatric availability.
  - 5.1.17.2.2 Unavailable: This facility temporarily has no inpatient adolescent psychiatric availability. Comments are mandatory. This status option must be updated every 4 hours.
  - 5.1.17.2.3 Not Provided: This facility does not provide inpatient adolescent psychiatric services.

5.1.18 Psych: Pediatric
- 5.1.18.1 Reflects the current status of a facility's ability to provide inpatient pediatric psychiatric services. Should be updated as needed.
- 5.1.18.2 Facilities can select from the following status options. Definitions for each status option are provided.
  - 5.1.18.2.1 Available: This facility currently has inpatient pediatric psychiatric availability.
  - 5.1.18.2.2 Unavailable: This facility temporarily has no inpatient pediatric psychiatric availability. Comments are mandatory. This status option must be updated every 4 hours.
  - 5.1.18.2.3 Not Provided: This facility does not provide inpatient pediatric psychiatric services.

5.1.19 Psych: Adult Chem. Dep.
- 5.1.19.1 Reflects the current status of a facility's ability to provide inpatient adult chemical dependency psychiatric services. Should be updated as needed.
- 5.1.19.2 Facilities can select from the following status options. Definitions for each status option are provided.
  - 5.1.19.2.1 Available: This facility currently has inpatient adult chemical dependency psychiatric availability.
  - 5.1.19.2.2 Unavailable: This facility temporarily has no inpatient adult chemical dependency psychiatric availability. Comments are mandatory. This status option must be updated every 4 hours.
  - 5.1.19.2.3 Not Provided: This facility does not provide inpatient adult chemical dependency psychiatric services.

5.1.20 Psych: Adolescent Chem. Dep.

5.1.20.1 Reflects the current status of a facility's ability to provide inpatient adolescent chemical dependency psychiatric services. Should be updated as needed.
5.1.20.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.20.2.1 Available: This facility currently has inpatient adolescent chemical dependency psychiatric availability.
5.1.20.2.2 Unavailable: This facility temporarily has no inpatient adolescent chemical dependency psychiatric availability. Comments are mandatory. This status option must be updated every 4 hours.
5.1.20.2.3 Not Provided: This facility does not provide inpatient adolescent chemical dependency psychiatric services.

5.1.21 Service: Neonatal Transport
5.1.21.1 Reflects the current status of a facility's ability to provide Neonatal Transport services. Should be updated as needed.
5.1.21.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.21.2.1 Available: This facility can currently provide Neonatal Transport services.
5.1.21.2.2 Unavailable: This facility is temporarily unable to provide Neonatal Transport services. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.21.2.3 Not Provided: This facility does not provide Neonatal Transport services.

5.1.22 Service: OB Transport
5.1.22.1 Reflects the current status of a facility's ability to provide OB Transport services. Should be updated as needed.
5.1.22.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.22.2.1 Available: This facility can currently provide OB Transport services.
5.1.22.2.2 Unavailable: This facility is temporarily unable to provide OB Transport services. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.22.2.3 Not Provided: This facility does not provide OB Transport services.

5.1.23 Status: 24/7 STEMI
5.1.23.1 Reflects the current status of a facility's ability to provide 24/7 STEMI services. Does not show any accreditations. Should be updated as needed.
5.1.23.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.23.2.1 Available: This facility can currently provide 24/7 STEMI services.

5.1.23.2.2 Unavailable: This facility is temporarily unable to provide 24/7 STEMI services. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.23.2.3 Not Provided: This facility does not provide 24/7 STEMI services.

5.1.24 Status: Anti-Venom
5.1.24.1 Reflects the current status of a facility's ability to provide Anti-Venom services. Should be updated as needed.
5.1.24.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.24.2.1 Available: This facility can currently provide Anti-Venom services.
5.1.24.2.2 Unavailable: This facility is temporarily unable to provide Anti-Venom services. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.24.2.3 Not Provided: This facility does not provide Anti-Venom services.

5.1.25 Status: Bariatric CT/MRI
5.1.25.1 Reflects the current status of a facility's ability to provide Bariatric CT/MRI services. Should be updated as needed.
5.1.25.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.25.2.1 Available: This facility can currently provide Bariatric CT/MRI services.
5.1.25.2.2 Unavailable: This facility is temporarily unable to provide Bariatric CT/MRI services. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.25.2.3 Not Provided: This facility does not provide Bariatric CT/MRI services.

5.1.26 Status: Burn
5.1.26.1 Reflects the current status of a facility's ability to provide burn services. Should be updated as needed.
5.1.26.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.26.2.1 Available: This facility can currently provide Burn services.
5.1.26.2.2 Unavailable: This facility is temporarily unable to provide Burn services. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.26.2.3 Not Provided: This facility does not provide Burn services.

5.1.27 Status: ECMO
5.1.27.1 Reflects the current status of a facility's ability to provide Extracorporeal Membrane Oxygenation (ECMO) services. Should be updated as needed.
5.1.27.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.27.2.1 Available - Adult: This facility can currently provide Adult ECMO services.
5.1.27.2.2 Available – Pedi/NICU: This facility can currently provide Pediatric and Neonatal ECMO services.
5.1.27.2.3 Available – All Ages: This facility can currently provide Adult, Pediatric, and Neonatal ECMO services.
5.1.27.2.4 Unavailable: This facility is temporarily unable to provide ECMO services. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.27.2.5 Not Provided: This facility does not provide ECMO services.

5.1.28 Status: Hand
5.1.28.1 Reflects the current status of a facility's ability to provide Hand services. Should be updated as needed.
5.1.28.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.28.2.1 Available: This facility can currently provide Hand services.
5.1.28.2.2 Unavailable: This facility is temporarily unable to provide Hand services. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.28.2.3 Not Provided: This facility does not provide Hand services.

5.1.29 Status: Hyperbaric Chamber
5.1.29.1 Reflects the current status of a facility's ability to provide Hyperbaric Chamber services. Should be updated as needed.
5.1.29.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.29.2.1 Available: This facility can currently provide Hyperbaric Chamber services.
5.1.29.2.2 Unavailable: This facility is temporarily unable to provide Hyperbaric Chamber services. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.29.2.3 Not Provided: This facility does not provide Hyperbaric Chamber services.

5.1.30 Status: ICU
5.1.30.1 Describes a hospital's ability to accept interfacility transfers requiring ICU-level care. Should be updated once per day if the status is "Available" and once every 12 hours if the status is "Unavailable" or "Available w/Restrictions".
5.1.30.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.30.2.1 Available: This facility can currently accept interfacility transfers of patients requiring ICU-level care.
5.1.30.2.2 Available w/Restrictions: This facility can currently accept interfacility transfers of patients requiring ICU-level care, but with restrictions (i.e. can't accept COVID-positive patients, can only accept Trauma, Stroke, and STEMI patients, etc). List the

restrictions in the comments; comments are mandatory. Must be updated once every 12 hours.

5.1.30.2.2 Unavailable: The facility is temporarily unable to accept any interfacility transfers of patients requiring ICU-level care regardless of patient type. List the reason in the comments; comments are mandatory. This status option must be updated at least once every 12 hours.

5.1.30.2.3 Not Provided: This facility does not have the capability to treat ICU-level patients.

5.1.31 Status: MedSurg

5.1.31.1 Describes a hospital's ability to accept interfacility transfers requiring MedSurg-level care. Should be updated once per day if the status is "Available" and once every 12 hours if the status is "Unavailable" or "Available w/Restrictions".

5.1.31.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.31.2.1 Available: This facility can currently accept interfacility transfers of patients requiring MedSurg-level care.

5.1.31.2.2 Available w/Restrictions: This facility can currently accept interfacility transfers of patients requiring MedSurg-level care, but with restrictions (i.e., can't accept COVID-positive patients, can only accept Trauma, Stroke, and STEMI patients, etc). List the restrictions in the comments; comments are mandatory. Must be updated once every 12 hours.

5.1.31.2.2 Unavailable: This facility is temporarily unable to accept any interfacility transfers of patients requiring MedSurg-level care regardless of patient type. List the reason in the comments; comments are mandatory. This status option must be updated at least once every 12 hours.

5.1.31.2.3 Not Provided: This facility does not have the capability to treat MedSurg-level patients.

5.1.32 Status: NICU

5.1.32.1 Reflects the current status of a facility's Neonatal Intensive Care Unit. Should be updated as needed.

5.1.32.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.32.2.1 Available: This facility's NICU is currently fully operational.

5.1.32.2.2 Unavailable: This facility's NICU is temporarily unavailable. Comments are mandatory. This status option must be updated at least once every 4 hours.

5.1.32.2.3 Not Provided: This facility does not provide NICU services.

5.1.33 Status: OB/L&D

5.1.33.1 Reflects the current status of a facility's ability to provide OB/L&D services. Should be updated as needed.

5.1.33.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.33.2.1 Available: This facility can currently provide OB/L&D services.
5.1.33.2.2 Unavailable: This facility is temporarily unable to provide OB/L&D services. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.33.2.3 Not Provided: This facility does not provide OB/L&D services.

5.1.34 Status: OR
5.1.34.1 Reflects the current status of a facility's operating rooms. Should be updated as needed.
5.1.34.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.34.2.1 Available: This facility's OR(s) are currently fully operational.
5.1.34.2.2 Unavailable: This facility's OR(s) are temporarily unavailable. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.34.2.3 Not Provided: This facility does not provide OR services.

5.1.35 Status: Oral/Maxillofacial
5.1.35.1 Reflects the current status of a facility's ability to provide Oral/Maxillofacial services. Should be updated as needed.
5.1.35.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.35.2.1 Available: This facility can currently provide Oral/Maxillofacial services.
5.1.35.2.2 Unavailable: This facility is temporarily unable to provide Oral/Maxillofacial services. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.35.2.3 Not Provided: This facility does not provide Oral/Maxillofacial services.

5.1.36 Status: PICU
5.1.36.1 Reflects the current status of a facility's Pediatric Intensive Care Unit. Should be updated as needed.
5.1.36.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.36.2.1 Available: This facility's PICU is currently fully operational.
5.1.36.2.2 Unavailable: This facility's PICU is temporarily unavailable. Comments are mandatory. This status option must be updated at least once every 4 hours.
5.1.36.2.3 Not Provided: This facility does not provide PICU services.

5.1.37 Status: Replant
5.1.37.1 Reflects the current status of a facility's ability to provide Replant services. Should be updated as needed.
5.1.37.2 Facilities can select from the following status options. Definitions for each status option are provided.
5.1.37.2.1 Available: This facility can currently provide Replant services.
5.1.37.2.2 Unavailable: This facility is temporarily unable to provide Replant services. Comments are mandatory. This status option must be updated at least once every 4 hours.

5.1.37.2.3 Not Provided: This facility does not provide Replant services

5.1.38 Status: SAFE-Ready

5.1.38.1 Reflects the current status of a facility's ability to provide Sexual Assault Forensic Evidence collection services. DSHS defines a SAFE-Ready facility as "A SAFE-Ready facility uses a certified sexual assault nurse examiner or a physician with specialized training to conduct a forensic medical examination of a sexual assault survivor or uses telemedicine to consult with a system of sexual assault forensic examiners, regardless of whether a report to law enforcement is made." Should be updated as needed.

5.1.38.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.38.2.1 Available: This facility can currently provide SAFE-Ready services.

5.1.38.2.2 Unavailable: This facility is temporarily unable to provide SAFE-Ready services. Comments are mandatory. This status option must be updated at least once every 4 hours.

5.1.38.2.3 Not Provided: This facility does not provide SAFE-Ready services.

5.1.39 Status: Stroke General Service

5.1.39.1 Reflects the current status of a facility's ability to provide general stroke services. Should be updated as needed. Does not reflect DSHS designation status.

5.1.39.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.39.2.1 Available: This facility can currently provide general stroke services.

5.1.39.2.2 Unavailable: This facility is temporarily unable to provide general stroke services. Comments are mandatory. This status option must be updated at least once every 4 hours.

5.1.39.2.3 Not Provided: This facility does not provide general stroke services.

5.1.40 Status: Stroke NeuroIR

5.1.40.1 Reflects the current status of a facility's ability to provide NeuroIR services. Can only be updated by Level I (Comprehensive) designated facilities. Should be updated as needed.

5.1.40.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.40.2.1 Available: This facility can currently provide NeuroIR services.

5.1.40.2.2 Unavailable: This facility is temporarily unable to provide NeuroIR services. Comments are mandatory. This status option must be updated at least once every 4 hours.

5.1.40.2.3 Not Provided: This facility does not provide NeuroIR services.

5.1.41 Status: Stroke NeuroSurg

5.1.41.1 Reflects the current status of a facility's ability to provide NeuroSurg services. Can only be updated by Level I (Comprehensive), Level II

(Primary), or Level III (Support) designated facilities. Should be updated as needed.

5.1.41.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.41.2.1 Available: This facility can currently provide NeuroSurg services.

5.1.41.2.2 Unavailable: This facility is temporarily unable to provide NeuroSurg services. Comments are mandatory. This status option must be updated at least once every 4 hours.

5.1.41.2.3 Not Provided: This facility does not provide NeuroSurg services.

5.1.42 Status: Trauma

5.1.42.1 Reflects the current status of a facility's ability to provide Trauma Surgery services.

5.1.42.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.42.2.1 Available: This facility can currently provide Trauma Surgery services.

5.1.42.2.2 Unavailable: This facility is temporarily unable to provide Trauma Surgery services. Comments are mandatory. This status option must be updated at least once every 4 hours.

5.1.42.2.3 Not Provided: This facility does not provide Trauma Surgery services.

5.1.43 Status: Therapeutic Hypothermia

5.1.43.1 Reflects the current status of a facility's ability to provide Therapeutic Hypothermia services. Should be updated as needed.

5.1.43.2 Facilities can select from the following status options. Definitions for each status option are provided.

5.1.43.2.1 Available - Adult: This facility can currently provide Adult Therapeutic Hypothermia services.

5.1.43.2.2 Available – NICU: This facility can currently provide Neonatal Therapeutic Hypothermia services.

5.1.43.2.3 Available – Adult/NICU: This facility can currently provide Adult and Neonatal Therapeutic Hypothermia services.

5.1.43.2.4 Unavailable: This facility is temporarily unable to provide Therapeutic Hypothermia services. Comments are mandatory. This status option must be updated at least once every 4 hours.

5.1.43.2.5 Not Provided: This facility does not provide Therapeutic Hypothermia services.

5.1.44 Transfer Line

5.1.44.1 Shows the phone number to call if you need to transfer a patient to this facility.

5.1.44.2 This is a text-entry field.

5.2 EMS/FRO Status Types

5.2.1 Agency Type

5.2.1.1 Shows the type of agency for each resource. Can only be updated by the EMResource Regional Administrator. Agencies should contact support@ncttrac.org if their agency type is in error.
5.2.1.2 The following status options are available.
5.2.1.2.1 FD EMS
5.2.1.2.2 VFD
5.2.1.2.3 Private EMS
5.2.1.2.4 Hospital EMS
5.2.1.2.5 Public EMS
5.2.1.2.6 Other

5.2.2 Dispatch Number
5.2.2.1 Shows the non-emergency phone number to contact this agency's dispatch center. Should be updated as needed.
5.2.2.2 This status is updated using a text entry field.

5.2.3 EMS Medical Director
5.2.3.1 Shows the current EMS Medical Director for the agency. Please list a contact phone number in the comments. Should be updated as needed
5.2.3.2 This status is updated using a text entry field.

5.2.4 Service: 911 EMS Response
5.2.4.1 Reflects the current status of an agency's ability to perform 911 EMS response. Should be updated as needed.
5.2.4.2 Agencies can select from the following status options. Definitions for each status option are provided.
5.2.4.2.1 Available: This agency can currently perform 911 EMS response.
5.2.4.2.2 Unavailable: This agency is temporarily unable to perform 911 EMS response. This status option must be updated at least once every 4 hours. Comments are mandatory.
5.2.4.2.3 Not Provided: This agency does not perform 911 EMS response.

5.2.5 Service: Critical Care Transport
5.2.5.1 Reflects the current status of an agency's ability to perform Critical Care Transport services. Should be updated as needed.
5.2.5.2 Agencies can select from the following status options. Definitions for each status option are provided.
5.2.5.2.1 Available: This agency can currently perform Critical Care Transport services.
5.2.5.2.2 Unavailable: This agency is temporarily unable to perform Critical Care Transport services. This status option must be updated at least once every 4 hours. Comments are mandatory.
5.2.5.2.3 Not Provided: This agency does not provide Critical Care Transport services.

5.2.6 Service: HazMat Response
5.2.6.1 Reflects the current status of an agency's ability to perform Hazardous Materials Response operations. Should be updated as needed.
5.2.6.2 Agencies can select from the following status options. Definitions for each status option are provided.

5.2.6.2.1 Available: This agency can currently perform Hazardous Materials Response operations.
5.2.6.2.2 Unavailable: This agency is temporarily unable to perform Hazardous Materials Response operations. This status option must be updated at least once every 4 hours. Comments are mandatory.
5.2.6.2.3 Not Provided: This agency does not have the capability to perform Hazardous Materials Response operations.

5.2.7 Service: HCID Response
5.2.7.1 Reflects the current status of an agency's ability to perform High Consequence Infections Disease (HCID) Response operations. Should be updated as needed.
5.2.7.2 Agencies can select from the following status options. Definitions for each status option are provided.
5.2.7.2.1 Available: This agency can currently perform HCID response operations.
5.2.7.2.2 Unavailable: This agency is temporarily unable to perform HCID response operations. This status option must be updated at least once every 4 hours. Comments are mandatory.
5.2.7.2.3 Not Provided: This agency does not have the capability to perform HCID response operations.

5.2.8 Service: High Angle Rescue
5.2.8.1 Reflects the current status of an agency's ability to perform High Angle Rescue operations. Should be updated as needed.
5.2.8.2 Agencies can select from the following status options. Definitions for each status option are provided.
5.2.8.2.1 Available: This agency can currently perform High Angle Rescue operations.
5.2.8.2.2 Unavailable: This agency is temporarily unable to perform High Angle Rescue operations. This status option must be updated at least once every 4 hours. Comments are mandatory.
5.2.8.2.3 Not Provided: This agency does not have the capability to perform High Angle Rescue operations.

5.2.9 Service: Hospital Patient Transfers
5.2.9.1 Reflects the current status of an agency's ability to perform hospital patient transfers. Should be updated as needed.
5.2.9.2 Agencies can select from the following status options. Definitions for each status option are provided.
5.2.9.2.1 Available: This agency can currently perform hospital patient transfers.
5.2.9.2.2 Unavailable: This agency is temporarily unable to perform hospital patient transfers. This status option must be updated at least once every 4 hours. Comments are mandatory.
5.2.9.2.3 Not Provided: This agency does not perform hospital patient transfers.

5.2.10 Service: Swift Water Rescue

5.2.10.1 Reflects the current status of an agency's ability to perform Swift Water Rescue operations. Should be updated as needed.
5.2.10.2 Agencies can select from the following status options. Definitions for each status option are provided.
5.2.10.2.1 Available: This agency can currently perform Swift Water Rescue operations.
5.2.10.2.2 Unavailable: This agency is temporarily unable to perform Swift Water Rescue operations. This status option must be updated at least once every 4 hours. Comments are mandatory.
5.2.10.2.3 Not Provided: This agency does not have the capability to perform Swift Water Rescue operations.

5.2.11 Service: Trench Rescue/Recovery
5.2.11.1 Reflects the current status of an agency's ability to perform Trench Rescue/Recovery operations. Should be updated as needed.
5.2.11.2 Agencies can select from the following status options. Definitions for each status option are provided.
5.2.11.2.1 Available: This agency can currently perform Trench Rescue/Recovery operations.
5.2.11.2.2 Unavailable: This agency is temporarily unable to perform Trench Rescue/Recovery operations. This status option must be updated at least once every 4 hours. Comments are mandatory.
5.2.11.2.3 Not Provided: This agency does not have the capability to perform Trench Rescue/Response operations.

5.2.12 Vehicle: Bariatric
5.2.12.1 Reflects the current status of an agency's ability to provide specialty bariatric vehicles. Non-emergency contact information for these vehicles should be listed in the comments.
5.2.12.2 Agencies can select from the following status options. Definitions for each status option are provided.
5.2.12.2.1 Available: This agency has a currently available specialty bariatric vehicle. Please list non-emergency contact information for this vehicle in the comments.
5.2.12.2.2 Unavailable: This agency's specialty bariatric vehicle is temporarily unavailable. This status option must be updated at least once every 4 hours. Comments are mandatory.
5.2.12.2.3 Not Provided: This agency does not have a specialty bariatric vehicle.

5.2.13 Vehicle: Mobile Command Center
5.2.13.1 Reflects the current status of an agency's ability to provide a mobile command center. Non-emergency contact information for this asset should be listed in the comments.
5.2.13.2 Agencies can select from the following status options. Definitions for each status option are provided.

5.2.13.2.1 Available: This agency has a currently available mobile command center. Please list non-emergency contact information for this vehicle in the comments.
5.2.13.2.2 Unavailable: This agency's mobile command center is temporarily unavailable. This status option must be updated at least once every 4 hours. Comments are mandatory.
5.2.13.2.3 Not Provided: This agency does not have a mobile command center.

5.2.14 Vehicle: Other
5.2.14.1 Lists any other specialty vehicles that an agency might have. The agency should list both the specialty vehicle and the non-emergency contact information for that vehicle.
5.2.14.2 This status is updated by a text entry field.

5.3 Other Status Types
5.3.1 24/7 Point of Contact
5.3.1.1 Shows the 24/7 Point of Contact for a deployable asset. Should be updated as needed.
5.3.1.2 This status is updated using a text entry field.
5.3.2 Deployment Status
5.3.2.1 Reflects the current deployment status of a regional deployable asset. Should be updated as needed.
5.3.2.2 Asset hosts can select from the following status options. Definitions for each status option are provided.
5.3.2.2.1 Demobilized: This asset has been demobilized from a deployment.
5.3.2.2.2 Deployed: This asset is currently deployed. Comments are mandatory.
5.3.2.2.3 In Rehab: This asset is currently in rehab from a deployment.
5.3.2.2.4 Mission Capable: This asset is currently capable of deployment.
5.3.2.2.5 On Alert: This asset is currently on alert in anticipation of a potential deployment.
5.3.2.2.6 Out of Service: This asset is currently out of service. Comments are mandatory.
5.3.2.2.7 Partially Capable: This asset is currently partially capable of deployment. Comments are mandatory.
5.3.3 Flight Availability Status
5.3.3.1 Reflects the current status of an air medical unit's availability to respond to calls. For most air medical providers, this status is automatically updated using an API from the air medical provider's CAD system into EMResource.
5.3.3.2 Air medical units can select from the following status options. Definitions for each status option are provided.
5.3.3.2.1 Delayed At: This aircraft is delayed. Enter location/time/weather in comments.
5.3.3.2.2 Unavailable: This aircraft is unavailable. Enter location/maintenance in comments.
5.3.3.2.3 Available At: This aircraft is available. Enter location in comments.
5.3.3.2.4 Limited Availability: This aircraft's availability is limited.

5.3.4 Point of Contact Verified
5.3.4.1 Shows the date that a facility/organization last verified that its Point of Contact in EMResource was correct.
5.3.4.2 This is a text entry field.

6. System Performance Improvement Metrics and Indicators

6.1 Regional
6.1.1 TSA-E uses the following Performance Metrics and Indicators to measure overall EMResource utilization success.
6.1.1.1 At least 75% of hospitals update their Hospital Intake Status at least once every 24 hours 80% of the time. Tracked monthly using EMResource reports. Report will be sent to ED Operations Committee, Trauma Committee, and NCTTRAC Zones.
6.1.1.2 At least 75% of hospitals update their NEDOCS at least once every 6 hours. Tracked monthly using EMResource reports. Report will be sent to ED Operations Committee, Trauma Committee, and NCTTRAC Zones.
6.1.1.3 At least 75% of hospitals update their Psych ED Holds at least once every 6 hours. Tracked monthly using EMResource reports. Report will be sent to ED Operations Committee, Mental Health Workgroup, and NCTTRAC Zones.
6.1.1.4 At least 75% of hospitals and special facilities update their available bed numbers at least once every 24 hours. Tracked monthly. Report will be sent to ED Operations Committee, REPC, and NCTTRAC Zones.
6.1.1.5 At least 75% of hospitals, special facilities, and EMS agencies update their EMResource point of contact at least once per year. Tracked annually using Status Type “Point of Contact Verified”.
6.1.1.6 At least 75% of hospitals, special facilities, and EMS agencies review their associated users list and send necessary changes to NCTTRAC at least once per year. Tracked annually using NCTTRAC email records.
6.1.1.7 At least 75% of EMS agencies monitor EMResource for status changes via active monitoring or status change notifications. Tracked annually via regional survey.

6.2 Hospitals
6.2.1 TSA-E uses the following Performance Metrics and Indicators to measure individual healthcare facility EMResource utilization success.
6.2.1.1 Hospital updates its Hospital Intake Status at least once every 24 hours 80% of the time. Tracked monthly using EMResource reports.
6.2.1.2 Hospital updates its NEDOCS at least once every 6 hours. Tracked monthly using EMResource reports.
6.2.1.3 Hospital updates its Psych ED Holds status at least once every 6 hours. Tracked monthly using EMResource reports.
6.2.1.4 Facility updates its available bed numbers at least once every 24 hours. Tracked monthly using EMResource reports.
6.2.1.5 Facility has at least one person with EMResource access on-site 80% of the time. Tracked annually via regional survey.
6.2.2 EMS

6.2.2.1 TSA-E uses the following Performance Metrics and Indicators to measure individual EMS Agency EMResource utilization success.
6.2.2.1.1 EMS Agency monitors EMResource for status changes via active monitoring or status change notifications. Tracked annually via regional survey.
6.2.2.1.2 EMS Agency has at least one person with EMResource access on-shift 80% of the time. Tracked annually using regional survey.

7. Accountability

7.1. NCTTRAC staff will run monthly reports on update frequency and make them available to NCTTRAC Committees. Frequent non-compliance will prompt informal follow-up by NCTTRAC staff; continued non-compliance will prompt review by SPI/related committee. Further actions against non-compliant organizations are to be determined by SPI/related committees and pushed to the NCTTRAC Board of Directors for action.

8. Additional Views

8.1 Clinical Views
8.1.1 TSA-E: Pediatric
8.1.1.1 Shows all County – Hospitals and County – Special Facilities Resource Types
8.1.1.2 Shows the following status types:
- Hospital Intake Status
- Transfer Line
- IBA: Pedi Monitored
- IBA: Pedi Non-Monitored
- IBA: PICU Monitored
- IBA: PICU Non-Monitored
- Pedi Only Vents

8.1.2 TSA-E: Perinatal
8.1.2.1 Shows all County – Hospitals and County – Special Facilities Resource Types.
8.1.2.2 Shows the following status types:
- Hospital Intake Status
- DSHS Maternal Designation
- OB Transfer Line
- Service: OB Transport
- Status: OB/L&D
- IBA: OB Antepartum
- IBA: OB L&D
- IBA: OB Recovery and Postpartum
- DSHS Neonatal Designation
- NICU Transfer Line
- Service: Neonatal Transport
- Status: NICU
- Status: ECMO
- Status: Therapeutic Hypothermia

- IBA: NICU Monitored
- IBA: NICU Non-Monitored

8.1.3 TSA-E: Psych

8.1.3.1 Shows all County – Hospitals and County – Special Facilities Resource Types with licensed psych beds.

8.1.3.2 Shows the following status types:

- Hospital Intake Status
- Psych ED Holds
- Psych: Pediatric
- Psych: Adolescent
- Psych: Adult
- Psych: Adolescent Chem. Dep.
- Psych: Adult Chem. Dep.
- Psych: Child Male (<=12)
- Psych: Child Female (<=12)
- Psych: Ado Male (13-17)
- Psych: Ado Female (13-17)
- Psych: Adult Male (>=18)
- Psych: Adult Female (>=18)
- Psych: Older Adult Male
- Psych: Older Adult Female
- Psych: Chem Dep Male
- Psych: Chem Dep Female
- Psych: Total Beds

8.1.4 TSA-E: Stroke

8.1.4.1 Shows all County – Hospitals and County – Special Facilities Resource Types.

8.1.4.2 Shows the following status types:

- Hospital Intake Status
- NEDOCS
- DSHS Stroke Designation
- Status: Stroke General Service
- Status: Stroke NeuroIR
- Status: Stroke NeuroSurg

8.1.5 TSA-E: Trauma

8.1.5.1 Shows all County – Hospitals and County – Special Facilities Resource Types.

8.1.5.2 Shows the following status types:

- Hospital Intake Status
- NEDOCS
- DSHS Trauma Designation
- Transfer Line
- Status: Anti-Venom
- Status: Burn
- Status: Hyperbaric Chamber
- Status: ICU

- Status: OR
- Status: Oral/Maxillofacial
- Status: Replant
- Status: Hand
- Status: ECMO
- Status: SAFE-Ready
- Status: Therapeutic Hypothermia

8.2 Zone Views

- Z8 – Dallas
- Z7 – Tarrant
- Z6 – Erath Hood Johnson S-vell
- Z5 – Collin, Hunt, Rockwall
- Z4 – Ellis, Kaufman, Navarro
- Z3 – Parker, Palo Pinto
- Z2 – Denton, Wise
- Z1 – Cooke, Fannin, Grayson

8.2.1 All zone views will contain the County – Hospitals, County – Special Facilities, County – EMS Agencies, and County – FROs located within the identified zone.

8.2.2 Individual zones will eventually have the opportunity to customize their specific zone view. Currently, all zone views have the same status types:

- Facility Type
- Hospital Intake Status
- NEDOCS
- IBA: Emergency Dept
- Psych ED Holds
- Psych: Total Beds
- Transfer Line
- MCI Green
- MCI Red
- MCI Yellow

8.3 Disaster Views

8.3.1 TSA-E: Bed Availability

8.3.1.1 Shows all County – Hospitals and County – Special Facilities Resource Types

8.3.1.2 Shows the following status types:

- IBA: MedSurg Monitored
- IBA: MedSurg Non-Monitored
- IBA: Pedi Monitored
- IBA: Pedi Non-Monitored
- IBA: Adult ICU Monitored
- IBA: Adult ICU Non-Monitored
- IBA: PICU Monitored
- IBA: PICU Non-Monitored
- IBA: NICU Monitored
- IBA: NICU Non-Monitored
- IBA: Burn Monitored
- IBA: Burn Non-Monitored

- IBA: Neg Pressure ER Beds
- IBA: Neg Pressure Inpatient Beds
- IBA: Emergency Dept
- IBA: Operating Rooms
- IBA: OB Antepartum
- IBA: OB L&D
- IBA: OB Recovery and Postpartum
- Adult & Pedi Vents
- Adult Only Vents
- Pedi Only Vents

8.3.2 TSA-E: Facility EM
8.3.2.1 Shows all County – Hospitals and County – Special Facilities Resource Types
8.3.2.2 Shows the following status types:
- Hospital Intake Status
- Command Center Activation Status
- Critical Utilities Availability

8.3.3 TSA-E: MCI Beds
8.3.3.1 Shows all County – Hospitals and County – Special Facilities Resource Types
8.3.3.2 Shows the following status types:
- MCI Green
- MCI Yellow
- MCI Red
- MCI Gray
- MCI Black
- DSHS Trauma Designation
- Hospital Intake Status

8.4 Resource Type Views
- TSA-E: EMS Agencies
- TSA-E: FROs
- TSA-E: LTC Facilities
- TSA-E: Specialty Facilities

8.5 Position-Specific Views
8.5.1 EMS/ED (Default View for ED Staff and EMS users)
- Hospital Intake Status
- NEDOCS
- Psych ED Holds
- Status: Trauma
- DSHS Trauma Designation
- DSHS Stroke Designation
- Status: 24/7 STEMI
- Status: OB/L&D
- Status: SAFE-Ready
- MCI: Green, Yellow, Red, Black
- Helipad

8.5.2 Transfer Centers (Default View for Transfer Center users)
8.5.2.1 Statuses to be determined

2019 ASA Recommendation: Options to Treat Arterial Hypertension in Patients with AIS Who Are Candidates for Acute Reperfusion Therapy[2]

Class IIb, LOE C-EO				
	Drug	**Starting dose**	**Titration**	**Maximum dose**
Patient eligible for acute reperfusion therapy except that BP > 185/110 mm Hg **If BP is not maintained ≤185/110 mm Hg, do not administer thrombolysis**	Labetalol	10-20 mg IV over 1-2 minute	may repeat 1 time	
	Nicardipine	5 mg/hour IV	titrate up by 2.5 mg/hour every 5-15 minute	15 mg/hour
	Clevidipine	1-2 mg/hour IV	titrate by doubling the dose every 2-5 minutes	21 mg/hour
	Other drugs (e.g. hydralazine, enalaprilat) may also be considered			
If systolic BP >180-230 mm Hg or diastolic BP >105-120 mm Hg	Labetalol	10 mg IV followed by continuous infusion	2-8 mg/minutes	
	Nicardipine	5 mg/hour IV	titrate up by 2.5 mg/hour every 5-15 minutes	15 mg/hour
	Clevidipine	1-2 mg/hour IV	titrate by doubling the dose every 2-5 minutes	21 mg/hour
	If BP is not controlled or diastolic BP is>140 mm Hg, consider IV sodium nitroprusside			
Management of BP during and after thrombolysis or other acute reperfusion therapy to maintain BP ≤180/105 mmHg				
Monitor BP every 15 minutes for 2 hours from the start of thrombolysis therapy, then every 30 minutes for 6 hours, and then every hour for 16 hours.				

2019 ASA Recommendation: Management of Orolingual Angioedema Associated with IV thrombolysis Administration for AIS[2]

Class IIb, LOE C-EO	
1. Maintain airway	Endotracheal intubation may not be necessary if edema is limited anterior tongue and lips.
	Edema involving the larynx, palate, floor of the mouth, or oropharynx with rapid progression (within 30 minutes) poses a higher risk of requiring intubation.
	Awake fiberoptic intubation is optimal. Nasal-tracheal intubation may be required but poses the risk of epistaxis post-IV thrombolysis. Cricothyroidotomy is rarely needed and is also problematic after IV thrombolysis.
2. Discontinue IV thrombolysis infusion and hold ACE inhibitors	
3. Administer IV methylprednisolone 125 mg	
4. Administer IV diphenhydramine 50 mg	
5. Administer ranitidine 50 mg IV or famotidine 20 mg IV	
6. If there is a further increase in angioedema, administer epinephrine (0.1%) 0.3 mL subcutaneously or by nebulizer 0.5 mL	
7. Icatibant, a selective bradykinin B_2 receptor antagonist, 3 mL (30 mg) subcutaneously in the abdominal area; additional injection of 30 mg may be administered at intervals of 6 hours not to exceed a total of 3 injections in 24 hours; and plasma-derived C1 esterase inhibitor (20 IU/kg) has been successfully used in hereditary angioedema and ACE inhibitor-related angioedema	
8. Supportive care	

NCTTRAC
NORTH CENTRAL TEXAS TRAUMA REGIONAL ADVISORY COUNCIL

Coordination Flowchart

Plan/Program/Guideline Currently in Place?

No → **Begin with Plan/Program/Guideline Template** → **Develop Plan/Program/Guideline**

Yes

Documentation Review of:

FY23 Regional Stroke System Plan

Primary **Committee/ Workgroup**
Revise Plan/Program/Guideline (Track Changes)
EHS staff to post to website and send appropriate notification

Stroke Committee Review Date: 10/05/2022
Comments: Reviewed and approved
NCTTRAC Staff Initials CG Chair Sign Off: Dr. Robin Novakovic Date: 10/05/2022

Committee Coordination

- Air Medical
- Cardiac
- ED Ops
- EMS
- Pediatric
- Perinatal
- REPC
- Stroke
- Trauma

Pediatric Committee Review Date: 11/02/2022
Comments: Electronic vote of approval
NCTTRAC Staff Initials CG Chair Sign Off: KaLinda Evans Date: 11/02/2022

ED Ops Committee Review Date: 11/02/2022
Comments: Electronic vote of approval
NCTTRAC Staff Initials CG Chair Sign Off: Don Tucker Date: 11/02/2022

Air Medical Committee Review Date: 11/02/2022
Comments: Electronic vote of approval
NCTTRAC Staff Initials CG Chair Sign Off: Jeff Donson Date: 11/02/2022

EMS Committee Review Date: 11/02/2022
Comments: Electronic vote of approval
NCTTRAC Staff Initials CG Chair Sign Off: Kevin Sandifer Date: 11/02/2022

Medical Directors Focus Group

Medical Director Focus Groups (Initial/Date)

- ☐ Air Medical MD:
- ☐ Cardiac MD:
- ☐ ED Ops MD:
- ☐ EMS MD:
- ☐ Pediatric MD:
- ☐ Perinatal MD:
- ☐ REPC MD:
- ☑ Stroke MD: Reviewed and Approved - RN, JW - 10/07/2022
- ☐ Trauma MD:

Medical Directors Committee

Medical Directors Committee Review Date: 11/14/2022
Comments: Electronic vote of approval
NCTTRAC Staff Initials CG Chair Sign Off: Ray Fowler, MD Date: 11/14/2022

Legal Counsel Review (PRN)

Signature
Date:

Finance Committee Review (PRN)

Signature
Date:

Final NCTTRAC Staff Review

NCTTRAC Staff Review Date: 11/17/2022
Comments: Reviewed and approved
Staff Initials JD Date: 11/17/2022

NCTTRAC Administration Review Date: 11/17/2022
Comments: Reviewed, reformatted
Staff Initials SB Date: 11/17/2022

NCTTRAC Executive Review Date: 11/18/2022
Comments: Recommend BoD endorsement for General Membership approval
Staff Initials HJA Date: 11/18/2022

Board of Directors Endorsement/Approval

NCTTRAC Administration submit to Board of Directors Date: 11/18/2022
NCTTRAC Board of Directors Approval Date: 11/28/2022

General Membership approval (PRN)
Date: 12/13/2022

→ **Final Format for Publication**
Date: 12/13/2022

→ **Publish and Post on website**
Date: 12/13/2022

For further Committee review continue on next page

Committees Continued

REPC Committee Review Date: 11/02/2022
Comments: Electronic vote of approval
NCTTRAC Staff Initials CG Chair Sign Off: Stephan Epley Date: 11/02/2022

Select Committee Review Date: _____
Comments: _____
NCTTRAC Staff Initials _____ Chair Sign Off: _____ Date: _____

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Comments: _____
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Select Committee Review Date: _____
Comments: _____
NCTTRAC Staff Initials _____ Chair Sign Off: _____ Date: _____