

**2019**

# Emergency Healthcare System Plan



Central Texas Regional Advisory Council

**Trauma Service Area - L**

[www.TSA-L.com](http://www.TSA-L.com)

## INTRODUCTION

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Central Texas Regional Advisory Council (CTRAC) was established in 1992 through a grant from the \*Texas Department of Health's Regional Trauma System Development Grant Program. It is one of 22 Trauma Service Areas in Texas and consists of six counties known as Trauma Service Area – L. CTRAC is recognized by the IRS as a 501(c) 3 non-profit organization since 1998.

During the 71<sup>st</sup> legislative session (1989), House Bill 18 was passed directing the establishment of a statewide trauma system for Texas. Specific rules and regulations related to the development of the statewide system were identified and implemented.

The state was divided into 22 Trauma Service Areas that account for the 254 counties in Texas. A Regional Advisory Council for trauma serves each Trauma Service Area. The Regional Advisory Councils were charged with developing a system plan based on standard guidelines for implementing a comprehensive trauma care system. The development of a regional plan is the ultimate responsibility of the stakeholders and participants of the Regional Advisory Councils. Some elements of the plan are required, while others may be added to best reflect the needs of the community. While the Plan may have numerous components, its heart is the dedication of the professionals who transform these guidelines into reality.

Since its inception, CTRAC has been active in trauma prevention and education programs as well as development and implementation of trauma patient care standards. Maintaining public education and awareness activities to increase the understanding of the trauma care system, access to trauma care and prevention of injuries, and providing coordination of acute medical services in mass casualty and disaster settings is an integral part of the mission and goals of CTRAC.

CTRAC covers over 5,467 square miles and has a population of 460,641. Fifty-five percent of the population lives outside of the largest cities of Killeen and Temple. CTRAC has a Level I Trauma Center, Scott & White Medical Center – Temple, as its Lead Trauma Facility. Additionally, Fort Hood military base, located in Bell and Coryell Counties is the largest military installation in the free world with comprehensive training facilities for reserves, National Guard units from across the country, and NATO Allies. CTRAC consists of over 4,485 highway miles with Interstate Highway 35 and 14 dividing the region. Over 80% of CTRAC is rural, frontier rural and many areas are considered primitive- frontier.

Trauma and acute care should be part of a seamless emergency healthcare system that provides patients with well-organized and high-quality care. Incorporation of an overall health care system requires cooperation and availability of each component of the system.

The essence of an emergency healthcare system is the ability to get the right patient to the right hospital at the right time to reduce death and disability. CTRAC members have made great strides toward this goal and continue to collaborate and strive to improve care of trauma and acute patients.

*(\*Texas Department of Health became Texas Department of State Health Services in 2005)*

# Central Texas Regional Advisory Council

## Mission Statement

To provide the infrastructure and leadership necessary to reduce death and disability through coordinated efforts focused exclusively on the Emergency Healthcare System within Trauma Service Area L.

## Vision

To be a model leader in Texas for meeting the needs of the entire Emergency Healthcare System.

## Purpose

The purpose of this organization is to:

1. Advance and improve the state of healthcare for the injured patient within the counties of Trauma Service Area L (Central Texas Regional Area).
2. Decrease morbidity and/or mortality which results from injury.
3. Encourage activities designated to promote cooperation among member organizations.
4. Improve funding of trauma care providers within the counties served by this council.
5. Maintain an Emergency Healthcare System Plan for the RAC which is based on standard guidelines for comprehensive system development.
6. Improve public awareness of the methods of accessing the trauma and acute care systems and preventing injury.
7. Coordinate responses to mass casualty and disaster events.

<b>County</b>	<b>Population (2010 census)</b>	<b>Square Miles</b>	<b>9-1-1 EMS Providers</b>	<b>First Responder Organizations</b>	<b>Rural / Urban</b>
Bell	323,037	1088	7	13	Urban
Coryell	77,231	1057	2	6	Urban
Hamilton	8,307	836	1	2	Rural
Milam	24,757	1022	2	0	Rural
Mills	4,828	750	1	0	Rural
Lampasas	20,107	714	2	3	Urban

## **BOARD OF DIRECTORS**

<b><u>Position</u></b>	<b><u>Name</u></b>	<b><u>Entity</u></b>
<b>Chair</b>	Taylor Ratcliff, MD	
<b>Vice Chair</b>	Angie Gentry, RN, BSN	Baylor Scott & White – Temple
<b>Secretary</b>	Wesley Gilbreath	Belton Fire Department
<b>Treasurer</b>	Crissie Richardson, RN, BSN	Premier ER
<b>Immediate Past Chair</b>	(Vacant)	(Vacant)
<b>Injury Prevention &amp; Community Education Committee Representative</b>	Stacy Sepeda, RN, BSN	Seton Medical Center Harker Heights
<b>Hospital Care Committee Representative</b>	Heidi Lavka, RN	Carl R Darnall Army Medical Center
<b>Healthcare Coalition Emergency Preparedness Committee Representative</b>	Jennifer Henager	Bell County Office of Emergency Management
<b>EMS Operations Committee Representative</b>	Justin Bright, LP	Air Evac LifeTeam
<b>Medical Advisory Committee Representative</b>	Dr. Justin Regner	BSW – Temple
<b>Trauma Program Representative</b>	Heidi Lavka, RN	Carl R Darnall Army Medical Center

<b>Lead Pediatric Facility Representative</b>	Cassandra Campbell, RN, MSN	McLane Children’s Baylor Scott & White Medical Center
<b>Military Facility Representative</b>		
<b>Rural Area At-large</b>	Daniel Lay, EMT-P	Coryell Health EMS
<b>Physician At-large</b>	Scott Sagraves, MD	BSW – Central Division
<b>Community At-large</b>	Azeita Taylor	

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## **COMMITTEES & WORKGROUPS**

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<b><u>Injury Prevention &amp; Community Education Committee</u></b>	
<b>Chair</b>	Thomas Pechal
<b>Vice Chair</b>	Kayla Cehand
<b>Mission</b>	To provide leadership and resources to facilitate educational programs that increase awareness by changing behaviors regarding prevention of injuries and promote community safety.

<b><u>Hospital Care Committee</u></b>	
<b>Chair</b>	Heidi Lavka
<b>Vice Chair</b>	Cassie Campbell
<b>Mission</b>	To serve as a liaison between health care facilities within this region to include the monitoring of system development, coordination of activities, performance improvement, facility designations and hospital training.

<b><u>EMS Operations Committee</u></b>	
<b>Chair</b>	Justin Bright
<b>Vice Chair</b>	Elizabeth Hicks
<b>Mission</b>	To serve as a liaison for pre-hospital providers within this Region to include the monitoring of system development, coordination of activities, performance improvement, and pre-hospital training.

<b><u>Medical Advisory Committee</u></b>	
<b>Chair</b>	Dr. Justin Regner
<b>Vice Chair</b>	Dr. Tim Rudolph
<b>Mission</b>	To provide oversight and assistance related to patient care/system issues for the CTRAC region and assist the CTRAC PI Committee with PI issue resolutions.

<b><u>Healthcare Coalition Emergency Preparedness</u></b>	
<b>Chair</b>	Angie Gentry
<b>Vice Chair</b>	Bob Harrell
<b>Mission</b>	To coordinate preparedness and responses to acute medical mass casualty and disaster situations.

<b><u>Perinatal Committee</u></b>	
<b>Chair</b>	Dr. Nathan Drevers
<b>Vice Chair</b>	Arica Smith
<b>Mission</b>	To coordinate development of a regional perinatal system.

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## *EMResource® Guidelines*

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### **Goal**

To provide guidelines for EMResource® use by hospitals, pre-hospital providers, public health departments, as well as others who have access to the system.

### **Hospital Responsibility**

All local, state, and federal laws, including but not limited to EMTALA, pertaining to patients presenting to emergency departments for care still apply. Nothing in this plan should be interpreted in a manner that would violate the right of patients seeking emergency care. Patients presenting to any hospital in the care of EMS will not be denied triage/treatment on the basis of that hospital's patient acceptance status.

### **REQUIREMENTS**

- 1) All listed hospitals are required to update the EMResource® daily between 7:00am and 9:00am or as situations warrant as described/defined in this document.
- 2) All listed EMS agencies are required to update the EMResource® at a minimum of twice a week, preferably Mondays and Fridays between 7:00 am and 9:00 am or as situations arise as described/defined in this document. Air medical services should update daily as feasible.

### **EMResource® PROCEDURES AND POLICIES:**

#### A. EMResource® Description

1. EMResource® is a Web-based program providing real-time information on status, capacity and availability of resources for emergency departments, hospitals and transport services.
2. EMResource® is used to coordinate "routine" and emergency medical operations [e.g., mass casualty incidents (MCI)] throughout the defined service area. The purpose of is not to make decisions regarding transportation, but to facilitate patient transportation and communication.
3. EMResource® is used to communicate important information, such as disasters, public health alerts or notification of potential terrorist events, simultaneously and consistently to all users.
4. EMResource® is operated on a computer located in the hub of operations, i.e., in the hospital emergency department or other location staffed 24 hours a day and in the dispatch centers of transporting EMS agencies. EMResource® is in use 24 hours a day, seven days a week.

#### B. Purpose

1. The implementation of EMResource® is an effort to efficiently and effectively:
  - a. Communicate situations in which the diversion of an ambulance(s) may be necessary due to the existence of temporary conditions in hospital emergency departments or the hospital that may affect patient care.
  - b. Determine hospital patient capacity, availability of staffed beds and availability of specialized treatment capabilities during an MCI or a terrorist incident.
  - c. Notify pre-hospital care providers, as well as other health care facilities, of temporary limitations of services or resources at receiving hospitals.

d To provide real-time public health and other special alerts.

2. With EMResource®, the definition of hospital status is standardized across the entire state. Participating hospitals will update EMResource® with their current hospital status. However, EMS providers and/or emergency medical systems should continue to follow their local policies and procedures regarding the determination of hospital destinations.
3. Use of EMResource® will aid in taking patients to the most appropriate facility.
4. Use of EMResource® and these policies is intended to effectively manage and coordinate hospital and EMS resources, including but not limited to:
  - a Minimizing prolonged patient transport times.
  - b Minimizing prolonged out-of-hospital care when definitive hospital-based resources are needed.
  - c Determining EMS resources available to the service area.
  - d Helping to determine or obtain timely information important during an MCI, public health or other special event.

### C. EMResource® Functions

1. Hospital Emergency Department Status
  - a Participating hospitals update their routine emergency department/hospital status at defined intervals. (Daily between 7:00am and 9:00am or as situation warrants.)
  - b A status screen displays the status of each hospital in service area.
  - c Hospitals, EMS services and other users view the current status page to assess system capacity, potential bottlenecks and the availability of resources.
2. Mass Casualty Incident Support
  - a Unplanned, acute, medical emergencies involving significant numbers of ill or injured people require instantaneous EMS resource allocation.
  - b Participating hospitals enter MCI details required to respond.
  - c Each hospital then enters its ability to accept patients including decontamination patients and/or special needs patients.
  - d Incident-specific evaluation and treatment protocols are easily uploaded and immediately available to all facilities.
  - e Critical information can be instantaneously disseminated to health care providers, public health agencies and other key emergency medical personnel.

**Hospital Status Definitions:** **Open — green color:** Accepting all traffic

**Divert — red color:** Diverting ambulance traffic (update every 2 hrs.) **Resource Alert—maroon color:** Actual or pending resource limitations exist

**Internal Disaster — black color:** Indicates that there is an environmental or physical plant situation, such as utility outage, unsafe situation in the hospital, etc.

The following abbreviations and terms may be used in comments as resources:

- Med/Surg Beds - Medical/Surgical inpatient beds
- ICU Beds – Adult Intensive Care Unit beds to include medical, surgical, or coronary.
- Telemetry Beds - Beds with monitoring capabilities



- NICU Beds - Beds in the Neonatal Intensive Care Unit
- PICU Beds - Beds in the Pediatric Intensive Care Unit
- PEDI Beds - Pediatric beds
- L & D Beds - Beds in Labor and Delivery
- Psych Beds - Available beds in the Psychiatric Unit
- Closed Psych beds – Locked Psychiatric beds
- OR - Operating Room
- Trauma Center Level - Designated Trauma Center Level I, II, III, or IV.
- CT SCAN - Computerized axial tomography
- Fixed MRI - Fixed Magnetic Resonance Imaging Unit
- Mobile MRI - Mobile Magnetic Resonance Imaging Unit

**Pre-Hospital Status Definitions:**

**Available – green color** - Unit or organization is ON-CALL and AVAILABLE to respond to emergency calls

**Caution – yellow color** - Resource limitations exist. Must specify in comments.

**Unavailable – red color** - Unit or organization is UNAVAILABLE TO RESPOND to new emergency requirements currently.

**D. Primary Users**

1. Primary users are service area hospitals, pre-hospital agencies, EMS first responders, public health, and mental health. Additional primary users may be added as they are identified. Primary users have read and write access to their specific information on the system and read-only access to all other users' information.
2. Primary users may view status information and update their respective area service data. User-specific historical data also can be retrieved for data collection, downloading or printing.

**E. Secondary Users**

1. Secondary users are all other interested agencies such as Offices of Emergency Management, EMS dispatchers, etc. These users will have read only access to the system.
2. Secondary users may view defined area status information. These users cannot update or alter system information unless mutually agreed upon by the Primary user agency and the Secondary user agency.

**F. Access to Data**

1. The Administrator will have full access to EMResource® data.
2. The following policy is in place for data access:
  - a. Each Primary User shall have access to its individual data elements.
  - b. Anyone seeking data queries of a specific facility's information should direct their request to Administrator or that specific Primary User.
  - c. Requests from the public and media for statistics should be given to that agency's designated spokesperson.

**G. Accessing EMResource® Help**

1. First discuss any EMResource® problems you are encountering with your own IT Department.
2. Technical assistance: EMResource® has a 24-hour help desk to assist users with technical issues with the operation of EMResource®. They can be reached at (888) 735-9559.

## EMS Providers

County	EMS Provider	Contact	Level	RAC Member
<b>Bell</b>	Belton Fire / EMS MD: Dr. Taylor Ratcliff	PO Box 120 Belton 76513	BLS w/MICU	Yes
	Harker Heights Fire / EMS MD: Dr. Taylor Ratcliff	401 Indian Trail Harker Heights 76548	MICU	Yes
	Scott & White EMS, Inc. MD: Dr. Margaret McGraw	2401 S 31 <sup>st</sup> St. Temple 76508	BLS w/ MICU	Yes
	Temple EMS MD: Dr. Margaret McGraw	505 N. 3 <sup>rd</sup> St Temple 76501	BLS w/ MICU	Yes
	Killeen Fire / EMS MD: Dr. Chris Colvin	201 N. 28 <sup>th</sup> Killeen 76541	MICU	Yes
	Carl R Darnall AMC EMS MD: Dr. Kevin Schlicksup	36065 Santa Fe Avenue Ft Hood 76544	BLS w / MICU	Yes
	Acadian Ambulance MD: Dr. Emily Kidd	4100 Ed Bluestein Blvd #100 Austin 78721	BLS w/ MICU	Yes
<b>Coryell</b>	Coryell Health EMS MD: Dr. Jeff Bates	1507 W. Main Gatesville 76528	BLS w/ MICU	Yes
	Copperas Cove Fire / EMS MD: Dr. Taylor Ratcliff	415 S. Main St Copperas Cove 76522	BLS w/ MICU	Yes
<b>Hamilton</b>	Hamilton EMS MD: Dr. Tim Rudolph	400 N. Brown Hamilton 76531	BLS w / MICU	Yes
<b>Lampasas</b>	Acadian EMS MD: Dr. Emily Kidd	4100 Ed Bluestein Blvd #100 Austin 78721	BLS w/ MICU	Yes
<b>Milam</b>	AMR – Milam MD: Dr. Mark Ackrell	3601 Bluestein Blvd. Austin 78721	BLS w/ MICU	Yes
	Thorndale EMS MD:	PO Box 308 Thorndale 76557	BLS	Yes
<b>Mills</b>	Hamilton EMS MD: Dr. Tim Rudolph	400 N. Brown Hamilton 76531	BLS	Yes

## *First Responder Organizations*

<b>County</b>	<b>First Responder Organization</b>	<b>Contact</b>	<b>RAC Member</b>
<b>Bell</b>	Bartlett VFD MD: Dr. Taylor Ratcliff	PO Drawer H Bartlett, TX 76511 254-527-3219	No
	Central Bell County VFD MD: Dr. Taylor Ratcliff	100 N Main St Nolanville, TX. 76559 254-317-9656	No
	Fort Hood FD MD: Kevin Schlicksup	Bldg. 23025 Fort Hood, TX 76544 254-553-0640	Yes
	Holland VFD MD: Dr. Taylor Ratcliff	PO Box 326 Holland 76534 254-857-2365	Yes
	Little River Academy VFD MD: Dr. Taylor Ratcliff	PO Box 351 Little River 76554 254-982-4251	Yes
	Moffat VFD MD: Dr. Taylor Ratcliff	5660 Lakeair Blvd. Temple 76502 254-986-8388	No
	Morgan's Point First Responders MD: Dr. Taylor Ratcliff	8 Morgan's Point Blvd Belton 76513 254-780-2022	No
	Rogers VFD MD: Dr. Margaret McGraw	PO Box 309 Rogers 76569 817-642-3312	No
	Salado VFD MD: Dr. Margaret McGraw	PO Box 503 Salado 76571 254-947-8961	Yes
	Southwest Bell County VFD MD: Dr. Chris Colvin	PO Box 10792 Killeen 76547 254-526-4500	No
	Sparta VFD MD: Dr. Taylor Ratcliff	7041 Sparta Rd Belton 76513 254-721-6085	No
	Stillhouse VFD MD: Dr. Taylor Ratcliff	PO Box 457 Belton 76513 254-933-2302	No
	Temple Fire and Rescue MD: Dr. Margaret McGraw	210 N. 3 <sup>rd</sup> Street Temple 76501 254-298-5682	Yes
Troy VFD MD: Dr. Taylor Ratcliff	PO Box 1 Troy 76579 254-938-2188	No	

<b>County</b>	<b>First Responder Organizations</b>	<b>Contact</b>	<b>RAC Member</b>
<b>Coryell</b>	Coryell City /Osage VFD MD: Dr. Jeff Bates	301 CR 255 Oglesby 76561 254-230-8758	No
	Flat First Responder Organization MD: Dr. Jeff Bates	PO Box 60 Flat 76526 254-487-2936	No
	Gatesville VFD MD: Dr. Jeff Bates	109 S. 23 <sup>rd</sup> Gatesville 76528 254-865-8416	No
	Jonesboro VFD MD: Dr. Jeff Bates	PO Box 6 Jonesboro 76538 254-463-2200	No
	Oglesby VFD/FRO MD: Dr. Jeff Bates	PO Box 185 Oglesby 76561 817-470-2204	No
	Turnersville VFD MD: Dr. Jeff Bates	1205 CR 226 Gatesville 76528 254-494-6585	No
<b>Hamilton</b>	Hico VFD	PO Box 383 Hico 76457 254-485-1933	No
	Jonesboro VFD	PO Box 6 Jonesborough 76538	No
<b>Lampasas</b>	Lampasas Fire Department	1107 E. 4th Lampasas 76550 512-556-3446	No
	Lometa VFD	PO Box 246 Lometa 76853	No
	Kempner VFD	PO Box 136 Kempner 76539 254-535-2199	No
<b>Milam</b>	No Registered EMS-First Responders		
<b>Mills</b>	No Registered EMS-First Responders		

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## *Air Medical Providers*

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<b>Name</b>	<b>Location</b>	<b>Address</b>	<b>Dispatch Number</b>
<b>Air Evac LifeTeam AEL66</b>	Killeen	1210 Bell Tower Dr. Killeen Base Phone: 254- 628- 1275 MD: Dr. Darioush Kavospour	877-633-3544
<b>PHI Air Medical Med 1-5</b>	Temple	2401 S. 31 <sup>st</sup> St. MS 12-100-01 Temple, TX 76508 MD: Dr, Jay Kovar Assoc MD: Dr. Taylor Ratcliff	877-435-9744

## Trauma Facilities

<u>County</u>	<u>Trauma Designation Level</u>	<u>Hospital</u>	<u>Address</u>
<b>Bell</b>	<b>Level I</b>	Baylor Scott & White Medical Center – Temple TMD: Dr. Justin Regner TPM: Angie Gentry	2401 S. 31 <sup>st</sup> St. MS-11-A306 Temple 76508 254-724-8202
	<b>Level II</b>	McLane Children’s Medical Center - BSW TMD: Dr. Danny Little TPM: Kayla Cehand	1901 SW HK Dodgen Loop MS- CH-1205 Temple 76502 254-771-8600
	<b>Level III</b>	Carl R Darnall Army Medical Center TMD: LTC Jonathon Lundy TPM: Heidi Lavka	36065 Santa Fe Avenue Ft Hood 76544 254-553-3979
	<b>Level IV</b>	Advent Health Central Texas TMD: Dr. Daniel McLaughlin TPM: Laura Stephens	2201 S. Clear Creek Rd Killeen 76549 254-526-7523
	<b>Level IV</b>	Seton Medical Center Harker Heights TMD: Dr. Jared Kennedy TPM: Joy Custer	850 W. Central Texas Exp. Harker Heights 76548 254-690-0900
<b>Coryell</b>	<b>Level IV</b>	Coryell Health System TMD: Dr. Jeff Bates TPM: Kristin Cummings	1507 W. Main St Gatesville 76528 254-248-6300
<b>Hamilton</b>	<b>Level IV</b>	Hamilton General Hospital TMD: Dr. Tim Rudolph TPM: Angela Newton	400 N. Brown St Hamilton 76531 254-386-1600
<b>Lampasas</b>	<b>Level IV</b>	Advent Health Rollins Brook TMD: Dr. Ron Johnson TPM: Laura Metcalf	608 N. Key Ave Lampasas 76550 512-564-3200

## *General Facilities*

<u>County</u>	<u>Hospital</u>	<u>Address</u>
<b>Bell</b>	Cedar Crest Hospital	3500 S IH-35 Belton 76513 254-939-2100
	Olin E. Teague Veteran’s Medical Center, Central Texas Veteran’s Health Care System	1901 Veterans Memorial Dr Temple 76504 254-778-4811
	Advent Health Behavioral Health	2201 S Clear Creek Rd Killeen 76549 254-628-1000
	BSW - Continuing Care Hospital	546 N Kegley Rd Temple 76502 254-215-0900
<b>Milam</b>	No hospitals located in this county.	

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## SYSTEM ACCESS

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### **Goal**

The Goal for System Access within CTRAC is two-fold. First, rapid access to notification of the need for emergency and trauma care at any location within CTRAC must be available to all persons in the Region. Second, Emergency Medical Services (EMS) must be rapidly available to provide quality health care to injured or ill persons in each CTRAC Community. In portions of this Region, First Responder Organizations (FRO) may provide initial treatment pending EMS arrival.

### **Objectives**

1. To ensure that all persons located in Trauma Service Area L will have the availability to access Emergency Dispatch for EMS services.
2. To ensure emergency healthcare providers have communication equipment available.
3. To strive to maintain an adequate number of First Responders and EMS providers that have the knowledge, skills, and equipment needed to provide emergency care to persons requesting assistance within the Region.

### **Discussion**

Basic '911' is a regional system providing dedicated trunk lines, which allow direct routing of emergency calls. Routing is based on the telephone exchange area, not municipal boundaries. Automatic Number Identification (ANI) and Automatic Location Identification (ALI) are not provided with Basic '911'. All the '911' systems within CTRAC are enhanced '911'.

Enhanced '911' is a system, which automatically routes emergency calls to a pre-selected answering point based on geographical location from which the call originated. All '911' systems in CTRAC are enhanced with different levels of service.

This system engages when a telephone caller dial '911'. The call is routed to the local telephone company or CO where the ANI is attached to the voice and sent to the Public Safety Answering Point (PSAP). With ALI and selective routing, the call is set to the CO and is assigned an address to the phone number electronically and routes the call to the designated PSAP.

ANI is a system capability that enables an automatic display of the seven-digit number of the telephone used to place a '911' call. ALI is a system that enables the automatic display of the calling party's name, address and other information.

Alternate Routing is a selective routing feature which allows '911' calls to be routed to a designated alternative location if all incoming '911' lines are busy, or the central system (PSAP) closes for a period.

Selective Routing (SR) is a telephone system that enables '911' calls from a defined geographic area to be answered at a pre-designated PSAP.

Emergency Care providers for accessing emergency communications use a variety of methods, such as 800 MHz, VHF, and UHF frequencies. CTRAC always strives to ensure interoperable communications.



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## COMMUNICATIONS

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### **Goal**

The Goal for Communications within CTRAC is to ensure communication capability between EMS providers, medical control, receiving facilities; and other First Responders entities. Rapid dispatch and notification of the need for emergency and trauma care at any location within TSA- L must be available to all persons in the region. Each agency is responsible for monitoring their own response time(s) using national established guidelines for their geographical area.

### **Objectives**

1. To facilitate regional communications, and to work cooperatively with the Central Texas Council of Governments (CTCOG) to ensure that all EMS & First Responder Units as well as hospital emergency personnel will have a list of the communication devices & operating frequencies of the EMS and emergency care providers operating in the CTRAC region and to encourage all participating agencies to enter into a Memorandum of Understanding with the State of Texas for adherence to established permissions and guidelines for use of interoperability or mutual aid radio channels.
2. To ensure that all EMS providers, First Responders, and hospital facilities in the CTRAC region have functional communications equipment in order to communicate information related to the patient's condition, the need for medical, EMS, or helicopter back-up, and to receive and communicate information related to patient care and disposition.
3. To ensure that emergency dispatch within the CTRAC region is accomplished by persons who have the knowledge, skills, and equipment necessary to rapidly mobilize the appropriate level of emergency care to persons requesting assistance throughout the region. It is recommended that dispatchers attend Emergency Medical Dispatch training or other appropriate training for consistent knowledge among dispatchers within the CTRAC region.
4. To ensure agencies are utilizing the National Incident Management System (NIMS)/Incident Command System (ICS) Communications for Multi-agency scenes.
5. To establish communications protocol for interagency responses that serve the best interest of all agencies involved in remediating the emergency they are currently working on and to do this in a manner that is consistent with the utilization of the Texas Statewide Interoperability Channel Plan when possible.

### **Discussion**

There are numerous communication systems currently in use in the CTRAC. In time of disaster it is essential that all agencies can communicate seamlessly and that all agencies and their employees are extremely familiar with all communication capabilities that are available to their agency. Regardless of the method that may be used on a regular basis to communicate with other emergency service agencies and hospitals, in a time of disaster these normal communication mediums may be overwhelmed and or may fail. The use of multiple communications systems ensures regional communications are maintained between public and private EMS agencies, police, fire, hospital entities and other government and non-government entities, however, all personnel that may be called upon to use wireless and wired communications must be proficient in the use of those systems in worst case scenarios.

Dispatch - Emergency dispatch in each of the six (6) CTRAC counties is accomplished through various methods (i.e., sheriff's office, local police department, or county 911 services). All 911 PSAP's in the CTRAC are equipped with a Director IP radio system or its equivalent. These Director IP or equivalent radio systems have communication capability for day to day operations on frequencies (channels) designated by each agency as well as designated VHF and 800MHz Interoperability channels. Each of these systems also can cross link (patch) multiple radios to provide users operating on different frequencies the ability to communicate with other users regardless of the frequency band that they have access to.

Pre-hospital Care Providers – EMS Providers throughout CTRAC use various frequencies and communication devices to handle day to day radio traffic, those frequencies are most typically VHF, UHF and 800 MHz Traditional UHF MED CHANNELS are still in use in many areas to contact area hospitals; however, this is not all inclusive to all hospitals as a result other communications methods are being used on a day to day basis. It is the intent of the CTRAC to support a more streamlined method for agencies communications capabilities and needs in the area and to work toward the simplest method possible that meets all the needs of each agency.

Hospital Care Providers - All CTRAC hospital facilities maintain communications capability with pre- hospital care providers using various communications means to include VHF, UHF, 800, cellular phones, or standard phone lines. CTRAC purchased each facility an Amateur (HAM) radio.

CTRAC is an active participant in the interoperability planning efforts being address by the Central Texas Council of Governments. CTRAC strives to remain at Level 4 interoperability will support all efforts to reach and maintain an interoperability Level 6.

The Central Texas Council of Governments (CTCOG) administer the '911' communications system in Texas Trauma Service Area–L (CTRAC). All the '911' systems within Trauma Service Area – L are enhanced '911'. Enhanced '911' is a system, which automatically routes emergency calls to a pre-selected answering point based upon geographical location from which the call originated. All '911' systems in CTRAC are enhanced with different levels of service.

**Interagency Air Medical Operations** – Due to the number of air medical responses that occur in the CTRAC each year, and in effort to enhance safety measures associated with air medical operations in the CTRAC region, it ESSENTIAL that units on the ground have a reliable means of communicating with responding air medical units. Air medical personnel should have the capability of tuning the aircraft radio to various departmental frequencies, but in order to avoid confusion and reduce the risks involved with helicopter operations at emergency scenes all agencies should utilize primarily one of the following channels/talk-groups VMED28, Copperas Cove Helicopter talk- group or Bell County Helicopter talk-group to communicate with air medical units whenever possible. Backup channels will be VFIRE21 and Bell County VFD main. If more than one helicopter will be responding to the same incident, the incident commander shall notify each air medical agency dispatch with the ETA of the other aircraft and the appropriate radio frequency for all to communicate. Crews should utilize common aviation frequency 123.025 to communicate air to air during multi-aircraft scene responses if unable to establish communication via above listed frequencies.

**Interagency Operations-** When two or more agencies will be working together on an emergency scene those agencies under the direction of the established IC should communicate on frequencies (channels/talk-groups) that are designated under the Texas Statewide Interoperability Channel Plan as a priority.

Users on 800 MHz radio communications systems primarily in Copperas Cove and Bell County will use designated MUTUAL channels as established by the Bell County Communications Center. And in situations where VHF and 800 MHz users will be working jointly, a patch, or patches may be created at the discretion of the IC.

**Radio Site on Wheels (SOW)** – The CTRAC has a SOW that is available for use at any emergency scene within the CTRAC. There is no cost for the use of the SOW for any recognized first responder organization that requests it. A request for deployment of the SOW may be made to the Copperas Cove Police Department at 254-547-8222, option 1.

**The communication system includes the following CTRAC counties:** Bell, Coryell, Hamilton, Lampasas, Milam, and Mills.

## ***Bell County***

- Bell County has four communicationsCenters.
- An 800 MHz system for the civilian population
- A 400 MHz system for the military emergency responders including mutual aid within civilian communities.
- 400 MHz system for Baylor Scott & White Med Comm.
- UHF Fire Dispatch Frequency is 460.525 MHz
- Bell County Communications Center has countywide repeaters on Interop Channels 8CALL90 and 8TAC91. The Communications Center consoles also have access to VCALL10 andVFIRE21.
- Bell County utilizes a UHF paging system forVFD's

Bell County Communications Center provides communication for the following:

<b>LAW ENFORCEMENT</b>	<b>FIRE</b>	<b>EMS</b>	<b>HOSPITALS</b>	<b>OTHER</b>
Bartlett PD	Bartlett VFD	Acadian Ambulance	Carl R. Darnall Army Medical Center	Army Corps of Engineers
Bartlett PD	Belton Fire	Belton Fire	Cedar Crest RTC	Bell County Fire Marshal
Bell County Sheriff's Office	Central Bell VFD	Harker Heights Fire	McLane Children's Medical Center - Baylor Scott & White	Bell County OEM
Belton PD	Harker Heights Fire	Killeen EMS	Advent Health Behavioral Health	Burlington Northern Santa Fe
Harker Heights PD	Holland VFD	Scott and White EMS	Advent Health Central Texas	City Public Works Departments
Holland PD	Killeen Fire	Temple EMS	BSW - Continuing Care Hospital	Community Services and Corrections
Killeen PD	Little River / Academy VFD		Baylor Scott & White - Temple	County Attorneys
Little River / Academy PD	Moffat VFD		Seton Medical Center - Harker Heights	Central Texas College Police Department
Morgan's Point PD	Morgan's Point VFD		Olin E. Teague Veteran's Medical Center	District Attorneys
Nolanville PD	Rogers VFD			DTF and Constables
Rogers PD	Salado VFD			Justices of the Peace
Salado PD	Southwest Bell VFD			Killeen ISD
Temple PD	Sparta Valley VFD			Probation
Troy PD	Stillhouse VFD			Temple College DPS
	Temple Fire			Texas ABC
	Troy VFD			Texas A&M
				Texas Department of Public Safety
				Texas Parks and Wildlife
				University Mary Hardin Baylor

## ***Coryell County***

- Coryell County has two enhanced '911' communication centers.
  - Copperas Cove Police Department dispatches for the City of Copperas Cove and transfers Coryell County Calls to Coryell County Sheriff's Department.
  - Copperas Cove Fire Department and EMS respond to calls in South Coryell County.
- The City of Gatesville Dispatch Center Dispatches EMS calls within their city on 154.540.
- The City of Copperas has an 800 MHz EDACS radio system.
- Interoperability Communications Capabilities in accordance with the Texas Interoperability Channel Plan for the City of Copperas Cove includes: VCALL10, VFIRE21, VMED28, VLAW31, 8CALL90

Coryell County Communications includes the following:

Law Enforcement	Copperas Cove PD Coryell Sheriff's Department Gatesville PD
Fire Departments	Copperas Cove Fire Gatesville VFD
EMS	Copperas Cove Fire Coryell Health EMS
Hospital	Coryell Health System
Other	None

## ***Hamilton County***

Hamilton County Communications includes the following:

Law Enforcement	Hamilton County Sheriff's Department Hamilton PD Hico PD
Fire Departments	Carrolton / Jonesboro VFD Hamilton VFD Hico / 219 VFD Pottsville VFD Shive / Evant VFD
EMS	Hamilton EMS
Hospitals	Hamilton General Hospital
Other	None

## **Lampasas County**

Lampasas County has two enhanced '911' dispatch centers:

- Lampasas Police Department dispatches EMS and fire departments within the City of Lampasas.
- Lampasas County Sheriff's Department dispatches EMS and fire departments outside the City of Lampasas.

Lampasas County Communications includes:

Law Enforcement	Kempner PD Lampasas County Sheriff's Office Lampasas PD Lometa PD
Fire Departments	Adamsville VFD Kempner VFD Lampasas Fire Lampasas VFD Lometa VFD
EMS	Acadian Ambulance
Hospitals	Advent Health Rollins Brook
Other	none

## **Milam County**

Milam Co Amateur Radio Emergency Services 147.020Mhz w/ PL tone 123.0Khz

Milam County Communications includes the following:

Law Enforcement	Buckholts PD Cameron PD Milam County Sheriff's Office Rockdale PD Thorndale PD
Fire Departments	Bartlett VFD St. 2 (Davilla) Buckholts VFD Burlington VFD Cameron VFD Gause VFD Milano VFD Minerva VFD Rockdale VFD Thorndale VFD
EMS	AMR – Milam Thorndale EMS

## ***Mills County***

Mills County Communications includes the following:

Law Enforcement	Mills County Sheriff's Department
Fire Departments	Goldthwaite VFD
EMS	Hamilton County EMS
Hospitals	none
Other	none

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## ***Regional Medical Control and Oversight***

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### **Goal**

The goal for Regional Medical Control and Oversight in CTRAC is multifaceted:

1. To ensure strong physician leadership and supervision for pre-hospital care providers in both on- line and off-line functions.
2. To secure medical involvement in regional planning and educational program development.

### **Objectives**

1. To evaluate regional trauma and acute care from a systems perspective and to involve EMS medical directors in all phases and at all levels of the leadership and planning activities of regional development.
2. To identify and educate regional medical control resources, standardize treatment guidelines, and analyze accessibility of medical control resources.
3. To identify and educate CTRAC EMS providers and sources of on-line and off-line medical control.
4. To meet or exceed the minimum state requirements for all pre-hospital reporting per the Department of State Health Services reporting requirements.
5. Medical Directors are required and responsible for ensuring their personnel are proficiently trained. The CTRAC may assist with providing adequate training when funds are available and a need for training has been adequately documented.

### **Discussion**

The CTRAC region includes both rural and urban hospital and emergency care providers with varying levels of medical capability. There is no single EMS medical director for all the CTRAC EMS providers; however, there is one EMS medical director per provider or for multiple EMS providers within each county. All EMS medical directors are members of the CTRAC Medical Advisory Board, which meets on a quarterly basis.

Medical Direction of Pre-hospital Care Providers - In accordance with DSHS guidelines, all pre-hospital care providers function under medical control. Regional triage, bypass, and transport guidelines are maintained and distributed to all EMS providers for incorporation into local protocols. Periodic reviews and updates are completed and upon approval are distributed as necessary.

A tiered system of patient care based on severity of injury utilizes First Responder Organizations and EMS providers with varying level of capability to ensure the rapid assessment and initial care of the trauma patient and transport to the appropriate level of care. Off-line medical control protocols direct EMS provider interventions. On-line medical control from the receiving CTRAC facility is also utilized when the patient's condition or scene conditions cannot be addressed by off-line protocols.

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## **AIR MEDICAL ACTIVATION**

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### **Goal**

To establish guidelines for access and dispatch of Helicopter Emergency Medical Services (HEMS) to achieve effective, efficient and coordinated responses to emergencies involving critically ill or injured patients. The goal of these guidelines is to reduce delays in providing optimal care for critically ill or injured patients, and to decrease morbidity and mortality.

### **Decision Criteria**

Helicopter activation/scene response should be considered when it could reduce transportation time for trauma patients meeting dispatch guidelines. Early activation should be considered for the following:

- Major trauma
- Suspected Cardiac Emergencies
- Suspected Stroke
- Burn patients meeting Burn Center criteria
- Other accidents (boating, industrial, farming, downed aircraft and near drowning)

### **Time Intervals**

When considering time intervals as they relate to HEMS, it is important to consider all aspects of the response and transport. For the purposes of this guideline and for performance improvement criteria, the following time intervals and definitions will be used. All the following intervals should be considered when evaluating time issues:

- Response Time: Includes the time interval for notification of the Helicopter Communication Center + Time to Launch + Flight Time + Scene Time
- Scene Time: Includes the time spent by the Flight Crews on Scene
- Transport Time: Includes the time for the HEMS to fly to receiving Facility, land and deliver the patient.

#### **1. Guidelines for Activation /HEMS Dispatch:**

- The ground emergency medical services (EMS) provider may request a scene response from a HEMS when one or more of the activation or triage criteria exist:
  - Once a helicopter has been activated to a scene only the transporting agencies highest level of



certification should make the determination to cancel the air response.

- Ground EMS providers should not remain on scene awaiting arrival of HEMS if an appropriate Trauma facility is nearby and the patient can be transported faster by ground.
- Ground EMS providers should activate the HEMS as early as possible, including Prior to arrival to scene if the mechanism of injury or illness meet activation guidelines.
- The ground EMS provider may activate HEMS if the patient has an emergent need for a procedure or intervention not available from ground provider and the HEMS can deliver this intervention faster than transport time to trauma facility.
- Other factors to consider: Location of Incident, Number of Patients, Age of patients, Weight of Patients, Response time of HEMS.
- Patients should be taken to the closest appropriate facility based on the CTRAC Emergency Healthcare System Plan.

# TRAUMA SYSTEM PLAN

## *Prehospital Triage Guidelines*

### **Goal**

Patients will be identified, rapidly and accurately assessed, and based on identification of their actual or potential for serious injury, will be transported to the nearest appropriate CTRAC trauma facility.

### **Objectives**

In order to ensure the prompt availability of medical resources needed for optimal patient care, each patient will be assessed for the presence of abnormal vital signs, obvious anatomic injury, mechanism of injury, and concurrent disease/predisposing factors.

### **Definition**

Trauma Patient—the patient is a victim of an external cause of injury that results in major or minor tissue damage or destruction caused by intentional or unintentional exposure to thermal, mechanical, electrical, or chemical energy, or by asphyxia, submersion, or hypothermia.

### **System Triage**

Unless immediate stabilization (ABC's, cardiac arrest, etc.) is required, patients in CTRAC with the following injuries, with significant mechanism of injury, should be taken directly to the closest Level 1 / Level II Trauma Facility if ground transport time is ≤ 30 minutes. Also refer to the **CTRAC Pre- Hospital Trauma Triage Criteria Algorithm** for additional high- risk considerations for transporting the patient directly to Scott & White Medical Center – Temple or Baylor Scott & White McLane Children's Medical Center:

- Penetrating injuries to head, neck, and torso
- Respiratory compromise, obstruction, and/or intubation
- GCS less than or equal to 12
- Unstable Vital Signs-Any **ONE** below:
  - SBP <90 (SBP <100 if patient >60 y/o)
  - RR <10 or >29 with distress
  - O<sub>2</sub> Sat <90%
- Traumatic Paralysis (**NOT** numbness/tingling)
- Amputation proximal to the wrist or ankle
- Two or more proximal long bone fractures (Femur, Humerus)
- Pelvic fractures
  - Burns ≥ 20% BSA or ≥ 10% if under 6 years old (2<sup>nd</sup> & 3<sup>rd</sup> degree only) .
  - Transport to Burn Center if possible
- **Pediatrics** -Unstable Vital Signs - Any **ONE** below:

- Tachycardia for age **PLUS** poor perfusion
- BP not appropriate for age (70 + 2x age)
- RR not appropriate for age

2. Patients with the below **Mechanism of Injury** should be transported directly to the nearest appropriate:

Motor Vehicle Collision: <ul style="list-style-type: none"> <li>• With ejection</li> <li>• High speed <math>\geq</math> 40 mph</li> <li>• Unrestrained <math>\geq</math> 20 mph</li> <li>• Death in same vehicle</li> <li>• Extrication <math>\geq</math> 20 minutes</li> <li>• Auto vs. Pedestrian</li> </ul>
MCC / ATV / Bike / Large Animal: <ul style="list-style-type: none"> <li>• Separation of rider</li> <li>• Crash speed <math>\geq</math> 20 mph</li> </ul>
Falls: <ul style="list-style-type: none"> <li>• <math>\geq</math> 20 feet</li> <li>• 2x height of the child <math>\leq</math>6 yrs. old (minimum of 4 ft.)</li> </ul>
Assault / Child Abuse
Burns <ul style="list-style-type: none"> <li>• Partial or full thickness</li> </ul>
Crush Injuries (not hands or feet)

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## **AIR MEDICAL ACTIVATION**

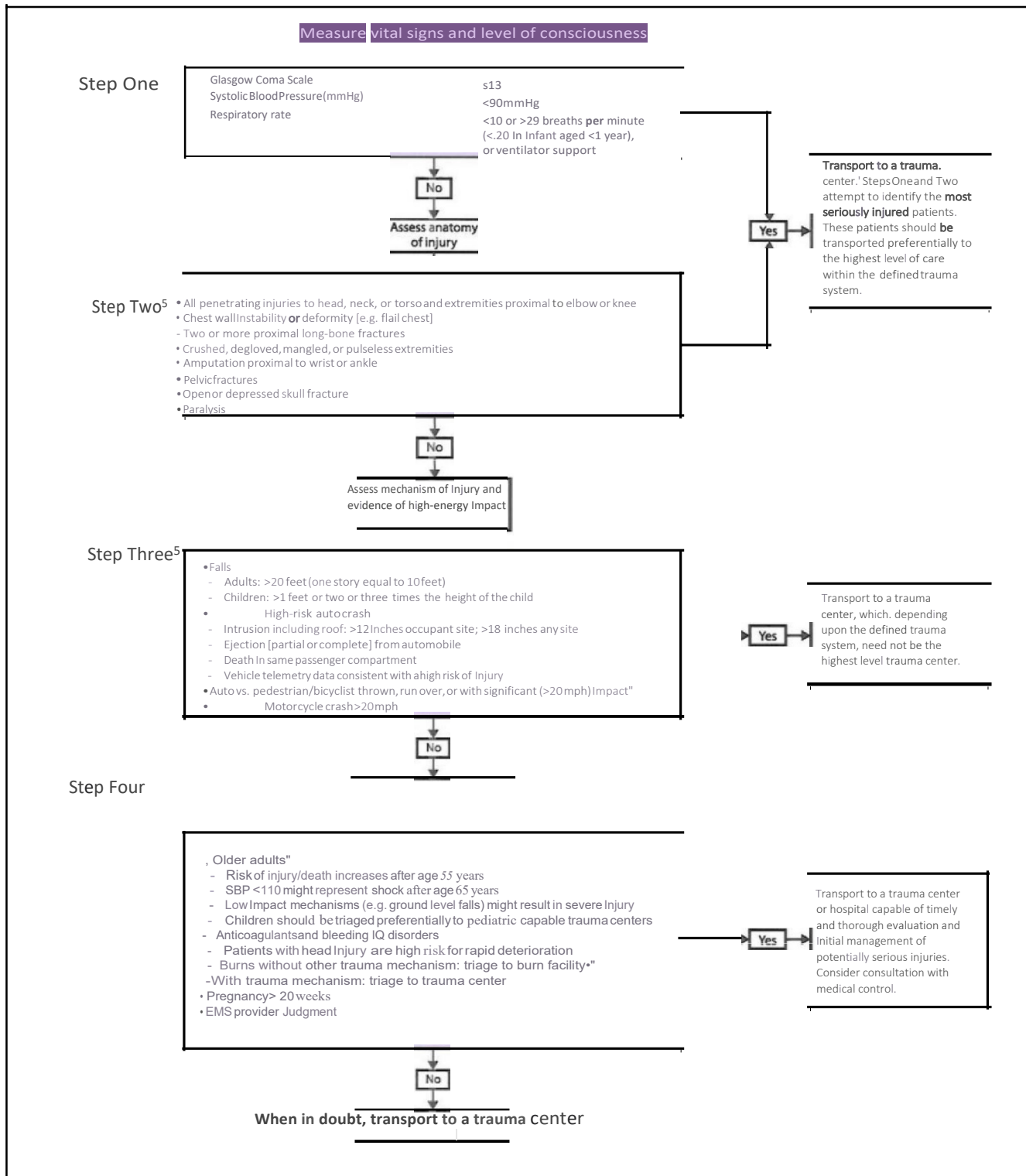
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### **Guidelines for Air Activation for Trauma Patients**

- Anatomic Considerations
  - Penetrating Trauma to Head, Chest or Abdomen
  - Amputations (except Digits)
  - 2 or more long bone fractures or pelvis Fracture
  - Spinal cord injury
  - Major Burns > 20 % or burns to the Airway, hands, feet or genitalia
  - Depressed or open skullFracture
  - Trauma patients requiring endotracheal intubation or having difficulty maintaining an airway
  - VS/ Physiologic Considerations
  - GCS <10 or deterioration of MentalStatus
  - Significant Hypotension- B/P = or <90 with signs of shock
  - RR <10 or >29
  - HR <60 or >120
- Mechanism of Injury
  - Falls > 3 X the Pt. Height or >20 feet
  - Auto-ped > 20 MPH
  - Ejection from MVC

- Rollover MVC
- Prolonged extrication >20 min.
- Death of another occupant in same vehicle
- Multiple patients on scene

FIGURE 2. Guidelines for field triage of injured patients - United States, 2011



## FACILITY DIVERSION

## **Goal**

CTRAC facilities should communicate “facility diversion” status promptly and clearly to regional EMS and trauma facilities through EMResource in order to ensure that trauma patients are transported to the nearest appropriate alternate trauma system hospital.

## **Acknowledgements**

CTRAC facilities, both designated and undesignated, should request diversion activation only when the resources or capabilities of that facility have been exhausted to the point that further EMS traffic would jeopardize the care and treatment of patients at that facility as well as any subsequent patient transported to that facility by EMS. It is recognized in advance that no diversion strategy can guarantee total compliance with these guidelines and it is likely that EMS will deliver patients to hospitals that have requested diversion activation. It is further understood that a request for diversion activation is honored as a courtesy by EMS. Patient’s informed wishes will be honored. Each facility is responsible for defining facility-specific policies and procedures for implementation of these guidelines.

## **Definitions**

1. **Transfer:** Movement of a patient from one hospital to another based upon the patient’s need (inter- hospital transport) or request.
2. **Bypass:** Intentional movement of a patient from the scene to the most appropriate hospital, not necessarily the nearest hospital, based upon the patient’s medical need.
3. **Diversion:** Intentional movement of a patient from the scene to an alternate hospital capable of providing appropriate care at the request of the diverting hospital due to lack of available resource or capability. **Appropriate Facility:** A hospital, not necessarily the nearest hospital, with the resources and capability to care for a patient based upon the patient’s medical needs.

## **Authorization for diversion status implementation and deactivation:**

- **Hospital administrator or designee**

### **Communication of diversion status:**

- A hospital should communicate “facility diversion” status promptly and clearly to regional EMS and trauma facilities through EMResource®.

### **TIME PERIOD FOR DIVERSION STATUS:**

- Diversion status is determined by each individual facility and is updated on EMResource® based on resolution of situation.
- In the event the hospital diversion status goes beyond 24 hours, the RAC will verify the need for continued diversion.

### **AUTHORIZATION FOR OVER-RIDE OF DIVERSION STATUS:**

- EMS may over-ride a diversion status after consideration of the following:
  - The patient’s clinical presentation
  - Distance and estimated time to an alternate appropriate facility

- Inclement weather conditions
- Resource availability and capability of the transporting prehospital provider
- An Informed Patient Preference

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## ***FACILITY BYPASS***

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### **Goal**

Patients who have been assessed and determined to be medically unstable, unconscious, or at high risk of multiple and/or severe injuries will be safely and rapidly transported to the nearest appropriate Level I or Level II trauma center. All other trauma patients will be safely and rapidly transported to the nearest appropriate trauma facility or nearest appropriate acute care facility within TSA L.

### **Decision Criteria**

Regional transport protocols ensure that patients who meet the triage criteria for activation of the CTRAC Regional Emergency Healthcare System Plan will be transported directly to the nearest appropriate trauma facility rather than to the nearest hospital except under the following circumstances:

1. If unable to establish and/or maintain an adequate airway, or in the case of traumatic cardiac arrest, the patient should be taken to the nearest acute care facility for stabilization.
2. A Level III or Level IV trauma facility may be appropriate if the expected scene to Level I Trauma Center transport time is excessive (> 30 minutes) and there is a qualified physician available at the facility's Emergency Department capable of delivering stabilizing care.
3. Medical Control may wish to order bypass in any of the above situations as appropriate, such as when a facility is unable to meet hospital resource criteria or when there are patients in need of specialty care (burns).
4. If expected ground transport time to the nearest appropriate Trauma Center is excessive (> 30 minutes) or if a lengthy extrication time (> 20 minutes) is expected, medical control or the EMS crew on scene should consider activating air transportation resources.

Note: Should there be any question regarding whether to bypass a facility, on-line medical control should be consulted for the final decision from the receiving facility.

# FACILITY TRIAGE CRITERIA

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## Goal

The goal of establishing and implementing facility triage criteria in CTRAC is to ensure that all regional hospitals use standard definitions to classify trauma patients in order to ensure uniform patient reporting and facilitate inter-hospital transfer decisions.

## Objectives

1. To ensure that each trauma patient is identified, rapidly and accurately assessed, and based on identification and classification of their actual or potential for serious injury, transferred to the closest appropriate Level I or Level II trauma facility.
2. To ensure the prompt availability of medical resources needed for optimal patient care at the receiving trauma facility.

## Discussion

1. The Trauma Patient - The definition of the trauma patient in CTRAC is derived from the American College of Trauma Surgeon's definition of trauma. In CTRAC, the trauma patient is defined as one who is a victim of an external cause of injury that results in major or minor tissue damage or destruction caused by intentional or unintentional exposure to thermal, mechanical, electrical, or chemical energy, or by asphyxia, drowning, or hypothermia.
2. Facility Triage Criteria - Trauma patients are assessed in the pre-hospital setting and transferred to the closest appropriate trauma facility in accordance with the CTRAC Pre-hospital Trauma Triage Criteria. Upon admission to the hospital emergency department, trauma patients receive initial treatment and re-assessment of their condition. The severity of injury of the trauma patient in the initial treating emergency department determines the optimal level of trauma care needed. Inter-hospital transfer is initiated as appropriate according to CTRAC facility triage decision criteria.

**Trauma Facility Triage Criteria** - Trauma patients meeting the below criteria should be considered high-risk and transfer to closest appropriate Level 1 or Level II Trauma Facility should be initiated. Also refer to the CTRAC Facility Trauma Triage Criteria Algorithm for additional high-risk considerations for initiating early transfer:

### ADULT PATIENT

- Penetrating injuries to head, neck, and torso
- Respiratory compromise, obstruction, and/or intubation
- GCS  $\leq$  13
- Unstable Vital Signs-Any **ONE** below:
  - > SBP <90 (SBP <100 if patient >60 y/o)
  - > RR <10 or >29 with distress
  - > O2 Sat <90%
- Traumatic Paralysis (**NOT** numbness/tingling)
- Amputation proximal to the wrist or ankle

- Two or more proximal long bone fractures (Femur, Humerus)
- Pelvic fractures
- Burns  $\geq 20\%$  BSA or  $\geq 10\%$  if under 6 years old – **Transport to Burn Center if Possible**

#### **PEDIATRIC PATIENT**

- Penetrating injuries to head, neck, and torso
- Respiratory compromise, obstruction, and/or intubation
- GCS  $\leq$  to 13
- Traumatic Paralysis (NOT numbness/tingling)
- Amputation proximal to the wrist or ankle
- Two or more proximal long bone fractures (Femur, Humerus)
- Pelvic fractures
- Burns  $\geq 20\%$  BSA or  $\geq 10\%$  if under 6 years old – **Transport to Burn Center, if possible**
- Pediatrics-Unstable Vital Signs-Any ONE below:
  - Blood Pressure not appropriate for age ( $70 + 2x$  age):
    - Neonate: BP  $< 60$
    - Infant ( $< 2$  years)  $< 65$
    - Child (2-5 years)  $< 70$
    - Child (6-14 years)  $< 80$
  - Respiratory Rate not appropriate for age:
    - Rate  $< 10$  or  $> 60$
  - Tachycardia for age PLUS poor perfusion Pediatric Trauma Score  $> 9$
- High energy event, such as
  - Ejection from
    - Vehicle
    - ATV
    - Large Animal
    - Motorcycle
    - Bicycle
  - Significant fall
    - 2x the height or
    - $> 10$ ft if  $<$  or = 6 yrs. old
  - Auto-pedestrian impact
  - Significant assault

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## ***INTER-FACILITY TRANSFER GUIDELINES***

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### **Goal**

The goal for establishing and implementing inter-hospital transfer criteria in CTRAC is to ensure that those trauma, stroke or STEMI patients requiring additional or specialized care and treatment beyond a facility's capability are identified and transferred to an appropriate facility as soon as possible.

### **Objectives**



1. To ensure that all regional hospitals make transfer decisions based on standard definitions which classify trauma, stroke or STEMI patients according to CTRAC facility triage criteria.
2. To identify trauma, stroke, or STEMI treatment and specialty facilities within and adjacent to CTRAC.
3. To establish treatment and stabilization criteria and time guidelines for CTRAC patient care facilities.

### **Discussion**

The level of trauma care resources required for **poly**-trauma patients is outlined in the CTRAC facility triage criteria and pre-hospital triage criteria. Scott & White Medical Center – Temple is the Lead Trauma Facility in CTRAC and accepts all poly-trauma transfer patients from any requesting CTRAC facility. A toll-free number has been established and distributed to all CTRAC emergency medical and hospital providers:

**Baylor Scott & White Medical Center – Temple Trauma Transfer Phone Line: 1-877-783-6422**

Medical personnel calling this number receive an “automatic acceptance” for **poly**-trauma patients after speaking with the on-call **Attending Trauma Surgeon** or **Staff Emergency Medicine Physician**.

Severely injured trauma patients should be immediately transferred to the nearest appropriate Level I or Level II Trauma Facility. Patients with less life-threatening injuries should be initially transported to the closest trauma facility for stabilization. If admission is necessary, the patient should be transferred to the closest Level I or Level II Trauma Facility within (2) hours from the time the patient arrived at that facility. The CTRAC Performance Improvement program will monitor all delay in trauma transfers out (>2 hours) for acute patients, trauma transfers outside CTRAC, and any ICU trauma patient admissions (**except the Level I and Level II trauma facilities**).

**Definition** – as noted in DSHS Health & Safety Code, Rule 157.2

Major is defined as an ISS score of 9-14

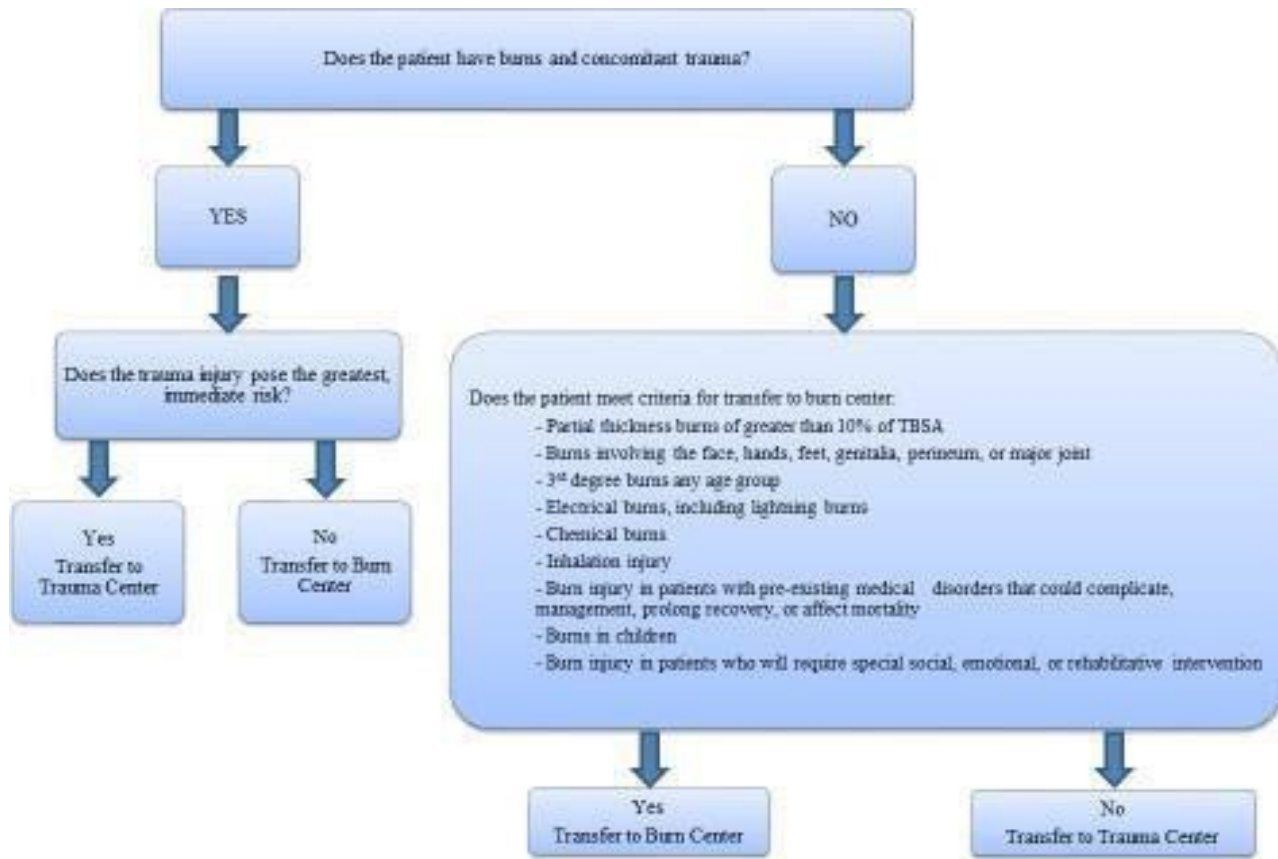
Severe is defined as an ISS score of  $\geq 15$

### **Identification of Trauma Patients & Trauma Transfers**

- Trauma patients and their treatment requirements for optimal care are identified in the CTRAC facility triage criteria and pre-hospital triage criteria.
- Written transfer agreements are available between all CTRAC hospital facilities, and hospital facilities in adjacent regions.
- Trauma patients with special needs may be transferred to the nearest appropriate trauma facility or assessment and initial treatment by the trauma team. The CTRAC initial-receiving hospitals.
- Patient transfer should not be delayed due to transfer of chart.
- Pediatric burn patients may be transferred directed to these facilities when appropriate:
  - Children's Medical Center of Dallas (Level I Trauma/Pediatric) – TSA E, Dallas
  - Dell Children's Medical Center (Level I Trauma/Pediatric) – TSA O, Austin
- may also choose to transfer patients with special needs (burns) directly to these facilities, bypassing the Lead Level I Trauma Facility when appropriate. Below are lists of possible facilities that may be utilized outside CTRAC:
  - Parkland Health & Hospital System (Level I Trauma/Burn) – TSA E, Dallas
  - San Antonio Military Medical Center (Level I Burns) – TSA P, San Antonio

- University Medical Center (Level I Trauma/Burns) – TSA P, San Antonio
- University Medical Center (Level I Burns) – TSA B, Lubbock
- Dell-Seton Hospital (Level I Trauma) – TSA O, Austin

### Burn Transfer Matrix



### Trauma Patient Transport

Trauma patients in CTRAC are transported according to patient need, availability of air transport resources, and environmental conditions. Ground transport via BLS, ALS, or MICU ground ambulance is available throughout the Region. Air Medical transport is also available in this Region.



# Regional Stroke System Plan

## **Mission**

The mission of the Central Texas Regional Advisory Council (CTRAC) Stroke System Plan is to decrease disability and mortality associated with acute stroke by utilizing an organized and integrated system wide approach for treatment and transport of acute stroke patients.

## **Goal**

- Establish guidelines for transportation of stroke patients.
- Develop a system that incorporates national recognized standards and guidelines for stroke care with all participants having a key role in the delivery and care of the stroke patient.
- Recognize a facility's capability to treat stroke patients according to the State designation rules.
- Establish a system with a mechanism to continually evaluate the quality of care the stroke patient receives within the system.

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## ***Hospital Stroke Designations***

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### **Comprehensive Stroke Centers (Level I)**

Baylor Scott & White Medical Center - Temple

### **Primary Stroke Centers (Level II)**

Advent Health Central Texas

Seton Medical Center – Harker Heights

### **Support Stroke Centers (Level III)**

There are no facilities currently designated as Support Stroke Centers in TSA L.

### **Non-designated Acute Care Facilities**

Advent Health Rollins Brooks

Carl R. Darnall Army Medical Center (CRDAMC)

Central Texas Veterans Healthcare System – Temple

Coryell Health System

Hamilton General Hospital

McLane Childrens Medical Center - Baylor Scott & White

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## ***Seeking Stroke Designation Criteria***

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When a facility in the Central Texas RAC Region decides to proceed with initial stroke designation or upgrade of current stroke designation, the facility shall formally notify the RAC of its plans to seek stroke designation and at what level. The facility must submit a letter of attestation (see below) signed by its CEO and Chief Medical Officer/Stroke Medical Director.

### **Stroke Center Designation Letter of Attestation**

This Letter of Attestation (LOA) is in effect on the date on which it is signed and remains in effect for a period of one (1) year. It can only be renewed one (1) time in a three (3) year period. All parties reserve the right to terminate this LOA at any time, with or without cause, upon written notice. Upon expiration thereof, this agreement will continue in force until either party notifies the CTRAC Medical Advisory Board in writing of its intent to terminate this agreement in which case it shall terminate thirty (30) days from the date of the notice.

Facilities signing this LOA are attesting that their facility or facilities meets the criteria of the surveying agency they will be using for their facility stroke certification and they will maintain the capabilities as specified in the chosen surveying agency's requirements/standards in this LOA.

**Facility:** \_\_\_\_\_

**Stroke Center Designation (Choose Level):**

Comprehensive (Level 1) / Primary (Level 2) / Support (Level 3)

**Surveying Agency (Choose Agency):**

Joint Commission / Det Norske Veritas / TETAF (Level 3 only)

**Hospital Administrative (CEO/ COO/ CNO):** \_\_\_\_\_

**Hospital Administrative Number:** \_\_\_\_\_

**Stroke Center Medical Director:** \_\_\_\_\_

**Stroke Center Medical Director Email Address:** \_\_\_\_\_

**Stroke Center Medical Director Contact Number:** \_\_\_\_\_

**Stroke Center Coordinator:** \_\_\_\_\_

**Stroke Center Coordinator Email Address:** \_\_\_\_\_

**Stroke Center Coordinator Contact Number:** \_\_\_\_\_

<b>Organization name:</b> _____	
By: _____ CEO Name _____ Date	By: _____ _____ Date
<b>Central Texas Regional Advisory Council</b>	
By: _____ _____ CTRAC Medical Advisory Chair _____ Date	By: _____ Christine Reeves, RAC Executive Director _____ Date

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## *Prehospital Care*

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### **Goal**

Suspected stroke patients will be identified, rapidly and accurately assessed, and based on identification of their actual or suspected onset of symptoms, will be transported to the nearest appropriate TSA L facility.

### **Purpose**

In order to ensure the prompt availability of medical resources needed for optimal patient care, each patient will be assessed for the presence of abnormal vital signs, nationally recognized stroke scale and concurrent disease/predisposing factors.

### **System Triage**

- Suspected stroke patients (positive prehospital screening, such as FAST, CPHSS) with a **negative LVO screening and a last known well of 4 hours or less** should be taken to the **closest alteplase-capable facility** within TSA L.
- Suspected stroke patients (positive prehospital screening, such as FAST, CPHSS) with a **positive LVO screening** (such as VAN, RACE) and a **last known well of 4 hours or less** should be taken to the **closest Comprehensive Stroke Center - unless such transport would delay hospital arrival to a thrombolytic capable facility by more than 30 minutes.**
- Suspected stroke patients outside the thrombolytic window of 4 hours since last known well, or those with a clear thrombolytic contraindication confirmed by online medical control who have a **POSITIVE LVO screen** should be taken to the **closest Comprehensive Stroke Center.**

- Suspected stroke patients with a last known well of greater than 4 hours who are negative on LVO screen or all suspected strokes greater than 24 hours may be taken to the closest most appropriate acute care facility.
- Prehospital providers should consider using aeromedical transport if doing so will significantly shorten transport time and improve time to intervention.
- Prehospital personnel should communicate any stroke scales done and the outcome when calling report on the suspected stroke patient.

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## *Helicopter Activation*

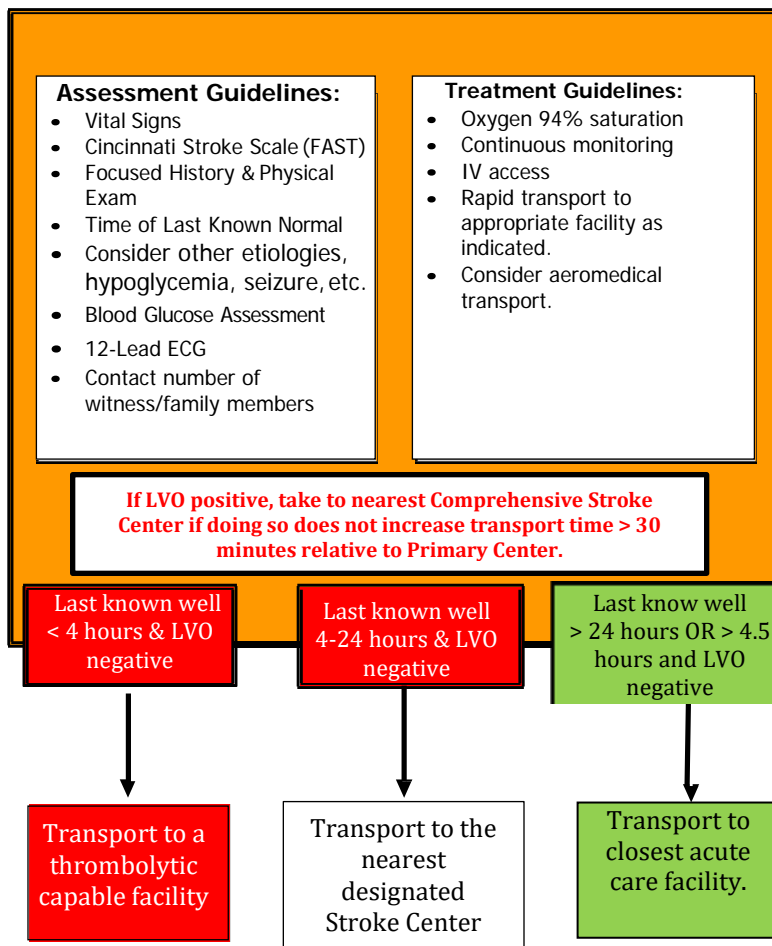
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### **Goal**

TSA L regional air transport resources will be appropriately utilized in order to reduce delays in providing optimal stroke care.

### **Decision Criteria**

- Aeromedical utilization should be considered when it can reduce transport time for patients with acute stroke. Refer to the above guideline to determine preferred patient destination and if this can change acceptable transport times to Comprehensive stroke centers, etc. Should there be any question whether to activate TSA L regional air transport resources, on-line medical control should be consulted for the final decision.
- The closest available helicopter should be utilized to reduce transport time.




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## *Facility Triage Criteria*

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### **Goal**

The goal of establishing and implementing facility triage criteria in TSA L is to standardize the definitions and classifications of stroke patients, which may allow for uniform patient reporting and assist with inter-facility transfer decisions for all facilities in the Region.

### **Objectives**

1. To ensure that each stroke patient is rapidly identified, assessed, and if necessary, transferred to the nearest appropriate TSA L facility.
2. To ensure the prompt availability of medical resources needed for optimal patient care at the receiving facility.
3. To develop and implement a system of standardized stroke patient classification definitions.

### **Discussion**

- For TSA L, all the acute care facilities can administer thrombolytics in appropriate stroke patients.



- **If a stroke patient is LVO positive and within a 24-hour window since last known well, they should be immediately given thrombolysis if indicated and transferred to the closest Comprehensive Stroke Center.**
- If a stroke patient presents at a Primary Stroke Center or a thrombolytic capable acute care facility with a last known well of less than 4.5 hours and negative LVO screening, then alteplase should be started as appropriate. If the stroke patient needs a higher level of stroke care, the stroke patient should be transferred out within 90minutes.
- If a stroke patient presents at an acute care facility with a last known well of 4.5 to 24 hours and a negative LVO screening, the patient should be transferred to a Primary or Comprehensive Stroke Center.
- If a stroke patient presents at an acute care facility with a last known well greater than 24 hours, the stroke patient may stay if the facility is able to provide appropriate rehabilitation.

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## *Regional Performance Improvement*

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Per the Texas Administrative Code Title 25, Part 1, Chapter 157, Subchapter G, Rule 157.133 Requirements for Stroke Facility Designation (t)(3), all designated stroke centers will participate in the CTRAC Regional Stroke Performance Improvement (PI). All thrombolytic capable facilities have agreed to provide the same regional performance improvement as designated stroke centers. Regional Performance Improvement from a military facility shall be based on patients transferred out for stroke upon request of Central Texas RAC.

The Medical Advisory Committee will serve as the Performance Improvement Committee for the Central Texas RAC (TSA L). This committee will determine the type of Stroke data and manner of collection, set the agenda for the CTRAC Regional Stroke Performance Improvement 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, low volume, and problem prone parameters. Indicators will be objective, measurable markers that reflect stroke resources, procedural/patient care techniques, and or systems/process outcomes. At a minimum the Region will collect the following data indicators:

### **Facility PI Indicators**

- Facilities will report the mode of arrival of all stroke patients by POV, EMS, or transfer.
- Facilities that administer a thrombolytic will report the time the patient arrives at the facility to the time that thrombolytic administration is started. This indicator may also be referred to as “door to needle time”.
- All facilities transferring out a stroke will report the time the patient arrives at the hospital to the time the patient leaves the facility for transfer. This indicator may also be referred to as “door in/door out time”.
- If a stroke patient is transferred for potential endovascular treatment, the facility will report where the patient was transported and whether the stroke patient received endovascular treatment.
- All facilities will report any stroke patients transferred out of TSA L and the reason for the transfer.

### **Prehospital PI Indicators**

- All prehospital providers will report all suspected stroke patients that were transported out of TSA L directly from the scene.
- All prehospital providers will report how many suspected stroke patients were administered a primary stroke scale screening and/or an LVO screening.

# TSA L & M Regional Stroke Transfer Monitoring Tool

	Pre-Transfer												Post-Transfer	Transfer Facility Information
Time:														Date: _____
Initials:														Transfer Facility: _____
GCS and Pupil Assessment														Receiving Facility: _____
Eye Opening														Time of last known well/seen normal: _____
Verbal														NIHSS: _____
Motor														
Left Pupil (size/reaction)														<b>For alteplase transfers:</b> alteplase started at _____ alteplase infusing at time of transfer?    YES    NO If not infusing at time of transfer, time infusion completed? _____ **PLEASE send 50 ml 0.9% NS flush bag to flush alteplase line with if infusion will complete during transport**
Right Pupil (size/reaction)														
New onset H/A	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	
Vitals Signs														
Heart Rate														Maintain Blood Pressure per Blood Pressure Guidelines
Respirations														Has BP med been administered?    YES    NO
BP														• If YES: Medication & dose: _____ Time given: _____

<b>Glasgow Coma Scale</b>	<b>Pupil Assessment</b>										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center;"><b>Eye Opening</b></td> <td>4 = Spontaneous 3 = To speech 2 = To pain 1 = None</td> </tr> <tr> <td style="text-align: center;"><b>Verbal</b></td> <td>5 = Oriented 4 = Confused 3 = Inappropriate words 2 = Moans 1 = None T = intubated</td> </tr> <tr> <td style="text-align: center;"><b>Motor</b></td> <td>6 = Follows Commands 5 = Localizes 4 = Withdraws 3 = Decorticate 2 = Decerebrate 1 = Flaccid</td> </tr> </table>	<b>Eye Opening</b>	4 = Spontaneous 3 = To speech 2 = To pain 1 = None	<b>Verbal</b>	5 = Oriented 4 = Confused 3 = Inappropriate words 2 = Moans 1 = None T = intubated	<b>Motor</b>	6 = Follows Commands 5 = Localizes 4 = Withdraws 3 = Decorticate 2 = Decerebrate 1 = Flaccid	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><b>Reaction</b></td> <td>B = Reactive/Brisk S = Reactive/Sluggish NR = Non-reactive</td> </tr> <tr> <td style="text-align: center;"><b>New onset headache (H/A)</b></td> <td>Yes No</td> </tr> </table>	<b>Reaction</b>	B = Reactive/Brisk S = Reactive/Sluggish NR = Non-reactive	<b>New onset headache (H/A)</b>	Yes No
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<b>New onset headache (H/A)</b>	Yes No										

### PHYSICIAN ORDERS

Print Physician Name: \_\_\_\_\_

Physician Signature: \_\_\_\_\_

RN Print Name: \_\_\_\_\_ RN Signature: \_\_\_\_\_

Patient label

EMS Paramedic Print Name: \_\_\_\_\_ EMS Agency Name: \_\_\_\_\_