



**NORTH CENTRAL TEXAS
TRAUMA REGIONAL ADVISORY COUNCIL**

2019 Regional Trauma System Plan

(Pending General Membership Approval)

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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.

NCTTRAC - Regional Trauma System Plan

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

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APPROVAL AND IMPLEMENTATION

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

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

Secretary

Date

RECORD OF CHANGES

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

The plan will undergo updates and revisions:

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

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

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

RECORD OF CHANGES

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

- Location within document (i.e. page #, section #, etc)
- Change Number, in sequence, beginning with 1
- Date the change was made to the document
- Description of the change and rationale if applicable
- Name of the person who recorded the change

Article/Section	Date of Change	Summary of Changes	Change Made by (Print Name)

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

EXECUTIVE SUMMARY

1. Regional Demographics

- All demographics updated
- All statistics updated based on most current (2017) numbers

2. Communication

- NCTTRAC supports the implementation of redundant communication systems to ensure that hospitals, EMS providers, and medical control entities can still communicate with one another in the event of a primary communications method failure. In addition to administering the regional EMResource system, NCTTRAC hosts a WebEOC server with information sharing boards and patient tracking boards dedicated to EMS provider and hospital use.

3. Medical Oversight

- The past Physicians Advisory Group (PAG), is now an established Medical Directors Committee. This committee meets quarterly to provide guidance in the development and review of hospital and pre-hospital assessment tools, regional plans, and treatment guidelines. The committee is comprised of the elected committee medical directors of the following committees: Air Medical, Cardiac, Emergency Department Operations, Emergency Medical Services, Pediatric, Perinatal, Regional Emergency Preparedness (Disaster), Stroke, System Performance Improvement, and Trauma.

4. Prehospital Triage Criteria

- The [2015 Trauma Triage & Transport Guidelines](#) were added as an appendix

5. Diversion Policies and Bypass Protocols

- Trauma facilities will report their ED status as: “Open/Advisory/Advisory-Surge/Closed”

6. Helicopter Activation

- The [Aircraft Utilization and Performance Review Guidelines](#) has been added as an appendix

7. Inter-Hospital Transfers

- The [Regional Communications Center \(RCC\) Trauma Transfer Criteria](#) was updated to reflect new phone numbers for trauma patient transfers and attached as an appendix

8. System Performance Improvement

- The SPI Committee is divided into nine (9) service line Core groups: Air Medical, Cardiac, Emergency Department Operations, Emergency Medical Services, Pediatric, Perinatal, Regional Emergency Preparedness, Stroke, and Trauma.

9. Data Collection

- Regional data collected & managed by a third party service provider is utilized to support Trauma Committee goals and PI initiatives. Member hospitals with a capable registry are required by the Trauma Committee to submit data through the regional registry to support a comprehensive and useful data set.

North Central Texas Trauma Regional Advisory Council

2018 REGIONAL TRAUMA SYSTEM PLAN

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Introduction

I. Scope

The Trauma System Plan for Trauma Service Area (TSA) – E was developed 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. 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, updated annually and approved by NCTTRAC membership, is a resource for providers of trauma care across the spectrum, from first responder organizations to rehabilitation facilities. It identifies strategies to focus diverse resources in a collective way to reduce morbidity and mortality due to trauma, and includes additional key components such as injury prevention, public and professional education, system performance improvement, and disaster preparedness.

II. 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 Annex A Appendix A-1](#) for map of region. Recent DSHS population estimates indicate that 7.4 million people reside within the 15,574.71 square miles of TSA-E, representing 27% of the entire population of the State of Texas.

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 cultural, business, and political events. The region has large college system campuses, multiple community colleges, and medical school campuses. TSA-E is home to 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 4th busiest airport in the world in terms of aircraft movements, totaling 655,287 (2017 statistics) annually. In terms of passenger traffic, it is the 12th (2017 statistics) busiest airport in the world. The Naval Air Station Joint Reserve Base Fort Worth (NAS JRB), also known as Carswell Field, is a military airfield located within NCTTRAC. 10,000 active duty

military, Guardsmen, Reservists, and civilian employees work at the base. The Comanche Peak Nuclear Power Plant is a two-unit nuclear-fueled power generating facility located on 10,000 acres 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. Globe Life Park in Arlington is home to the Texas Rangers and is located within walking distance from Six Flags and AT&T Stadium in the heart of Arlington and TSA-E. Texas Motor Speedway hosts several NASCAR series, seating over 138,000 spectators in southwestern Denton County.

NCTTRAC is served by five Level I comprehensive adult trauma centers, one Level I comprehensive pediatric trauma center, five Level II major trauma centers, one Level II major pediatric trauma center, twelve Level III general trauma centers, twenty Level IV basic trauma centers, and three facilities “in active pursuit” of trauma designation, in addition to many acute care hospitals. See list of all hospitals within the region in [Annex A Appendix A-2](#). There are also approximately 130 ground and air EMS services and over 140 first responder organizations. See list of all EMS/FRO and Air Medical Providers for the region in [Annex A Appendix A-3](#).

III. List of RAC Officers

A list of RAC officers, including members of the Board of Directors and the Executive Committee of the Board of Directors. A list of all Board of Directors are available in [Annex B Appendix B-1](#). The Executive Committee of the Board of Directors consists of the Board Chair, Chair Elect, Secretary, Treasurer, Finance Committee Chair, and Medical Directors Committee Chair.

IV. Standing Committees

Committee leadership consists of a Committee Chair, Chair Elect, and Medical Director. These positions 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. The Chair Elect automatically ascends to the Chair position at the end of the current Chair’s term. Committees may establish a “core group” by SOP to ensure balanced and appropriate participation in committee activities. NCTTRAC standing committees are open to any individual who wants to attend, with the exception of the System Performance Improvement Committee closed sessions.

A list of standing committees, with the chairperson for each, are available in [Annex B Appendix B-2](#). The list of standing committees, as well as committee’s purpose,

Chair terms, job descriptions, and voting participation are defined in the NCTTRAC bylaws. A copy of the bylaws is attached to this plan as [Annex B Appendix B-3](#).

V. Evidence of System Participation

Announcements for trauma system planning are sent electronically to 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 Membership and Participation SOP.

Plan Components

VI. System Access

All counties in the State of Texas have access to the EMS System utilizing 911 service. Additionally, all Trauma Service Area (TSA) E counties received recent and robust updates including technology for cellular location. In the event 911 is out of service, 24/7 emergency phone numbers listed by county, are available for the civilian population. [See Annex C Appendix C-1](#).

The 911 capabilities for all EMS providers allow for efficient dispatch of response teams/agencies to the scene. In the event that the telephone or network communication system is down, EMS facilities and key agencies have access to two-way radios to communicate with dispatch, hospitals, and the NCTTRAC Emergency Medical Coordination Center (EMCC).

The EMCC helps coordinate response teams for disaster and regional surge responses through TSA-E resource and crisis applications such as **EMResource** and **WebEOC**. These responses include Emergency Medical Task Force (EMTF)-2 composed of Ambulance Strike Teams (AST) and task forces with Ambulance Strike Team Leaders (ASTL), AMBUSes, Mobile Medical Units (MMU), 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).

VII. Communication

Communication between hospitals, EMS providers, and medical control entities takes place using a variety of methods. Hospitals communicate information

regarding Emergency Department saturation, Emergency Department Advisory status, bed availability numbers, and clinical service line availability by updating dedicated status types in EMResource (see the section on *Diversion Policies and Bypass Protocol*). Direct communication between EMS providers, hospitals, and medical control entities generally occurs using a combination of cell phones, landline phones, and dedicated radio frequencies. Hospitals, EMS providers, and medical control entities work together to determine the best method of communication for their specific circumstances. For example, in some areas the most effective means of communication is for EMS providers to call the hospital's Emergency Department business line phone using cell phones held by individual paramedics, whereas other areas are better served by the hospital ED using a public safety radio with a dedicated channel for EMS communications.

NCTTRAC supports the implementation of redundant communication systems to ensure that hospitals, EMS providers, and medical control entities can still communicate with one another in the event of a primary communications method failure. In addition to administering the regional EMResource system, NCTTRAC hosts a WebEOC server with information sharing boards and patient tracking boards dedicated to EMS provider and hospital use. Using Hospital Preparedness Program (HPP) funding, NCTTRAC purchased amateur radios and VHF, UHF, and 700/800 public safety radios that can be given to hospitals and EMS providers as a means of redundant communication. NCTTRAC also purchased 2 Mobile Emergency Response Communications (MERC) trailers that can be deployed to provide temporary communications capabilities. These trailers are currently hosted by Parker County Hospital District/Lifecare EMS and Medical City North Texas. Additionally, NCTTRAC maintains multiple communications equipment caches that can be deployed in the event of a major communications failure.

Communications between multiple agencies responding to the same scene is generally dictated by the Incident Commander. Most neighboring jurisdictions share common radio frequencies or talkgroups that allow for interoperable radio communications – the exact frequencies or radio systems vary based on the jurisdiction having authority. In addition to jurisdiction-specific interoperable systems, it is recommended that EMS providers ensure that their responding units are equipped with radios that have been programmed with the Texas Statewide Interoperability Channels identified in the [Texas Statewide Interoperability Channel Plan](#).

VIII. 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.

NCTTRAC has an established Medical Directors Committee. This committee meets quarterly to provide guidance in the development and review of hospital and pre-hospital assessment tools, regional plans, and treatment guidelines. The committee is comprised of the elected committee medical directors of the following committees: Air Medical, Cardiac, Emergency Department Operations, Emergency Medical Services, Pediatric, Perinatal, Regional Emergency Preparedness (Disaster), Stroke, System Performance Improvement, and Trauma. Each Medical Director is responsible for participating with and providing medical oversight for their service line committee, as well as collaborating with other RAC committees and Medical Directors.

IX. Pre-hospital Triage Criteria

The survival of the trauma patient is dependent upon rapid recognition/management of life-threatening injuries and rapid transport to an appropriate facility. The NCTTRAC Trauma Triage and Transport Guidelines were developed to assist emergency care providers at the scene, in conjunction with standard medical operational procedures and on-line medical control, to evaluate the level of care required by the injured or ill person and to determine the patient's initial transport destination. These guidelines align with the most recent national Trauma Center Field Triage Criteria outlined in the American College of Surgeons, *Resources for Optimal Care of the Injured Patient*, and the Centers for Disease Control (CDC). The Trauma Triage and Transport Guidelines are reviewed annually and revised as necessary by the EMS and Trauma Committees with a final review and recommendation by the Medical Directors Committee and endorsement by the Board of Directors. [See NCTTRAC Trauma Triage and Transport Guidelines in Annex D Appendix D-1.](#) Regional air transport resources may be appropriately utilized in order to reduce delays in providing optimal trauma care. [Refer to Annex F: Aircraft Utilization and Systems Performance Review.](#) These documents are also posted on the NCTTRAC website at www.NCTTRAC.org.

X. Diversion Policies and Bypass Protocols

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 Trauma Service Area (TSA) E. Facilities may communicate information to EMS that may be relevant in the decision to transport to their destination, such as ED saturation, but may not post a "divert" status or comment within EMResource. EMResource is the primary tool in TSA-E for hospitals to communicate with EMS providers about any facility issues that may be relevant to EMS patient destination decisions. EMResource is used to report on the saturation level of a facility's Emergency Department, the overall status of a facility's Emergency Department, specific clinical service capabilities, and facility bed availability. NCTTRAC has intergrated the use of National Emergency Department Over Crowding Study (NEDOCS) scoring within EMResource for hospitals to help

determine emergency department saturation and reporting. Hospitals with emergency departments are required to update their NEDOCS once every 4 hours; if they do not, the system marks their NEDOCS as “Overdue”. EMS providers are required to monitor the NEDOCS of facilities in their service area. This can be accomplished by either actively monitoring EMResource on the website or mobile application or by receiving notifications when the NEDOCS goes above a certain threshold.

In addition to their ED saturation, facilities report on the general status of their Emergency Department using the “Open / Advisory / Advisory-Surge / Closed” status in EMResource. Facilities may choose from the following status options:

- **Open:** The ED is open and accepting patients with no limitations.
- **Advisory:** Hospital is advising EMS about a resource constraint so that EMS can make an informed decision regarding patient destinations. Hospitals can still receive EMS patients. Explanatory comments are mandatory. This status option must be updated once every 4 hours.
- **Advisory – Surge:** Hospital is advising EMS about high patient census in the ED that may affect EMS wait times. Hospitals can still receive EMS patients. This status option must be updated once every 4 hours.
- **Closed:** The ED is suffering from an internal disaster/facility emergency that is preventing them from accepting patients. Examples may include fire, flooding, power outage, water shortage, structural damage, etc. This facility cannot accept EMS patients. This status option is not to be used for patient surge and should not be used to address internal staffing issues. Comments are mandatory. This status option must be updated once every 4 hours.

ED personnel are required to monitor and update their “Open / Advisory / Advisory-Surge / Closed” status at least once every 24 hours. If a facility is on “Advisory”, “Advisory – Surge”, or “Closed”, the status must be updated at least once every 4 hours. Failure to update the system within the required timeframe will result in an automatic status update to “Open_Overdue”. EMS providers are required to monitor the “Open / Advisory / Advisory-Surge / Closed” status of facilities in their service area. This can be accomplished by either actively monitoring EMResource on the website or mobile application or by receiving notifications when the “Open / Advisory / Advisory-Surge / Closed” status changes.

Level I and II Trauma Centers (TC) may note a trauma resource alert in the comments section of the “Open / Advisory / Advisory-Surge / Closed” status – a trauma resource alert is the hospital asking EMS to use one of the other Level I/II TCs in their area. Level I trauma facilities should not utilize the “Closed” status resource alert unless there is a severe internal crisis within their facility. Designated

trauma facilities have their current designation level listed in the “DSHS Trauma Designation” status.

Trauma Centers can note specific trauma-related service capabilities, such as Hand, Replant, Burn etc., using the appropriate EMResource status types.

All hospitals and EMS providers have the ability to create event notifications in EMResource. These events are used to inform the emergency healthcare partners in TSA-E about any incidents or occurrences that might affect the overall emergency healthcare system in TSA-E. For example, hospitals can create event notifications to alert EMS providers about construction that affects EMS traffic, or an EMS provider can create an event notification that alerts hospitals to an emergent mass casualty incident.

Proper posting on EMResource is considered the official and standard mechanism for notification in TSA-E. All EMS services are expected to monitor EMResource at all times for current system information. An EMS agency may call a receiving hospital for information on the status of facilities in their area if they do not have access. EMS agencies should use the information within EMResource to help inform patient destination decisions to ensure that all patients receive the appropriate care quickly and effectively.

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

XII. Regional Medical Control

Regional Medical Control is defined as a centralized location for receiving on-line and off-line medical orders and for regional development of treatment protocols. As defined, there is no regional medical control in TSA-E.

Presently, each EMS agency has its own medical director and standard operating procedures (SOPs). Each medical director has the legal authority under Texas Administrative Code, Chapter 197 and the Texas Department of State Health Services (DSHS) Chapter 157 for developing the agency’s local protocols and guidelines. TSA-E provides off-line guidelines to each EMS provider and medical director as recommended by the EMS, Trauma, and Medical Directors Committees that may be utilized and adopted. 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.

XII. Facility Triage Criteria

Patients will be triaged to the appropriate trauma facility, following the Trauma Triage and Transport guidelines, with injured patients being transported to centers with appropriate capabilities. Each regional trauma center defines its internal facility triage criteria. There is not currently a regional standard for internal facility triage criteria. Some centers have a single level trauma activation while others have multi-tiered and/or specialty population specific criteria.

The ability of trauma facilities to monitor their resource capabilities is through NCTTRAC's web based resource and crisis applications such as EMResource and WebEOC. Individual trauma centers are responsible for determining if a patient exceeds the center's available resources and maintaining current capabilities, including the availability of call coverage for surgical specialties. Communication of hospital capabilities to pre-hospital and hospital providers is addressed through EMResource.

XIII. Inter-Hospital Transfers

Indications for Patient Transfer

Injured patients should be transferred to a higher level of care when the medical needs of the patient outweigh the resources at the initial treating facility. The NCTTRAC Trauma Transfer Guidelines ([See Annex D Appendix D-2](#)) identifies injury patterns that would benefit from a higher level of care and thus should be transferred to a Level 1 or Level 2 Trauma Center. Injury criteria includes, but is not limited to the following:

Neurosurgical:	Open skull fractures Lateralizing signs Spinal Cord injuries
Thoracic:	Major chest wall injury Signs suggesting mediastinal injury Continued blood loss from chest injury
Extremity Injuries:	Fractures with evidence of vascular injury Open long bone fractures
Pelvis:	Unstable ring fracture Pelvic injuries with ongoing evidence of blood loss Open pelvic injury
Multi-system:	Multiple long bone fractures Burns with other associated injuries Injury to two or more body systems
Comorbid Issues:	Greater than 55 years old Less than 5 years old Cardiac or respiratory disease Pregnancy

Time to Transfer

Access to timely trauma care is a system goal in TSA E. The focus should be to reduce time from onset of injury to definitive care. Facilities should provide initial stabilization and timely transport to the closest, most appropriate designated facility with definitive care capabilities. The time required to make the decision to transfer accounts for the greatest transfer delay. It is critical to make the decision to transfer early. Non-essential diagnostic testing and procedures will delay transfer and should be avoided. Attention should be directed at life-saving stabilization. Examples of stabilization that should be undertaken prior to transport include:

- Maintenance and protection of airway
- Decompression of tension and simple pneumothorax
- Establishment of redundant large bore IV or IO
- Maintenance of normothermia
- Decompression of stomach if indicated, especially if transported by air

Attempts to stabilize the patient should be continued until the transfer is completed; however, the most severely injured patients may not be completely stabilized prior to transfer. Inability to completely stabilize a patient is not a contraindication of transfer.

Per NCTTRAC Trauma SPI Performance Indicators and DSHS Trauma Facility Audit Filters:

- Major or severe trauma patients should be transferred to an appropriate higher level of designated trauma facility within 2 hours of arrival in the ED.
- Inter-facility transfers should primarily occur within TSA E however there may be occasions in which patients are transferred outside of TSA E due to availability of resources or patient/family preference.
- Inter-facility transfers should not occur more than once per patient. In the event two or more transfers occur before the patient reaches definitive care, a referral shall be made to review by the NCTTRAC SPI Committee.

Transferring facilities shall make efforts to send medical records and radiographic studies obtained during initial management to the accepting referral center. Copies of studies may be sent in hard copy or electronically through web-based programs. Exhaustive scanning frequently must be repeated at the receiving facility, often because of the quality of images, failure to transfer the images to the receiving facility, or inability to read the disc transported with the patient. This results in further delays in definitive care and avoidable exposure of the patient to ionizing radiation, and thus should also be avoided.

Physician to physician communication is essential between the initial facility and the accepting referral center. Physicians at the comprehensive and major trauma centers should be available for consultation with the sending provider prior to

transfer. Early communication with the receiving trauma surgeons can streamline the transfer process and satisfies one of the EMTALA requirements for transfer.

Transfer Agreements

Trauma centers are required to have a process to expedite the transfer of applicable major and severe trauma patients to a higher level of care to include written guidelines, written transfer agreements, and/or the NCTTRAC Trauma Transfer Guidelines. Level I and II trauma facilities may have written transfer agreements with other Level I and II facilities for specialty populations such as pediatrics, burn, replant, etc.

Coordination of the inter-facility transfer is the responsibility of the initial facility. Transfers may be coordinated directly with referring hospitals through transfer centers or directly with accepting providers. Transfer Center phone numbers for Level I and II Trauma centers in TSA-E can be found within the NCTTRAC Trauma Transfer Guidelines ([Annex D Appendix D-2](#)).

As referenced in the NCTTRAC Triage and Transport Guidelines ([Annex D Appendix D-1](#)), if a patient and/or family refuses transfer to the accepting referral facility or higher level of care, an emergency physician or trauma surgeon at the referral facility will be notified of the situation. Any refusal shall be documented on the patient record.

XIII. Plan for Designation of Potential Trauma Facilities

As required by DSHS, Trauma facilities within the TSA E region have an obligation to maintain NCTTRAC membership in good standing as well as meet active participation requirements. Facilities seeking In Active Pursuit (IAP) trauma designation status shall notify DSHS, NCTTRAC, and local providers of IAP intent.

Trauma Facilities that cannot meet an essential criterion must notify the Office of EMS/Trauma Systems, NCTTRAC, all other affected RACs and EMS agencies, and healthcare facilities to which it customarily transfers-out trauma patients or from which it customarily receives trauma transfers-in.

DSHS defines 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 NCTTRAC Systems Performance Improvement (SPI) Committee will help determine appropriate resolution efforts. The facility will notify affected EMS agencies of the limitations of the facility.

XIV. System Performance Improvement Program

The NCTTRAC System Performance Improvement (SPI) Committee is responsible for shared oversight of trauma and emergency healthcare system performance improvement activities. The SPI Committee is divided into nine (9) service line Core groups: Air Medical, Cardiac, Emergency Department Operations, Emergency Medical Services, Pediatric, Perinatal, Regional Emergency Preparedness, Stroke, and Trauma.

The SPI Committee will notify the Trauma Committee Chair of any trauma cases or system issues that have been reported and are in need of review. The Trauma SPI core group, comprised of the Trauma Committee Chair, Chair Elect, Medical Director, and two elected committee members as approved by the committee, will review each reported case/issue in a closed session and make recommendations to the SPI committee, the Executive Committee, and in turn the Board of Directors for determinations and action plans.

Data Collection

Regional data collected and managed by a third party service provider is utilized to support Trauma Committee goals and PI initiatives. Member hospitals with a capable registry are required by the Trauma Committee to submit data through the regional registry to support a comprehensive and useful data set. Resources are made available through NCTTRAC to facilitate the training of individual members on data submissions. The regional registry utilizes the National Trauma Data Bank (NTDB) inclusion criteria and data set.

Other NCTTRAC committees may request registry data. All data requests should be submitted through the NCTTRAC ticket system available on the website. The Executive Committee will approve/deny all data requests. If approved, the Chair or Chair Elect of the committee requesting the data will be required to share the results with the Board of Directors.

Trauma System Performance Improvement

The goal of Trauma System Performance Improvement is to reduce injury and death from trauma in TSA-E by identifying educational needs and opportunities for improvement in trauma patient care and system processes.

The Trauma Committee collaborates with the System Performance Improvement (SPI) Committee to define committee goals and trauma performance indicators for the region. The Trauma Committee standards and performance indicators are developed from committee consensus, evidence based practice guidelines, the American College of Surgeons *Resources for Optimal Care of the Injured Patient*, and DSHS Trauma Facility Designation rules/requirements. All designated trauma centers must comply and adhere to the standards of care determined by their verifying and designating agencies.

The Trauma Committee monitors regional trauma performance indicators and goals on a monthly dashboard which shall be presented to the committee and the Board of Directors. The trauma performance indicators and goals are reviewed/revised annually and defined in the Trauma Committee SOP, which is attached to this plan as [Annex B Appendix B-4](#).

A Trauma Registry Workgroup has been established by the Trauma Committee to assist with evaluating regional data, identifying data needs, providing education to other registrars, and sharing best practices.

XV. 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. A list of rehabilitation resources for the region are available in [Annex A Appendix A-4](#).

Transfer protocols for rehabilitation facilities are determined by individual facilities.

XVI. Injury Prevention and Public 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.

Prevention Strategies are based on epidemiologic data that is collected through available local, regional, state and national patient data systems. Collaboration with community coalitions and partners, policy makers, and other vested stakeholders defines the interventions targeting specific populations. Intervention programs seek to create a measureable reduction of injury and increase prevention strategies (such

as increased use of seatbelts), that have measurable outcomes in a specific timeline. Staffing and community partners are essential for success.

The NCTTRAC Public Education and Injury Prevention committee serves as a resource to identify prevention programs, events, and other prevention resources available to members and the community in TSA-E. Regional, state, and national data will be utilized to determine current trauma trends and address specific priorities. Workgroups and coalitions may also be developed to focus on specific mechanisms and/or populations for educational opportunities.

XVII. Coalition and Partnership Building

Coalition and Partnership 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, regional system guidelines, financing initiatives and disaster preparedness, system integration, and promoting collaboration rather than competition between trauma centers and prehospital providers. It is desired that 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.

XVIII. Disaster Preparedness and Response

Disaster preparedness and response activities among the emergency healthcare system in TSA-E are conducted at the regional level through the Health Care Coalition (HCC). The HCC has been developed and funded as part of the federal Hospital Preparedness Program (HPP). The TSA-E HCC is composed of partner organizations from 4 core groups: hospitals, EMS, public health, and emergency management. These 4 groups work together as the HCC to promote emergency preparedness and healthcare delivery response. The HCC's purpose is to:

- Lead collaborative regional planning, formulate strategies, and make recommendations to the NCTTRAC Board of Directors to ensure that the best possible approaches to regional HCC planning can be achieved in TSA-E.
- Identify and assess regional needs in order to develop possible options for strengthening the overall resiliency of regional response capabilities based upon federal and state guidance and best practices (these include the

- Hospital Preparedness Program, Centers for Medicare and Medicaid Services, Federal Emergency Management Agency, etc.)
• Serve to identify the regional priorities set forth by current federal and state guidelines by utilizing input from Subject Matter Experts to set strategic planning goals and initiatives.

The TSA-E HCC conducts disaster preparedness activities in accordance with the *Trauma Service Area-E Health Care Coalition Regional Preparedness Strategy*, which can be found in [Annex G Appendix G-1](#).

Coordinated medical responses that are timely and exercised routinely can mitigate damages and save lives. The response goal of the HCC is to promote resiliency and adequate surge capacity and capability across TSA-E during a mass casualty or disaster situation. Effective response and recovery requires a coordinated effort among public and private entities. Hospitals and healthcare facilities are encouraged to be active participants in emergency preparedness efforts, including partnering with EMS, emergency management, public health, and other entities. The TSA-E HCC regional response structure promotes jurisdictional cooperation and coordination, but recognizes the autonomy, operational authority, and unique characteristics of each jurisdiction at the facility, local, regional, and state levels. The TSA-E HCC conducts disaster response activities in accordance with the *Trauma Service Area-E Health Care Coalition Regional Medical Response Strategy*, which can be found in [Annex G Appendix G-2](#).

XIX. Research

NCTTRAC participates in system research on an ad hoc basis. The Board of Directors is responsible for governance and release of the data for all research purposes.

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