NORTH CENTRAL TEXAS
TRAUMA REGIONAL ADVISORY COUNCIL

2014 Regional Trauma System Plan

Effective Date: May 1, 2014
Review/Revision Date: March 2014
General Membership Approval: April 2014

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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.

North Central Texas Trauma Regional Advisory Council

2014 REGIONAL TRAUMA SYSTEM PLAN

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I. MISSION

The mission of the NCTTRAC Trauma System Plan is to focus diverse resources in a collective strategy to reduce morbidity and mortality due to trauma within Trauma Service Area E.

II. VISION

To be the safest and most effective Trauma Service Area in Texas.

III. PHILOSOPHY

Belief statements:

- We believe that all trauma patients are entitled to optimal trauma care (i.e. right patient, right care, right time, right place, and back home again).
- We believe that a planned and coordinated system with a public health model approach (assessment, policy development, and assurance) will result in a reduction of morbidity and mortality from injury events.
- We believe that the majority of injuries are preventable and that planned prevention strategies (primary, secondary, and tertiary) will result in decreased morbidity and mortality related to injury.
- We believe that a coordinated and organized approach is best accomplished with full commitment, engagement and collaboration of the essential disciplines involved in trauma care and injury prevention.
- We believe that resources are limited and that coordinated distribution and utilization of resources will result in the most safe and effective Trauma Service Area in Texas.
- We believe that trauma care providers, through organized education and training, can be trained to deliver optimal trauma care based on best evidence.

IV. SCOPE OF RESPONSIBILITY

This Trauma System Plan for Trauma Service Area (TSA) – E is provided to meet the requirements within Texas Administrative Code (TAC) § 157.123 and related Department of State Health Services (DSHS) documents forming the Regional Advisory Council (RAC) and Regional Trauma System Essential Criteria RAC Implementation Guidelines (Revised 08/2009). These Guidelines define the regional emergency medical services trauma system plan, the purpose of which is to "facilitate trauma and emergency healthcare system networking within a TSA."

This plan is aligned with the Texas Department of State Health Services (DSHS) RAC Operation Guidelines Regional Trauma System Plan; however it is framed within the Health Services and Resources Administration (HRSA) and American College of Surgeons (ACS) Regional Trauma Systems: Optimal Elements, Integration, and Assessment Systems Consultation Guide. It is a regional resource to be updated annually and approved by NCTTRAC membership as a resource for providers of trauma care from the First Responder Organization through the rehabilitation facilities, and includes not only care providers, but other key components of this system including injury prevention, public and professional education, system performance improvement, and disaster preparedness.

V. REGIONAL DEMOGRAPHICS

Trauma Service Area E (TSA-E), known as the North Central Texas Trauma Regional Advisory Council (NCTTRAC), incorporates nineteen north central Texas rural, suburban and urban counties: Cooke, Fannin, Grayson, Wise, Denton, Palo Pinto, Parker, Ellis, Kaufman, Navarro, Collin, Hunt, Rockwall, Erath, Hood, Johnson, Somervell, Tarrant and Dallas counties. See Appendix A. Recent DSHS population estimates indicate that 7.4 million people reside within the 15,574.71 square miles of TSA-E, representing 28.5% of the entire population of the State of Texas and 2.37% of the United States population.

The business community includes an international airport, a multiservice regional airport, multiple small airports, a military base, a nuclear power plant, and several regional entertainment venues. Entertainment venues include an NFL stadium, an NBA/NHL arena, an MLB stadium, a NASCAR

circuit speedway, several large scale amusement parks, and many large convention centers that play host to many cultural, business and political events. The region has over six large college system campuses, multiple community colleges, and two medical school campuses. TSA-E is home to two of the most successful airlines in the industry, an automobile assembly plant, and many other national and international business headquarters. These issues must be taken into account when planning an integrated trauma system.

Dallas Fort Worth International Airport is the fourth busiest airport in the world in terms of aircraft movements, totaling 652,261 annually. In terms of passenger traffic, it is the eighth busiest airport in the world and the ninth busiest international gateway in the United States, transporting almost 59 million passengers in 2012. In terms of land area, at 17,207 acres, it is the largest airport in Texas and the second largest in the United States. The Naval Air Station Joint Reserve Base Fort Worth (NAS JRB), also known as Carswell Field, is a military airfield located within NCTTRAC. This military airfield is operated by the United States Navy Reserve, and is headquarters to the Air Force Reserve Command's Tenth Air Force; the 301st Fighter Wing, and the 136th Airlift Wing of the Texas Air National Guard continue to be based at the installation. A number of Marine Corps aviation and ground units are also co-located at NAS JRB Fort Worth. The Comanche Peak Nuclear Power Plant is a two-unit nuclear-fueled power generating facility located four and a half miles northwest of Glen Rose in Somervell County.

Numerous entertainment venues are available to the residents and visitors within NCTTRAC including Six Flags Over Texas, the Texas State Fair at Fair Park, MayFest in Fort Worth, and many concert settings and sports arenas. In particular, the American Airlines Center in Dallas is a venue for hockey, basketball, and arena football games as well as concerts and various other events. The Ballpark in Arlington is home to the Texas Rangers and is located within walking distance from Six Flags and Cowboys Stadium in the heart of Arlington and TSA-E. Cowboys Stadium, the largest domed stadium in the world, seats 80,000, and expands to 100,000 for sporting and entertainment events including college bowl and championship football games, a Super Bowl, the NCAA Final Four and international rock star concerts. Texas Motor Speedway hosts several NASCAR series, seating over 138,000 spectators in southwestern Denton County.

NCTTRAC collaborates with the North Central Texas Council of Governments (NCTCOG). The NCTCOG is a voluntary association comprised of 229 local government members, which include cities, counties, independent school districts, and special districts that serve a 16-county area surrounding Dallas/Fort Worth. Cooke, Grayson, and Fannin are not part of the NCTCOG; these counties are members of the Texoma Council of Governments. These COGs are able to assist local governments and facilitate sound regional development through transportation planning, dissemination of demographic information, assistance with information systems development, environmental impact studies, planning for human services needs, 9-1-1 planning, emergency preparedness coordination, federally funded employment and training programs, training local government officials, and providing basic and continuing education for area personnel.

NCTTRAC is served by three Level I comprehensive adult trauma centers, one Level I comprehensive pediatric trauma center, three Level II major trauma centers, one Level II major pediatric trauma center, six Level III general trauma centers, nineteen Level IV basic trauma centers, and six facilities “in active pursuit” of trauma designation, in addition to dozens of acute care hospitals. There are also approximately 125 ground and air EMS services and dozens of first responder organizations.

VI. INJURY EPIDEMIOLOGY

The NCTTRAC Board of Directors and membership have made a commitment to acquire meaningful data to provide information for decision making. The general area is trending upward, and NCTTRAC looks forward to continued reports in support of regional system performance improvement.

VII. DATA EVALUATION

NCTTRAC has responsibility for implementation of a regional registry; the TSA-E regional registry for EMS and acute care is known as **REG*E**. The regional trauma registry is a sub data set of **REG*E** and is available to all NCTTRAC voting members. Hospitals participating in NCTTRAC that are designated trauma facilities submit the standard Texas Trauma Registry data elements defined by the Department of State Health Services (DSHS) to NCTTRAC through **REG*E**. EMS providers participate by submitting data elements for all patients as defined by DSHS to **REG*E**. Data submission is electronic unless special arrangements have been predefined. Data submission occurs quarterly per the related performance standards.

Trauma Facilities and EMS Providers may each have a registry workgroup member defined. These workgroups are charged with overseeing standards for maintaining the data integrity, data validation, data accuracy, and data security of the acute care functionality of **REG*E**. The Regional Trauma Registry Workgroup defines the standard reports that are produced from the regional trauma registry and the processes for current members of NCTTRAC to request data from the regional registry. This workgroup should include a lead hospital representative from each designated level I, II, III and IV facility who have completed the regional registry super user training, the American Trauma Society's Trauma Registry Course, the AAAM Injury Scoring Class, and have a letter of support from his or her facility to commit to participation in the Regional Trauma Registry Workgroup. Certification as a Trauma Registrar is preferred for participation in this workgroup. The EMS Registry Workgroup will have the same charge for EMS registry records. Participants on the EMS Registry Workgroup should have an appropriate background in EMS patient data management. All actions of these workgroups are processed through the appropriate Trauma or EMS Committee to the Board of Directors.

VIII. SYSTEM LEADERSHIP

The Board of Directors is charged with promoting awareness of the Trauma System as a component of the NCTTRAC Annual Report.

See attached Organizational Chart (See Appendix C)

Board of Directors	**Officer**
Chair	Dr. Rajesh Gandhi
Vice Chair	Ricky Reeves
Treasurer	David Orcutt
Secretary	Amy Atnip
Committee	**Committee Chair**
Air Medical	Mike Eastlee
Cardiac	Karen Yates
EMS	Kevin Cunningham
Finance	Derrick Cuenca
Physician Advisory Group	Board Liaison: Dr. Robert Simonson
Pediatric	Melinda Weaver
Professional Development	Shawn White
Public Education/Injury Prevention	Mary Ann Contreras
Regional Emergency Preparedness	Nick Sloan
Stroke	Sharon Eberlein
System Performance Improvement	Dwayne Howerton
Trauma	Lawan Smith
Zones Representative	Martha Headrick

Board Members as of 12/1/2013; see www.NCTTRAC.org for the most current list.

NCTTRAC Contact:
Hendrik J. (Rick) Antonisse
Executive Director
Phone: 817-608-0390
600 Six Flags Drive
Arlington, TX 76011

NCTTRAC committee chairs are elected for two year terms; they are chosen by vote of the present and eligible voting members of the committee and ratified by a simple majority vote of the Board of Directors. Committees may establish a “core group” by SOP to ensure balanced and

appropriate participation in committee activities. NCTTRAC standing committee membership participation, with the exception of the System Performance Improvement Committee closed sessions, are open to any individual who wants to attend. The System Performance Improvement Committee membership is comprised per SOP of a Core Group consisting of a balance of physicians, nurses, and prehospital providers as listed below. Refer to www.NCTTRAC.org for the most current committee information.

IX. COALITION BUILDING

Coalition building is a continuous process of cultivating and maintaining relationships with stakeholders within the NCTTRAC trauma service area. Collaboration on injury control and trauma system development with community partnerships are key. Constituents include health care professionals, prehospital providers, insurers, payers, data experts, consumers, advocates, policy makers, trauma center administrators, and media representatives. Coalition priorities are trauma system development, policy making, financing initiatives and disaster preparedness, system integration, and promoting collaboration rather than competition between trauma centers and prehospital providers. It would be ideal if every member of NCTTRAC participated in at least one activity or one committee.

Currently most initiatives around Injury Prevention are carried out by members of NCTTRAC hospital and prehospital providers. NCTTRAC supports collaborative partnerships with community leaders to focus on bringing in business partners and community leaders to assist with injury awareness and prevention activities.

X. LEAD AGENCY AND HUMAN RESOURCES

DSHS is the Lead Agency for trauma in the State of Texas and NCTTRAC is the Lead Agency for TSA-E. DSHS defines the regulatory standards for Emergency Medical Service Providers and Trauma Facilities. The American College of Surgeons defines the Trauma Facility criteria for the Level I and Level II trauma centers in *Optimal Care Resources for the Injured Patient*. The Level III and Level IV Trauma Facility criteria are defined by DSHS. In addition, criteria for Regional Advisory Councils are

defined by DSHS. NCTTRAC defines the system standards of care for TSA-E. These standards include Trauma Facility Field Triage Criteria, Trauma Transfer Guidelines, and Regional Trauma Registry Data Management Guidelines. Due to the size and capabilities within TSA-E, the responsibility of lead trauma facility is shared between all Level I facilities. Refer to definitive care facilities.

The Trauma Facilities Field Triage Criteria is reviewed annually through the Physician Advisory Group and processed through the Trauma System Committee, the EMS Committee, the Board of Directors and then approved by the General Membership. These criteria align with the national Trauma Center Field Triage Criteria outlined in the American College of Surgeons, *Optimal Care Resources for the Injured Patient*, and the Centers for Disease Control (CDC). See Appendix D. This document is also posted on the NCTTRAC website at www.NCTTRAC.org under the NCTTRAC Guidelines.

The ability of trauma facilities to monitor their resource capabilities is through NCTTRAC implementation of TSA-E Tracking, Resource, Alerts, and Communications (**E*TRACS** and **EMResource**). Communication to providers is addressed through EMResource. For details refer to the Disaster Preparedness section.

The Regional Communications Center (RCC), as a contracted service through NCTTRAC, assists facilities in the region to transfer serious and critical trauma patients to definitive care. For details refer to the System Coordination Patient Flow section.

NCTTRAC has dedicated staff to assist in development, implementation, education, and monitoring of the Regional Trauma System Plan. Listed are individuals that assist in coordination of the Regional Trauma System Plan. Contact information and areas of responsibility are listed at www.NCTTRAC.org.

NCTTRAC Staff	
Executive Director	Hendrik J. (Rick) Antonisse
Deputy Director	Shawn Chisholm
Comptroller/Accountant	Elaine Altman
Business Office Manager	Crystal Kellen
Hospital Preparedness Resource Manager	Hank Hufham

Emergency Medical Operations Manager	Ann Marie Harris
Emergency Healthcare Systems Manager/PIO	Leigh Anne Bedrich

NCTTRAC Bylaws

See Appendix E

Evidence of System Participation

Announcements for trauma system planning are sent electronically to all NCTTRAC membership to allow participation from interested members and to include a broad range such as physicians, nurses, EMS prehospital providers, and staff. Members have the capability to call in through both audio and visual forms of technology. Announcements are made at the Board of Directors meetings for maximum visibility of members to participate. To provide evidence and track actual participation in trauma system planning, rosters are kept at NCTTRAC offices. Trauma designated facilities are required to meet minimum participation guidelines per the NCTTRAC Participation SOP.

XI. FINANCIAL MANAGEMENT

NCTTRAC's Board of Directors defines an annual operating budget that supports the Regional Trauma System Plan. The Trauma Committee Chair as a member of the Board participates in the development of this budget. This budget is moved to the Finance Committee and approved or adjusted by the Board of Directors. NCTTRAC staff is responsible for the execution and management of the overall NCTTRAC budget.

Trauma System Funding

Senate Bill 102 (SB-102)
Signed in June 1997, established the EMS/Trauma System fund (Health and Safety Codes §773.122 – 144, and §157.130). The following November, the Board of Health proposed rules for the commitment of funding distribution, and then adopted in March 1998.

Senate Bill 1131 (78th Legislative Session)

Established a fund for county and regional emergency medical services, designated trauma facilities, and trauma care systems, which was appropriated to the Department of State Health Services. Within the bill are stipulations for the distribution of funds composed of money deposited under the Code of Criminal Procedures, and earnings of the account.

Senate Bill 3588; Article 10: Driver Responsibility Act (78th Legislation)
Created a system of points and surcharges applied to the driver's license of those convicted of certain moving violations to be implemented by the Department of Public Safety. One half of the funds are credited to trauma facilities and emergency medical services. Additionally, a $30 court fee was added on some traffic violations, of which one-third of the revenue is credited to designated trauma facilities and emergency medical services.

House Bill 1676 (76th Legislative Session)
Established the EMS & Trauma Care Tobacco Endowment for emergency medical services and trauma care to reduce morbidity and mortality due to injuries. The source of funds is interest earned on the endowment up to the appropriation level established by the 76th Legislative Session. The annual allocations are for Regional EMS/Trauma Systems Development grants, EMS Local Project Grants (LPG), DSHS administrative costs, and DSHS program costs.

Acronym	Fund	Description
EMS/TRA-RAC	3588	EMS/Trauma funds routed to RAC for distribution
EMS/TRA-CTY	3588	EMS/Trauma funds passed thru to counties within RAC who meet compliance at discretion of RAC and DSHS formularies
EMS/COUNTY	911/1131	EMS funds passed thru based on 911, mandated by state legislature and collected throughout stated, designated for EMS expended by county; funds distributed to each entity via the RAC based on RAC and DSHS formularies

EMS/RAC	911/1131	Funds designated for exclusive and discretionary use by RACs
EMS/TOB	Tobacco	Funds designated for use by RACs
Local Project Grants (LPG)	LPG	Funds directly to local EMS entities and RACs based on application for local projects/needs.
EEF	EEF	Emergency Extraordinary Funds
Dispro	Dispro	Disproportion funds for designated trauma care facilities, who are active participants in RAC, specified for indigent care

Funding Breakdown

A. Commissioner's Extraordinary Emergency Allotment
    1. $500,000 911/1131 funds
        a) To resolve acute compromise to provision of emergency services
        b) Eligible: EMS providers, hospitals, and registered FRO who participate in a RAC
    2. $500,000 3588 funds
    3. To resolve acute compromise to provision of emergency services
    4. Eligible: EMS providers, hospitals, and registered FRO
B. EMS Allotment
    1. EMS Portion: 911/1131 funds
    2. 50% accumulated in accounts
    3. To support EMS providers
    4. Eligible: Licensed EMS providers
C. EMS Portion: 3588 funds
    1. 2% accumulated in the account
    2. Eligible: Licensed EMS providers
D. RAC Allotment
    1. 911/1131 funds
    2. 20% accumulated in the account
    3. Eligible: RACs recognized by DSHS §Rule 157.123
E. RAC Portion: 3588 funds
    1. 1 % of accumulated 3588 monies
    2. Eligible: RACs recognized by DSHS §Rule 157.123
F. Tobacco RAC Grants
    1. Tobacco endowment: portion of accrued interest
    2. Support RACs

3. Quarterly distribution
4. Eligibility: RACs recognized by DSHS §Rule 157.123

G. EMS Local Project Grants (LPG)
1. Tobacco Endowment: portion of accrued interest
2. To increase availability/quality of EMS/Prehospital health care
3. Eligible: licensed EMS provider, registered FRO, RACs for EMS related projects

H. ECA Training
1. Tobacco endowment: portion of accrued interest
2. Tobacco Endowment: portion of accrued interest
3. To provide ECA training to rural and underserved areas
4. Eligible: Government entities or non-government organizations that meet rural or underserved area status

XII. PREVENTION AND OUTREACH EDUCATION

Unintentional and intentional injuries are a significant public health concern within the State of Texas. Trauma systems must develop prevention strategies that help control injury as part of an integrated, coordinated and inclusive trauma system.

Collaboration with stakeholders and community partners, prevention programs and strategies are based on epidemiologic data that is collected through **REG*E**. Prevention programs are defined by an annual needs assessment targeting specific populations with defined intervention programs. Intervention programs seek to create a measureable reduction in injury or increase in prevention strategies (such as increased use of seatbelts), that are attainable and have a defined timeline. Staffing and community partners are essential for success.

Current status of NCTTRAC

The injury prevention and public education committee provides guidance and financial aid to prevention efforts such as child passenger safety seats, bicycle helmets, Shattered Dreams, MADD, safety fairs, etc. Some courses have also been sponsored. This committee provides promotional items to various events and groups in an effort to raise NCTTRAC awareness.

NCTTRAC participates in the Governors EMS and Trauma Advisory Council (GETAC) Injury Prevention Committee.

XIII. EMERGENCY MEDICAL SERVICES

NCTTRAC TSA-E is supported by EMS systems with two-way communications to dispatch and hospitals. Medical oversight includes online and offline guidelines written by each medical director. The PAG provides leadership and guidance to documents for TSA-E. Prehospital triage and transportation is integrated into the EMS and public health system.

Each Medical Director within TSA-E assumes the responsibility for trauma oversight as well as specific performance improvement to investigate patient outcomes for his or her EMS personnel. TSA-E provides off line guidelines to each EMS provider and Medical Director as recommended by the EMS, Trauma, and PAG stakeholders.

The NCTTRAC PAGs include Emergency Physicians, Trauma Surgeons, and EMS Medical Directors to include oversight of prehospital and hospital therapeutic modalities in TSA-E. The PAGs meet periodically, with an EMS/emergency department practicing physician serving as a liaison that frequently updates the Board of Directors. Other disciplines of PAGs meet as necessary. Participation is flexible with a broad range of participants including private, municipal, rural, and urban areas represented.

Each Medical Director may adopt and supplement RAC guidelines and has the legal authority under Texas Medical Association Chapter 197 and the Texas Department of State Health Services (DSHS) Chapter 157 to adopt protocols and guidelines. They may create and implement performance improvement system guidelines to restrict the practice of pre-hospital practitioners to monitor, improve, and increase medical appropriateness of the EMS system.

EMS Medical Directors are responsible for active involvement in the development, implementation, and on-going evaluation of dispatch guidelines for the jurisdictions under their purview. These should include:

- Basic Life Support (BLS)
- Advanced Life Support (ALS)
- Air and ground coordination
- Pre-arrival instructions

DSHS along with the Medical Director is responsible for the retrospective medical oversight of the EMS system for trauma triage, communication, treatment, and transportation. This is coordinated through performance improvement of each provider.

All counties in the State of Texas have 911 service. All counties which are within NCTTRAC zones 2-8 are all within the NCTCOG and therefore have received recent and robust updates including technology for cellular location. The Texoma Council of Governments has also updated in similar fashion as the NCTCOG with 911, interoperability, and cellular call location software.

DSHS provides a designation for First Responder Organizations (FROs), which can range in support capabilities, but does not include the ability to transport. Part of the DSHS approval process includes obtaining Mutual Aid Agreements with a licensed EMS provider that transports for them.

911 capabilities for all EMS providers allow for efficient dispatch of response teams/agencies to the scene. Refer to the System Coordination and Patient Flow. NCTTRAC helps coordinate response teams for disaster and regional surge responses through TSA-E **E*TRAC** and **WebEOC**. These responses include Emergency Medical Task Force (EMTF)-2 composed of ambulance strike teams and task forces with Ambulance Strike Team Leaders, AMBUSes, Mobile Medical Units, RN Strike Teams and Medical-Incident Support Team (M-IST) personnel, which are also coordinated with DSHS and other EMTFs around the state. NCTTRAC is the lead agency for EMTF-2, which covers not only TSA-E but also TSA-C (Abilene) and TSA-D (Wichita Falls).

DSHS, Bureau of Emergency Management, supervises provider licensing of EMS vehicles including Basic Life Support (BLS), Advanced Life Support (ALS), and Mobile Intensive Care Unit (MICU) vehicles in Texas. Medical Directors, Providers, and NCTTRAC work to assist in ensuring that providers have the resources for a well-coordinated transportation system to arrive at the scene promptly and expeditiously transport patients to the correct hospital by the correct transportation mode including ground and air transport. Mutual Aid Agreements and Memorandum of Agreements are also in place if and when needed.

State and local licensing and certification agencies, hospitals, EMS Education programs, Board of Nurse Examiners, and the Texas Medical

Association ensures a competent work force in TSA-E. Providers of prehospital and hospital care along with associations may impose post graduate certifications to allow certificants and licensees to provide trauma care (i.e. International Trauma Life Support (ITLS) and Trauma Nurse Core Course (TNCC) as examples).

911 districts provide their own emergency medical dispatch training.

EMS Education programs in TSA-E and Medical Directors ensure that prehospital personnel who routinely provide care to trauma patients have initial and continuing trauma training. Trauma education should be performance improvement driven and part of a credentialing process put into place by an EMS Medical Director. NCTTRAC supports EMS agencies that strive to put comprehensive systems in place and support these agencies as they pursue excellence.

DSHS, the Medical Director, and NCTTRAC act as the lead agencies to protect the public welfare by enforcing various laws, rules and regulations as they pertain to the trauma system.

Incentives may be provided to individual agencies and institutions to seek state or national recognition such as awards presented by the Texas Department of State Health Services and the National Association of EMS Educators Accreditations. These may be obtained by meeting state and national standards as set by Commission on Accreditation of Medical Transport or Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions for EMS Education programs.

For complete list of EMS Providers/FRO see Appendix F

XIV. MEDICAL OVERSIGHT

The development of a Regional System for Trauma care requires the active participation of qualified physician providers with . expertise and competence in the treatment of trauma patients.

There are established Physician Advisory Groups (PAGs) made of focus groups of physicians. These groups meet as needed to review medical questions by committees and membership. Refer to section XIII, Emergency Medical Services.

XV. DEFINITIVE CARE FACILITIES

NCTTRAC is served by three Level I comprehensive adult trauma centers, one Level I comprehensive pediatric trauma center, three Level II major trauma centers, one Level II major pediatric trauma center, four Level III general trauma centers, nineteen Level IV basic trauma centers, and six facilities “in active pursuit” of trauma designation.

TSA-E DSHS Designated or In Active Pursuit Center	Level
BAYLOR UNIVERSITY MEDICAL CENTER	I
CHILDRENS MEDICAL CENTER OF DALLAS	I
JOHN PETER SMITH HOSPITAL	I
PARKLAND MEMORIAL HOSPITAL	I
COOK CHILDRENS MEDICAL CENTER	II
MEDICAL CENTER OF PLANO	II
METHODIST DALLAS MEDICAL CENTER	II
TH HARRIS METHODIST HOSPITAL FORT WORTH	II
DENTON REGIONAL MEDICAL CENTER	III
HUNT REGIONAL MEDICAL CENTER GREENVILLE	III
MEDICAL CENTER OF ARLINGTON	III
TEXOMA MEDICAL CENTER	III
TH HARRIS METHODIST HEB	III
TH PRESBYTERIAN HOSPITAL PLANO	III
DALLAS REGIONAL MEDICAL CENTER	IV
ENNIS REGIONAL MEDICAL CENTER	IV
LAKE GRANBURY MEDICAL CENTER	IV
LAKE POINTE MEDICAL CENTER	IV
MUENSTER MEMORIAL HOSPITAL	IV
NAVARRO REGIONAL HOSPITAL	IV
NORTH TEXAS COMMUNITY HOSPITAL	IV
NORTH TEXAS MEDICAL CENTER	IV
PALO PINTO GENERAL HOSPITAL	IV
TH HARRIS METHODIST HOSPITAL AZLE	IV
TH HARRIS METHODIST CLEBURNE	IV
TH HARRIS METHODIST HOSPITAL STEPHENVILLE	IV
TH PRESBYTERIAN HOSPITAL ALLEN	IV
TH PRESBYTERIAN HOSPITAL KAUFMAN	IV

WEATHERFORD REGIONAL MEDICAL CENTER	IV
WISE REGIONAL HEALTH SYSTEM	IV
BAYLOR ALL SAINTS MEDICAL CENTER	IAP
GLEN ROSE MEDICAL CENTER	IAP
MEDICAL CENTER OF LEWISVILLE	IAP
MEDICAL CITY DALLAS	IAP
NORTH HILLS HOSPITAL	IAP
RED RIVER REGIONAL HOSPITAL	IAP
TH PRESBYTERIAN HOSPITAL WNJ	IAP
TH PRESBYTERIAN HOSPITAL DALLAS	IAP

Current as of 12/1/2013. For most accurate status, see the DSHS EMS and Trauma Systems website.

NCTTRAC provides resource assistance to facilities seeking trauma facility designation. NCTTRAC completes a needs assessment annually that identifies gaps in programs and defines priorities in trauma facility designation assistance. The Trauma Committee defines a schedule and volunteers for targeted programs that assist facilities in reaching trauma facility designation. Facilities that are in the process of trauma facility designation must send a letter of intent to DSHS to be designated "in active pursuit."

Trauma Facilities that cannot meet an essential criterion for a prolonged period (defined as three months or more) must report these issues to the NCTTRAC Executive Director with a plan for resolution. The Trauma Committee is responsible to assist the facility in developing regional strategies to support the facility and maintain optimal patient care. DSHS defined the critical elements that must be reported to the State as the following:

- Loss of Trauma Medical Director (with no interim)
- Loss of Trauma Program Manager / Trauma coordinator (with no interim)
- Loss of Neurosurgery Coverage (with no interim plan – Level I & II)
- Loss of Orthopedic Coverage (with no interim plan – Level I, II, III)
- Loss of Trauma Registry (with no interim plan)
- Loss of capabilities to provide Injury Prevention or Outreach Education (with no interim plan – Level I, II, III)

- Loss of ability to provide acute trauma resuscitation and critical care stabilization

In support of the facility, the Trauma Committee will make the recommendation to the Board of Directors to continue the field trauma triage to this facility, provide modifications or to realign the field trauma triage dispersal for the region until the issues is resolved. The facility must provide monthly updates and data to the Trauma Committee to ensure progress is being made to meet all trauma facility criteria and keep the State updated on activities, with the ultimate goal of optimal patient care.

The Trauma Committee will develop trauma guidelines that include Trauma Facility Field Triage Guidelines and Burn Triage and Management Guidelines.

XVI. SYSTEM COORDINATION AND PATIENT FLOW

NCTTRAC coordination and patient flow does not exist for all patient categories, although there are several smaller systems that have strong functionality and there is infrastructure in place to improve the communication across TSA-E.

NCTTRAC has been a user of EMResource (formerly EMSystem) for communication of emergency department status in TSA-E for several years. Facilities are asked to update their status daily; if they do not, the system shows them as “forced open.” Facilities may provide messages such as alerts for construction or equipment malfunction to assist EMS agencies in making a transport destination decision.

As the 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 the region. 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 within EMResource.

Facilities may choose from status values of “Open,” “Closed”, or “Advisory.” “Advisory” is used when there is a situation at the facility that affects operations but doesn’t require closure; the specifics are indicated in the other columns as appropriate or in the “Comments” area. ED

personnel are required to monitor and update their ED status at least once each day. Failure to update the system will result in an automatic status update to Open Overdue status.

Level I and II Trauma Centers (TC) may post a “trauma resource alert” status, for one hour increments, which is asking EMS to use one of the other Level I/II TCs in their area; these decisions are facilitated by Biotel for the Dallas County TCs and EPAB for the Tarrant County TCs. Level I Trauma Facilities should not be on “trauma resource alert” status unless there is a severe crisis.

A facility may post a “Closed” status only if they are suffering from a facility emergency. Examples may include an internal disaster such as a fire, flooding, power outage, water shortage, or structural damage. This status expires every two hours, so the facility needs to update the system during the emergency or contact NCTTRAC staff to maintain the status for them during these rare events. The system will "automatically update" to Open Overdue when the closed status is *expired* and *overdue* for update or if the facility does not update daily during the 2-hour window.

Proper posting on EMResource shall be considered to be the official and standard mechanism for notification in NCTTRAC (TSA-E). All EMS services are expected to participate in EMResource and to monitor it at all times for current system information including “Trauma Resource Alert” or “Closed” status. An EMS agency may call a receiving hospital for information on the status of facilities in their area if they do not have access.

If the ED staff does not have the capability to update, they can contact NCTTRAC, Biotel, or EPAB to update their status for them.

If the patient destination decision is a factor and if the patient and/or family adamantly refuses to be transported to the redirected facility, an emergency physician or trauma surgeon at the initially requested facility will be notified of the situation. Any refusal shall be documented on the patient record. Patient choice is supported by regional guidelines developed by the EMS Committee and the Physician Advisory Group for attaching to this Trauma System Plan. The current guidelines are on the NCTTRAC website.

Patients in acute status, whose care would be compromised by delaying transport or lengthening transport time, should be transported as quickly as possible to the closest most appropriate participating/designated facility ***without*** regard for redirect status. EMS services are reminded that the best interests of the patient may be to honor the redirect request and transport to an alternative hospital.

NCTTRAC sponsors a Regional Communication Center (RCC) for the use of designated and undesignated trauma facilities to assist in the transfer of their acute trauma patient to a higher-level facility. The goal is to expedite trauma transfers and complete the patient transfer process within two hours of patient arrival at the receiving facility. Posters and information on the NCTTRAC website describe the process to member hospitals, which begins with a call to a toll-free number for the region. Facilities call into the RCC, and the communication specialists then use a rotational basis along with specific patient requirements to locate a receiving trauma center. The RCC coordinates communication between the facilities to expedite the patient's acceptance and may also arrange emergency transportation. This benefit is available to every NCTTRAC member.

Transfer Guidelines are reviewed a minimum of every three years and processed through the Trauma Committee to the Board of Directors. These guidelines are posted on the NCTTRAC website under Trauma System Plan. Level I and II trauma facilities have written transfer agreements; Level III and IV facilities do not have to have written transfer agreements. The RCC helps to facilitate transfers efficiently for all of these NCTTRAC members.

XVII. REHABILITATION

Rehabilitation is the process of helping a patient adapt to a disease or disability by teaching them to focus on their existing abilities. Within a rehabilitation center, physical therapy, occupational therapy, and speech therapy can be implemented in a combined effort to increase a person's ability to function optimally within the limitations placed upon them by disease or disability. To uphold the continuum of care from illness to health and offer a high-level of service, rehabilitation is a critical service offered within TSA-E through hospital-based programs and private organizations. Transfer protocols for rehabilitation facilities are determined by individual facilities.

VIII. DISASTER PREPAREDNESS

The emergency response system within Trauma Service Area E incorporates all emergency response functions (ESF) indicated in the National Response Framework, and as incorporated within state and local emergency plans. Regional ESF-8 (Health and Medical) response to incidents and emergencies, in which response is localized, is typically managed by individual hospitals, EMS agencies, and with minimal involvement by supporting local health departments and jurisdictional emergency management officials. However, additional regional resources must be used when these incidents exceed local capacity and multiple jurisdictions are required in order to achieve a satisfactory response.

As reflected in the State of Texas Homeland Security Plan, all emergencies are considered a local responsibility, and legal responsibility for provision of support for emergencies is placed on the senior elected official within the affected jurisdiction. Response entities such as hospitals and EMS agencies must work through these officials when resource needs cannot be met by local assets alone.

Many resources have been placed within TSA-E by participation in a number of federal and state programs designed to enhance local and regional ESF-8 readiness. These programs include:

- Jurisdictional participation through health departments in the federal Bioterrorism Public Health Emergency Preparedness Program, which includes all nineteen counties of TSA-E, and eleven counties associated in the Cities Readiness Initiative. These programs prepare jurisdictions, their supporting local health departments, and partnering health and medical professionals for epidemiological intervention in biological events, including Strategic National Stockpile preparations;
- Five cities (Garland, Irving, Dallas, Fort Worth, Arlington) are designated as participants in the Metropolitan Medical Response System, integrating through the North Central Texas Council of Governments;
- Texas Hospital Preparedness Program, through which approximately 85% of the area's 146 hospitals work towards a higher level of local and regional disaster preparedness;
- Other supporting Urban Area Security initiatives.

Following a regional ESF-8 gap analysis, many resources were emplaced to improve hospital and EMS disaster response readiness. Capabilities improved upon include:

- Provision of interoperable communications capability spanning jurisdictional, public health, and health care providers, expanding traditional telephone systems by adding regional internet – based platforms such as WebEOC and EMResource, emergency notification systems, and two-way radio capability, enabling hospitals and jurisdictions to communicate in virtually any disaster environment;
- Provision of deployable communications kits with interoperable two-way radios, satellite phones, and internet – based platforms;
- Placement of mobile medical assets providing independent deployment of up to 180 beds in nine surge units with five supporting command, control, and logistics units. These units are capable of providing alternate care sites while operating in biological / chemical events in a negative pressure environment.
- Development of five mobile medical supply caches in support of large scale trauma events, for use in triage and victim stabilization;
- Development of four hospital caches of medical supplies for use within acute care and trauma centers, or which could be deployed to large scale trauma events;
- Development of a cache of pandemic supplies and consumables for hospital or alternate care site use, including emergency TEMPS beds for deployment to surge locations;
- Development and maintenance of a cache of emergency – use ventilators;
- Placement of Level C personal protective equipment, decontamination equipment, and hospital evacuation equipment at most general and special hospitals within the region, and the provision of training and exercise opportunities for response teams.

Hospitals participating in the Texas Hospital Preparedness Program, and those pursuing accreditation under Joint Commission standards, have developed all-hazard response plans and protocols, including methods by which they respond to mass casualty events. Some of the response systems developed includes plans for sheltering in place, medical

evacuation, mass fatality management, and resource sharing. These plans and resultant Hospital Incident Command Systems incorporate the National Incident Management System, and are based on hospital, city, county, and regional hazard vulnerability assessments (HVA). Hospital integration to local emergency management systems is emphasized.

TSA-E leads the state in the development and execution of Homeland Security Exercise Evaluation Program – compliant ESF-8 exercises that integrate participating hospitals, supporting jurisdictions, regional and state partners into discussion-based and operations-based exercises. Regional communications drills testing both internet-based communications and radio systems are held monthly. Quarterly exercises incorporating both discussion-based and operations-based elements are provided for a myriad of acute care subjects, with emphasis on events that are most likely to occur, based on HVA analysis. Pre-hospital and inter-hospital functions are also tested. All participating agencies produce after action reports and corrective action plans for internal use, and provide input for regional development of these documents.

In order to effectively manage the assets listed above and to enhance mutual aid among hospitals, EMS agencies, and supporting jurisdictions, TSA-E has established an ESF-8 multiagency coordination center that enables cross-jurisdiction communications and resource sharing. Capabilities include:

- Establishment of video-teleconferencing ability for linking state and local health officials, jurisdictional authorities, and major trauma centers to, and independently of, the TSA-E Medical Operations Center (EMOC).
- Regional administration of internet-based crisis communications platforms, including WebEOC and EMResource, and support for local administration of the Texas Disaster Volunteer Registry (TDVR).
    - WebEOC provides a common platform for all resource requests originating at TSA-E hospitals and funneling through city, county, and state response agencies. It also provides the ability to track evacuees, inter-hospital patient transfers, hospital significant event reporting, situation reporting, and a mission / task system. It further enables near-real time bed reporting by all acute care and trauma facilities.

- EMResource provides every hospital, ground EMS, and air-based EMS services a single platform for alerting and reporting the ability to respond to a mass casualty event. This system indicates agency ability to respond to mass casualty locations and the ability to receive disaster victims.
- The Texas Disaster Volunteer Registry is the Texas version of the federal Emergency System for Advance Registration of Voluntary Healthcare Professionals. Within TSA-E, registration of volunteer health and medical and other supporting professionals is principally a jurisdictional responsibility. The TDVR is available for any agency that pre-registers such personnel, and provides licensure validation services.

- Integration of hospital resource sharing through the TSA-E **E*TRACS**, gives hospitals a medium through which they may request, and support requests, for mutual aid and the provision of supplies, equipment, medications, and personnel, including licensed health care providers.
- The EMOC functions as a Regional EMS Coordination Center and provides for deployment coordination of regional EMS support personnel and equipment into Ambulance Strike Teams, with Strike Team leaders, and Medical Incident Support Teams. These teams are capable of forward deployment into other regions of the state, and may be called upon to support local disaster response, including receipt or transfer of patients through the National Disaster Medical System (NDMS), state-based emergency air lift, and mass shelter events.

XIX. TRAUMA SYSTEM EVALUATION AND PERFORMANCE IMPROVEMENT

The Trauma Performance Improvement (PI) Workgroup reports to the System Performance Improvement Committee. This workgroup reviews aggregate data and specific case reviews in TSA-E. This review process analyzes the aggregate data generated by the regional trauma registry, and participating entities. The Trauma PI Workgroup is composed of defined members of the Trauma Committee. The System Performance Improvement Committee defines the guidelines and processes for review.

XX. TRAUMA MANAGEMENT INFORMATION SYSTEM

NCTTRAC has a trauma registry to support system data management. EMS and trauma facilities are required to submit data sets to the registry. Participating agencies are required to have a signed MOA and User's Agreement.

The regional registry, **REG*E**, has the ability to write reports leveraged against the entire trauma system. Quantifiable data is used to change current policies and procedures and provides for benchmarking against applicable standards to show the performance of the trauma system. **REG*E** data is available at a local level allowing each agency to identify individual program needs and strategies for injury prevention and education. Performance reports are evaluated at a regional level to provide a framework to identify needs in the system.

The Trauma PI Workgroup will process action items through the System PI Committee.

XXI. RESEARCH

The North Central Texas Trauma Regional Advisory Council participates in system research on an ad hoc basis. The Board of Directors is responsible for governance and release of the data.

XXII. RECOMMENDATIONS APPENDIX

The following are recommendations made by the Trauma System Plan Workgroup for further consideration by the Trauma Committee and the Board of Directors.

Coalition Building and Community Support
(to ultimately improve patient outcomes and limit injury within the population)

NCTTRAC has the opportunity to research community coalition groups to define the opportunities for NCTTRAC members to partner with for identifying key community concerns, system development and injury prevention and awareness.

NCTTRAC has the opportunity to develop organized public information and education efforts to educate and communicate with elected officials and the public to raise awareness about the burden of injury and the need for injury prevention and trauma system development.

Prevention and Outreach

Development of a needs assessment focusing on the public information needed for media relations, public officials, general public and third party payers, leading to a better understanding of injury control, impact, burden, and prevention of trauma care.

Annual report of the status of injury prevention within the NCTTRAC trauma system.

Access to a database that is user friendly and available for public health surveillance and data collection. (in progress)

A media campaign to focus on injury/prevention awareness, trauma system development, and targeted media messages. (in progress)

Committee working together as a unit as well as individually on the top 5 causes of injury/death.

Staff member that is the "public information officer" for media, and general public information/trauma system/injury prevention updates, awareness. (in progress)

Compile a list with web access for organizations dedicated to injury prevention within NCTTRAC service area and statewide.

Funding source for injury prevention campaigns, education. (in progress)

Orientation program for NCTTRAC members to include injury prevention and outreach education.

Cumulative report of injury prevention projects/efforts that are held/available within NCTTRAC service area.

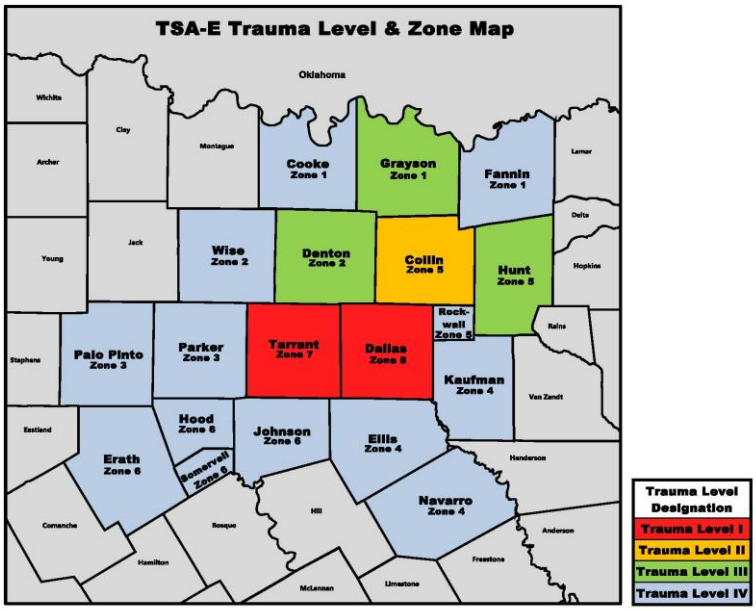
Trauma Medical Oversight

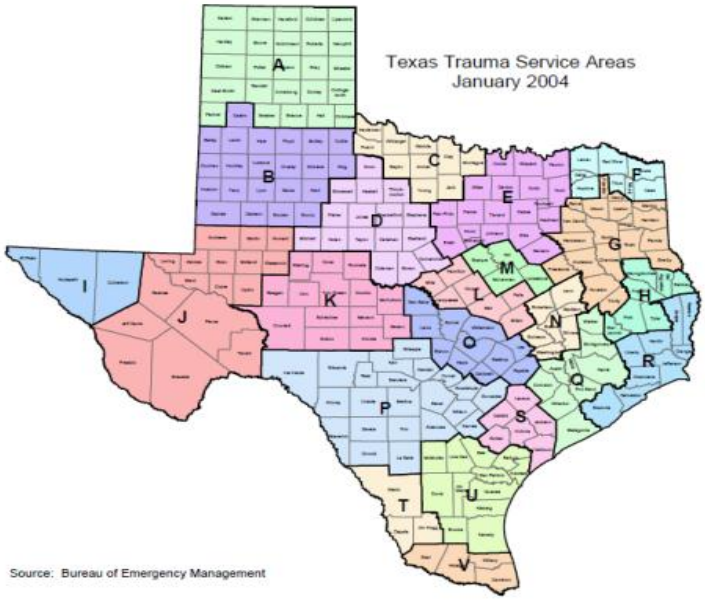
Ideas about the further development of a trauma care performance workgroup: There should be a trauma care performance workgroup that consists of interdisciplinary trauma providers involved in care in prehospital, hospital, surgical specialties, and rehabilitation settings. This workgroup needs a clear defined cooperative and on-going relationship between the trauma medical directors and the EMS medical directors as well as the many disciplines that support trauma care in the region. This workgroup would have the authority to develop protocols to ensure the appropriateness of prehospital and hospital trauma care. This workgroup would serve as a resource for trauma education for all disciplines and be charged with identifying special needs groups (such as pediatric, geriatric, etc) to address specific guidelines for trauma care. Perform a routine needs assessment to ensure the needs of the population are being adequately met. Meet at least quarterly. This workgroup moves action items through the Trauma Committee to the Board of Directors for approval.

SOP development for the recognition process for facilities in pursuit.

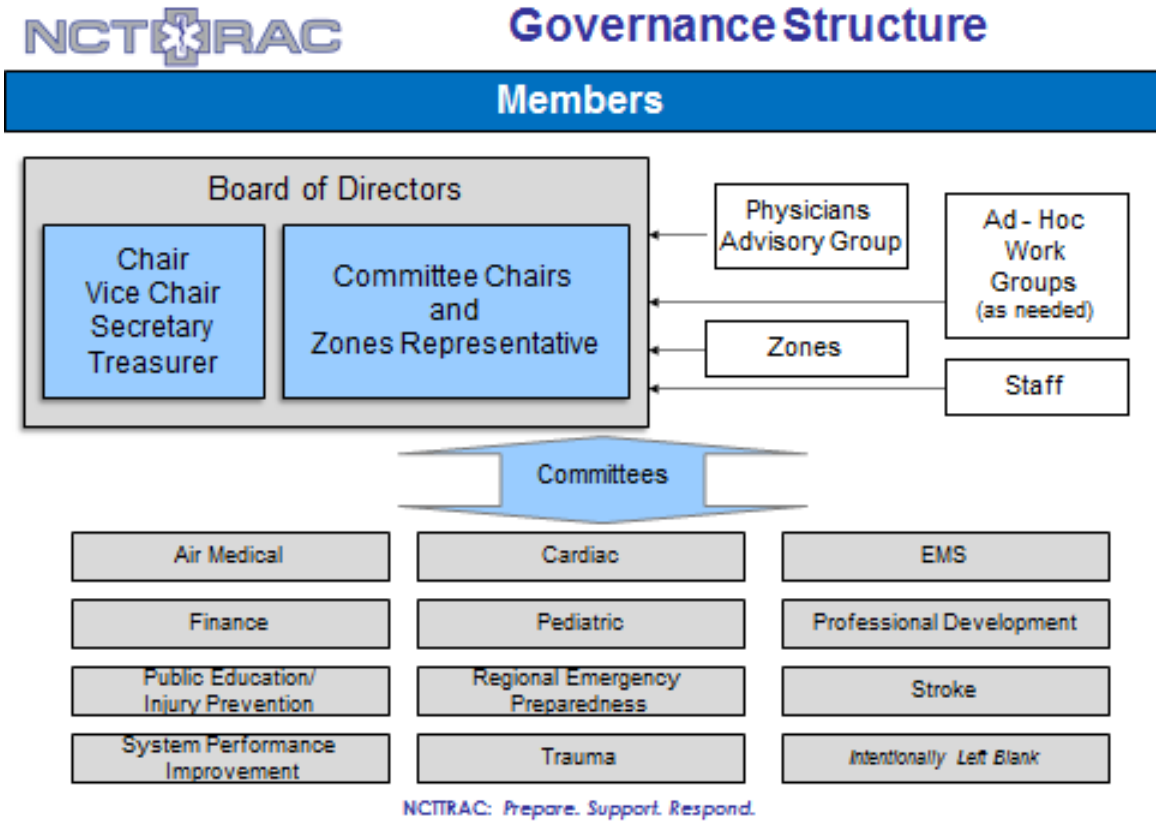
The trauma registry workgroup is charged with defining the top five E-Codes causing death, hospital admission, hospital charges, traumatic brain injury, spinal cord injury, amputations, alcohol related injuries and trauma center transfers to a rehabilitation facility within TSA-E. This workgroup defines the baseline reports to assist in targeting injury prevention initiatives and defining outcomes of interventions. The trauma registry workgroup is also developing a data dictionary for TSA-E to encompass the State minimum data set with the addition of NTDB and identified RAC data elements.

Appendix A
Zone Map

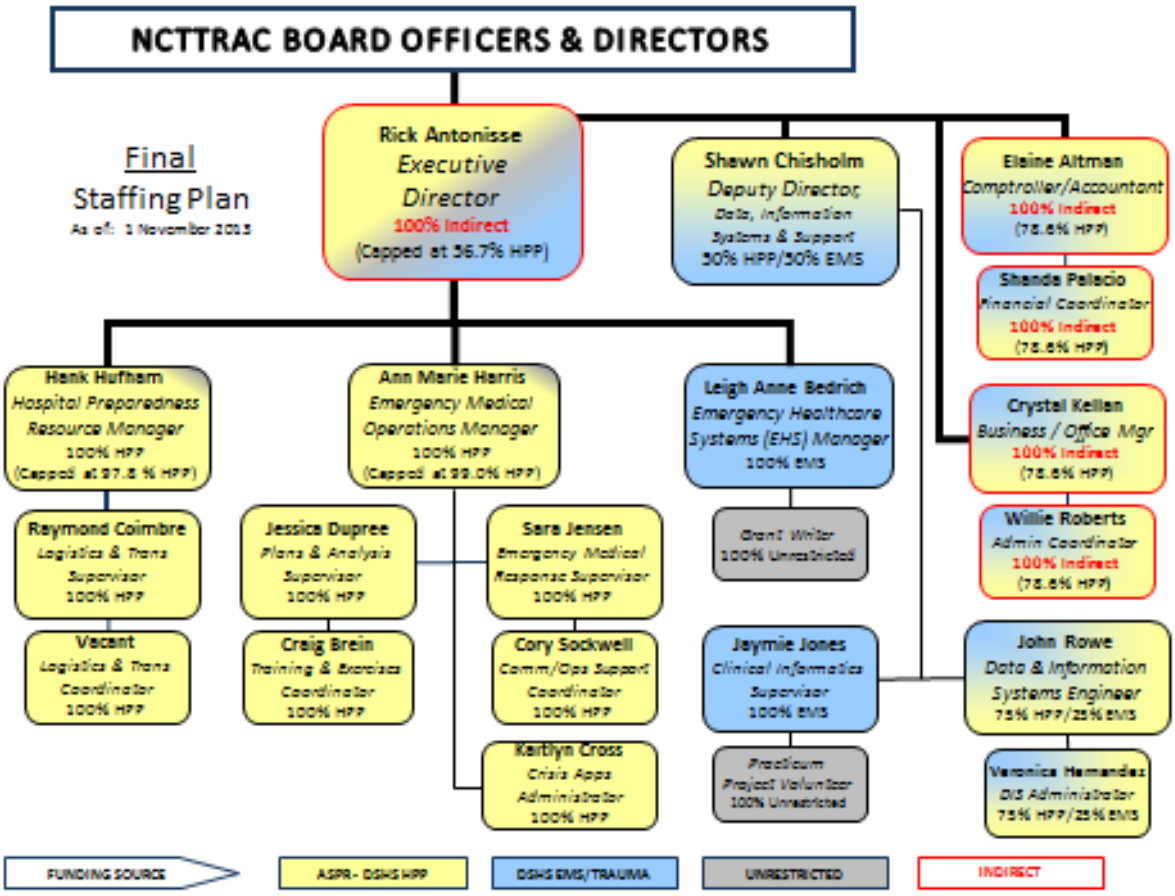




Appendix B


NCTTRAC
Governance Structure
Members
Board of Directors
Chair
Vice Chair
Secretary
Treasurer
Committee Chairs
and
Zones Representative
Physicians Advisory Group
Ad - Hoc Work Groups (as needed)
Zones
Staff
Committees
Air Medical
Cardiac
EMS
Finance
Pediatric
Professional Development
Public Education/ Injury Prevention
Regional Emergency Preparedness
Stroke
System Performance Improvement
Trauma
Intentionally Left Blank
NCTTRAC: Prepare. Support. Respond.

Appendix C


NCTTRAC BOARD OFFICERS & DIRECTORS
Final
Staffing Plan
As of: 1 November 2013
Rick Antonisse
Executive Director
100% Indirect
(Capped at 56.7% HPP)
Shawn Chisholm
Deputy Director, Data, Information Systems & Support
50% HPP/50% EMS
Elaine Altman
Comptroller/Accountant
100% Indirect
(78.6% HPP)
Shanda Palacio
Financial Coordinator
100% Indirect
(78.6% HPP)
Crystal Kellan
Business / Office Mgr
100% Indirect
(78.6% HPP)
Willie Roberts
Admin Coordinator
100% Indirect
(78.6% HPP)
Hank Hufham
Hospital Preparedness Resource Manager
100% HPP
(Capped at 97.8 % HPP)
Ann Marie Harris
Emergency Medical Operations Manager
100% HPP
(Capped at 99.0% HPP)
Leigh Anne Bedrich
Emergency Healthcare Systems (EHS) Manager
100% EMS
Grant Writer
100% Unrestricted
Raymond Coimbre
Logistics & Trans Supervisor
100% HPP
Vacant
Logistics & Trans Coordinator
100% HPP
Jessica Dupree
Plans & Analysis Supervisor
100% HPP
Craig Brein
Training & Exercises Coordinator
100% HPP
Sara Jensen
Emergency Medical Response Supervisor
100% HPP
Cory Sockwell
Comm/Ops Support Coordinator
100% HPP
Kaitlyn Cross
Crisis Apps Administrator
100% HPP
Jaymie Jones
Clinical Informatics Supervisor
100% EMS
Practicum
Project Volunteer
100% Unrestricted
John Rowe
Data & Information Systems Engineer
75% HPP/25% EMS
Veronica Hernandez
DIS Administrator
75% HPP/25% EMS
FUNDING SOURCE
ASPR - DSHS HPP
DSHS EMS/TRAUMA
UNRESTRICTED
INDIRECT

Appendix D

Trauma Facilities Field Triage Criteria for EMS follows this page.

Appendix E

The current version of the NCTTRAC Bylaws is located on the website at the www.NCTTRAC.org homepage under Organizational Documents.

Appendix F

The current list of EMS Providers and First Responder Organizations is located on the Texas Department of State Health Services EMS and Trauma Systems website under the EMS Open Records link at http://www.dshs.state.tx.us/emstraumasystems/formsresources.shtm.