Coastal Bend Regional Advisory Council (CBRAC)

TSA-U REGIONAL TRAUMA SYSTEM PLAN

Approved by General Membership January 2016.
Last revision April 2017.

INJURY PREVENTION AND PUBLIC AWARENESS

The Coastal Bend Regional Advisory Council TSA-U promotes the reduction of the incidence, severity and cost of intentional and/or unintentional injuries through the implementation of effective prevention strategies, to include education, improved technology and public policy.

In efforts to promote the reduction of the incidence, severity and cost of intentional and/or unintentional injuries, the Coastal Bend Regional Advisory Council TSA-U will utilize the state trauma registry database and other state and national databases to catalog and identify trauma trends in the region in order to implement strategies to reduce these trends.

The Coastal Bend Regional Advisory Council TSA-U Injury Prevention Committee will identify effective access mechanisms with entities that can assist our organization in implementing programs and distributing materials to the public. The Coastal Bend Regional Advisory Council TSA-U will participate in Injury Prevention activities within the community and develop programs that will educate the public and promote injury prevention within our communities. The Coastal Bend Regional Advisory Council TSA-U will monitor legislative issues regarding public injury prevention and support or oppose those that fit within our strategic plan.

ACCESS TO THE SYSTEM

Basic 9-1-1 is a regional system providing dedicated trunk lines, which allow direct routing of emergency calls. Routing is based on the telephone exchange area, not municipal boundaries. Automatic Number Identification (ANI) and Automatic Location Identification (ALI) are not provided with Basic 9-1-1. In Trauma Service Area U, there are no basic 9-1-1 systems. All systems are enhanced 9-1-1 with different levels of service.

Enhanced 9-1-1 is a system, which automatically routes emergency calls to pre-selected answering points based upon geographical location from which the call originated. A 9-1-1 system operates by a caller dialing the digits 9-1-1, and then the call is routed to the local telephone company central office. The ANI is attached to the voice and sent to the Public Safety answering point. With the ALI, the call is sent to the central office and the 9-1-1-computer database assigns an address to the phone number, then routes the call to the designated Public Safety Answering Point (PSAP).

In TSA-U, the primary emergency communication systems for public access is Enhanced 9-1-1. The emergency communication systems were implemented providing citizens to emergency communications to municipalities and counties (incorporated and unincorporated) in the TSA-U. In circumstances when all incoming 9-1-1 lines are busy or the central system is down for a period of time, the calls are automatically routed to a designated alternate location.
In TSA-U, all pay phones offer free 9-1-1 access as well as operator assistance. Phone lines in residences and business alike, that are not connected, have 9-1-1 accesses. Mobile phone customers also have no charge 9-1-1 access. For the public that is hearing impaired, the Telecommunications Device for the Deaf (TDD) system is linked to 9-1-1 and TDD pay phones offer free access.

**COMMUNICATIONS**

The current Trauma Communication network within TSA-U consists of traditional phones, wireless phones, VHF, and 800 MHz radio systems. Due to technical and geographic limitations the only region wide communications networks are traditional wire and wireless phones.

EMS Communication Systems in TSA-U currently do not utilize exclusively medical personnel for dispatch. Many systems have calls routed through various other agencies, such as the fire department, sheriff’s office or local hospitals. Emergency Medical Dispatcher (EMD) certified dispatchers are the exception rather than the rule. It is a goal of TSA-U to encourage and support the development of EMS certified dispatchers in all Public Service Answering Points (PSAPs) within the region.

The communication network in TSA-U providing for ambulance to ambulance, ambulance to dispatch, ambulance to hospital, ground to air, and hospital to hospital communications consist of several radio frequencies, including, but not limited to VHF high band frequencies, 800 MHz trunking systems and the use of telephones both land based and cellular. By using these multiple systems, communications with public and private EMS agencies, police, fire, and hospitals are maintained.

Each agency and their vehicles also maintain a listing of their mutual aid responders for ready reference, although written mutual aid agreements are not formally obtained by all of the EMS Systems.

The strength of the Communications systems within TSA-U is that there is widespread coverage via radio communications for the area.

**MEDICAL OVERSIGHT / REGIONAL MEDICAL CONTROL**

Trauma Service Area U (TSA-U) includes both rural and urban areas. Hospitals in the area have capabilities ranging from non-designated, but participating facilities, through Level II Trauma Centers. There is not a single EMS Medical Director serving all EMS agencies in the region.
Currently, a Level II Lead Trauma Center is located in Corpus Christi, Nueces County. Nueces County is the most urban of the counties within TSA-U. A tiered patient delivery system based upon severity of injury is geared toward transfer of the trauma patient from the scene to the most appropriate level of care within an appropriate time frame. This goal is accomplished through application of well-established off-line medical control protocols and utilization of on-line medical control when patient circumstances are contrary to these protocols. Proper communication of facility diversion is also essential to prevent harmful delays in the delivery of patient care. A list of TSA-U medical directors for the EMS Agencies is available upon request.

There are presently four air rescue systems and up to ten helicopters that may serve patients within TSA-U. HALO-Flight Inc. is headquartered in Corpus Christi and is the only air medical service based within the TSA-U region. HALO-Flight Inc. has a total of two available helicopters in Alice and Beeville, Texas. Air Evac Life-team is based in Laredo and McAllen, Texas with two total aircraft available, REACH has one aircraft in Pearsall, Texas. San Antonio Air Life is based in San Antonio and has four remote bases around San Antonio that are full time and has a twelve hour base in Pleasanton, Texas. PHI Air Ambulance based in Victoria has one helicopter. All systems can provide services within TSA-U as necessity dictates. A large portion of the EMS Agencies provide service in areas with no local hospital. Scene-to hospital times range anywhere from 5-50 minutes. Scene to Level II trauma center by ground time may exceed 70 minutes, and air transport times may be as long as 30 minutes from some areas of TSA-U.

Medical oversight of RAC and trauma related services have been established by involving the physician community into the RAC process. RAC protocols affecting the medical care of patients are required to be approved annually by the members at the General Membership of the RAC, including physician members. In addition, each EMS Medical Director is required to verify the use of various RAC protocols annually.

Regional Medical Control takes two forms, offline and online medical control. Online medical control is offered as needed to all prehospital services in the region from a standard medical radio/radio-phone communications system based at CHRISTUS Spohn Hospital Corpus Christi Shoreline and overseen by emergency department physicians at that facility. The medical directors of the individual services requiring medical direction provide Offline Medical Control. This medical direction includes the provision of standing orders and protocols for patient care and transportation. Offline direction also includes quality assurance practices including run reviews, comparisons of actions to orders, and other methods of control as specified by individual service directors.
AIR MEDICAL ACTIVATION GUIDELINES

Purpose: These Air Medical Provider (AMP) activation guidelines are intended to provide a framework for each RAC to develop a standardized method for ground emergency medical service providers to request a scene response by an AMP, to reduce delays in providing optimal care for severely ill or injured patients, and to decrease mortality and morbidity. AMP resources should be utilized in accordance with the regional trauma plan. Guidelines for Activation & Selection of AMP:

1. The EMS provider should comply with RAC-approved triage criteria to activate AMP transport. Factors that should be considered are:
   a. Location of incident
   b. Number of patients
   c. Age of patients
   d. Response time of AMP(s)
   e. Severity/MOI (refer to the CBRAC Guidelines for Field Triage of Injured Patients)
   f. The total AMP response time (response time + scene time + transport time) will result in delivery of the patient(s) to the most appropriate facility faster than transport by ground ambulance.

2. Any available AMP(s) that best meets the needs of the patient may be utilized.

Other considerations: Patients meeting criteria for AMP dispatch should be transported to the nearest appropriate facility.

AMP Selection Considerations: The following parameters may be considered in the development of RAC AMP activation criteria when more than one AMP provides service in the Trauma Service Area (TSA):

1. The AMP should meet the minimum RAC participation standards in the RAC in their primary service area;
2. The AMP should participate as requested in RAC performance improvement activities;
3. The AMP utilized for patient treatment and transport should be the AMP that best meets the patient's care and transport needs, including:
   - Performance criteria (dispatch + response time + scene time + transport time) clinical capabilities
   - Operational interface and safety. AMP should demonstrate safe operations at all times. Safe operations standards include safety standards such as those endorsed by the Federal Aviation Administration, the National Association of EMS Pilots, National Association of Air Medical Services and the Committee on Accreditation of Air Medical Transportation Services.
   - Clinical and operational performance improvement (PI) practices.
FACILITY DIVERSION GUIDELINES

SUBJECT: Diversion of Emergency Medical Services (EMS) traffic from emergency facilities.

PURPOSE: To define uniform system guidelines for a hospital requesting to re-direct EMS traffic to an alternate hospital.

ACKNOWLEDGMENTS:
Trauma Service Area U hospital facilities, both Trauma Centers and Non-Trauma Centers, should request that EMS services re-direct themselves only when the hospital emergency room is experiencing unsafe delays due to limitations in resources or in the case of possible internal disaster to the point that further patient traffic would jeopardize the care and treatment of patients at that facility as well as any subsequent patient to that facility.

It is recognized in advance that there is no guarantee that total compliance with these guidelines will be possible and it is likely that patients will continue to arrive to hospitals that have reached unsafe levels. It is further understood that honoring such a request from a hospital is a courtesy by the Regional EMS system. Patient's informed wishes will be considered.

Each facility is responsible for defining facility-specific policies and procedures for implementation of these guidelines.

DEFINITIONS:

**Transfer:** Movement of a patient from one hospital to another based upon the patient’s need (inter-hospital transport).

**Bypass:** Intentional movement of a patient from the scene to the most appropriate hospital, not necessarily the nearest hospital, based upon the patient’s medical need.

**Diversion:** Intentional movement of a patient from the scene to an alternate hospital capable of providing appropriate care at the request of the primary hospital experiencing unsafe delays due to limitations in resources or in the case of internal disaster (see acknowledgments above).

**Appropriate Facility:** A hospital, not necessarily the nearest hospital, with the resources and capability to care for a patient based upon the patient’s medical needs.

**Regional EMS System:** Will include any EMS Provider licensed within the Coastal Bend Regional Advisory Council on Trauma Service Area-U.
III  AUTHORIZATION FOR DIVERSION STATUS IMPLEMENTATION AND DEACTIVATION:

Authorization for diversion status will be made by a Hospital Administrator (or designee).

IV  COMMUNICATION OF DIVERSION STATUS:

1. A hospital shall post an unsafe level status change on the EMSystems status board.

2. EMSystems shall provide the Regional EMS System and Hospitals with the applicable unsafe level status.

3. The CBRAC staff will notify all TSA-U EMS and Hospitals contacts of any unsafe level status changes via the regional mass notification system.

V  AUTHORIZATION FOR OVER-RIDE OF DIVERSION STATUS:

EMS may over-ride an unsafe level status after consideration of the following:

1. The patient’s clinical presentation, with consideration to the regional Trauma Bypass Protocol.

2. Distance and estimated time to an alternate appropriate facility.

3. Inclement weather conditions.

4. Resource availability and capability of the transporting pre-hospital provider.

5. An informed patient preference.

VI  PROTOCOL FOR EMERGENCY DEPARTMENT ROTATION OF PATIENTS WHILE ON DIVERT:

When any two of the following hospitals are on divert:

1. CHRISTUS Spohn Hospital Shoreline
2. CHRISTUS Spohn Hospital South
3. Corpus Christi Medical Center Doctors Regional Hospital
4. Corpus Christi Medical Center Bay Area Hospital

Initiation of rotation of Emergency Departments will begin, and will be coordinated by CHRISTUS Spohn Hospital Shoreline.
Patients transported to a specific Emergency Department due to preference or presence of traumatic injury will be called into the Emergency Department at CHRISTUS Spohn Shoreline so that these patients can be included in the rotation.

Location of the call will be considered when routing the Regional EMS System to their destination.

**BYPASS PROTOCOL FOR THE MAJOR TRAUMA VICTIM**

**GOAL:** Major trauma patients who are medically unstable, unconscious and/or at high risk of multiple and/or severe injuries will be quickly identified and transported to the appropriate trauma facility.

**Decision Criteria:** This bypass protocol is intended to ensure that major trauma patients who meet triage criteria will be transported directly to the appropriate trauma facility rather than to the nearest hospital EXCEPT under the following circumstances:

- If unable to establish and/or maintain an airway, or in the event of traumatic cardiac arrest, the patient will be transported to the nearest acute care facility.

- If transport time to the indicated trauma facility exceeds 60 minutes and EMS is unable to arrange air transportation or hand-off the patient to an EMS service with advanced life support (ALS) capabilities, the patient will be transported to the nearest facility.

- Rural EMS systems with advanced life support (ALS) capabilities and the concurrence of their medical director may bypass local facilities if that facility lacks the resources to address the trauma patient's specialty need.

**Criteria for Trauma Facility Destination:**
The Criteria listed below are guidelines for EMS services in Trauma Service Area-U.

**Nearest Hospital / Handoff:**
The major trauma patient will be transported to the nearest hospital under the following conditions:

- If unable to establish and/or maintain an adequate airway

- If the patient is in traumatic cardiac arrest

- If the expected transport time to the appropriate trauma facility exceeds 60 minutes and EMS is unable to arrange air transportation or hand-off the patient to an EMS service with advanced life support (ALS) capabilities.
Patient Criteria for Activation of Regional Trauma System Plan:  
The Regional Trauma System Plan and Bypass Protocol will be initiated for all trauma patients who are hemodynamically unstable, unconscious and/or at risk of multiple and/or severe injury as indicated by the following (age appropriate where applicable):  

SEE CBRAC GUIDELINES FOR FIELD TRIAGE OF INJURED PATIENTS

Patient Criteria for Consideration of Bypass Protocol:  
These criteria should cause a high index of suspicion that the patient may have sustained a severe injury. Consultation with medical control is recommended to assist in the decision as to whether or not to activate the Regional Trauma System Plan for these patients.  

SEE CBRAC GUIDELINES FOR FIELD TRIAGE OF INJURED PATIENTS

 Considerations

• Pre hospital personnel's judgment of injury severity.

• Under age 5 or over age 5.

• Hostile environment (extremes of heat or cold).

• Cardiac or respiratory disease.

• Insulin dependent diabetes mellitus (IDDM), cirrhosis, morbid obesity, bleeding disorders, anticoagulants.

• Immuno-suppressed patients

• Second or third trimester of pregnancy

Injuries Requiring Specialized Medical Care:  

 Pediatric

• Trauma patients will be transported to Driscoll Children’s Hospital (DCH) unless the following criteria are present. The pediatric trauma patient will be taken to the level II trauma facility if:

• Penetrating injury to the head, neck torso, and/or extremities proximal to the knee and or elbow.

• Patients age 14 and older with major or severe trauma.

• All pregnant pediatric trauma patients
Burns

- Consideration should be given for direct transport to an accredited burn center (if Air Transport is available) for patients with burns of second degree exceeding 15% body surface area (BSA), third degree exceeding 10% body surface area (BSA), or burns involving face, hands, feet, genitalia, and/or perineum. If Air Transport is unavailable, transport to age-appropriate facility.

Air Ambulance / Hand-off:

- If the expected ground transport time to the appropriate trauma facility exceeds 30 minutes, or if extrication time is exceeding 20 minutes, air ambulance transport should be considered.

- Hand-off of the trauma patient to an advanced life support (ALS) or mobile intensive care unit (MICU) will be initiated in the following circumstances:
  
  - Unable to arrange air ambulance transfer.
  
  - EMS provider is first responder and unable to leave service area.

Notes:

- Contact Medical Control for questions regarding Trauma System Plan activation.

- Patient’s rights, choices and best interests will be respected in the determination of hospital destination.

- Trauma activation will be based on field triage report from EMS and the activation criteria. Patients brought in by private vehicle will be triaged by facility per activation criteria.

SEE CBRAC GUIDELINES FOR FIELD TRIAGE OF INJURED PATIENTS

- Trauma Transfers
  
  All requests for transfer of major and/or severe trauma patients will go directly to the ED physician on duty. To the best of their ability, the sending and receiving physicians will discuss whether the patient meets the definition of a major or severe trauma patient. Realizing there will be patients that do not fit precisely into this category, in times of high census, all options will be discussed regarding appropriateness of transfer. The ED physician may consult with the surgeon at any time. If the patient does not fit into the category of a major or severe trauma patient, and the sending facility does not have the capability, and the level II facility is not at capacity, efforts will be made to accept the patient. The Trauma Program Manager will be notified of all denied requests for transfer of trauma patients.
DESIGNATION OF TRAUMA FACILITIES

The CBRAC supports and encourages all hospitals within Trauma Service Area U to participate in the trauma system and to seek the appropriate level of designation. There are nine designated trauma facilities within the service area. There is currently no hospital designated as Comprehensive (Level I).

Assistance for initial and re-designation for TSA-U comes from the Texas EMS, Trauma and Acute Care Foundation Designation Manual and American College of Surgeons guidelines for Level II accreditation. Resources for the designation process exist within CBRAC and members routinely assist one another in the designation process.
PERFORMANCE IMPROVEMENT PLAN

Mission Statement

Trauma Service Area U is dedicated to the provision of quality healthcare. It provides accessible, comprehensive, quality healthcare to all trauma patients regardless of age, race, religion, sex, nationality or ability to pay.

The purpose of a performance improvement (P.I.) plan is to provide assessment and improvement activities designed to monitor and evaluate the quality of patient care through system analysis, to identify and pursue opportunities to improve patient care, and to sustain improvement over time.

Goals/Objectives

The Trauma Service Area U Performance Improvement plan is designed to achieve the following goals:
1. To facilitate improvement in patient care and services provided by establishing mechanisms to identify opportunities to improve.
2. To provide a framework for a planned, systematic approach for monitoring and evaluating the quality, appropriateness and effectiveness of trauma patient services provided within the region.
3. To pursue opportunities for improving patient care by evaluating systems and addressing educational issues.
4. To centralize the flow of information through the committee structure to prevent duplication of effort and to facilitate early awareness of problems or opportunities of improvement.
5. To create a structure which will provide for coordination, integration and accountability of quality management activities commensurate with established standards.
6. THIS PROCESS IS NOT SUBJECT TO DISCOVERY PURSUANT TO TEXAS REVISED CIVIL STATUTES ART.4495b. NO PI DOCUMENTS WILL BE REMOVED FROM MEETING ROOM.*

Performance Improvement Committee Description (from the existing bylaws)

1. Performance Improvement
   A. The Performance Improvement Committee may conduct both open and closed meetings.
   B. The committee members for meetings shall consist of the chair and members of the board, and any other members present or alternates appointed by the committee chairperson with the advice and consent of the Board of Directors. Decisions will be made by consensus of all present.
   C. Issues of concern that are brought to the committee for discussion and recommendation will be discussed in closed meetings.
   D. The chair of the committee will appoint additional members as needed based on the issue with the approval of the Board of Directors.

   April 2017
Functional Authority

The final authority and ultimate responsibility for a flexible and integrated performance improvement plan shall rest with the Coastal Bend Regional Advisory Council (CBRAC).

Organization and Collection of Data:
Data shall be collected and organized for review under the direction of the Performance Improvement Chair. Participation in the Performance Improvement by supplying data is a requirement for participation in CBRAC. Consideration for collection will be given to:
- Who will collect data
- What data is to be collected
- Frequency of data collection
- How data should be collected
- Sources for data collection

Data Evaluation: The Performance Improvement Committee will analyze the data and determine if there are areas where improvement can be identified. When identified, causes will be established and recommendations made to achieve improvement. The evaluation of key functions includes analyses of trends and patterns in data collected.

When evaluation identifies an opportunity for improvement, actions shall be directed toward the root cause with the overall goal of improving the quality of service. This may be through education, system analysis, or other committee recommendations. Statistical analysis will be utilized to determine whether actions taken have been successful in improving care or services.

The Performance Improvement Committee will communicate the results of monitoring and evaluation to the members of the CBRAC. The results of these activities will be available for review by the Texas Department of State Health Services.

A standardized reporting mechanism (issue referral form) will be utilized. Participation by all agencies will be required to be compliant in CBRAC participation.

Confidentiality

All documents generated concerning the Performance Improvement Plan within the region shall be confidential and used only in the exercise of designated functions of the Performance Improvement Plan.

Conflict of Interest

No practitioner or other individual involved in Performance Improvement shall be required to review any case in which they are professionally involved but shall be given the opportunity to participate in the review.