

**TSA-I**

**BorderRAC**

**Emergency Healthcare Plan**

Original: May 1998  
Revised: August 1998  
Revised: July 1999  
Revised: July 2000  
Revised: June 2001  
Revised: June 2002  
Reviewed: July 2003  
Revised: June 2004  
Reviewed: June 2005  
Revised: October 2006  
Revised: July 2008  
Revised: September 2009

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## INTRODUCTION

*History of Trauma Care*

*Definition of Trauma System*

*Responsibilities of National, State and Regional Trauma Systems*

*History of Far West Texas & Southern New Mexico Regional Advisory  
Council on Trauma*

## INTRODUCTION

### A BRIEF HISTORY

Trauma has often been called the “forgotten disease” or “the silent epidemic”. This has happened for many reasons and historically, the care of the injured patient has not kept pace in terms of mortality, morbidity and lost productivity.

Although one may suppose the treatment and care of injuries has only recently been studied, case studies of trauma and injuries go as far back as the Napoleonic Wars. It was during this period in history where medical people began to discover that patient outcome was directly related to the time between injury and definitive surgery. In America, it was not until the 1920’s when the American College of Surgeons first addressed trauma care by forming the Committee on Fractures, later to become the Committee of Trauma. Although this was an important step in bringing the issue of trauma care to the forefront, most efforts continued to be placed in the military, not civilian, experience. It was in the military where a comprehensive system of triage, transport, and definitive care for trauma was developed by the U.S. armed services and used with increasing success in World War II, Korea and Vietnam.

It was not until the late 1960’s that the problem of trauma and the care of the trauma patient in the civilian community became apparent. Until this time, pre-hospital and hospital care of the injured had very few standards and the training for pre-hospital and hospital personnel was limited or non-existent. In both environments, staffing was limited, ill-equipped and trained only in very basic skills. During this time the national Academy of Science, in conjunction with other research organizations, published the study, *Accidental Death and Disability: The Neglected Disease of Modern Society*. This study first recognized the need for an overall organized approach to address pre-hospital and hospital care and services, and research. The Highway Safety Act and the National Traffic and Motor Vehicle Safety Act were signed into law in an attempt to address these deficiencies.

Throughout the 1970’s and early 1980’s the momentum continued to build. Two Emergency Medical Service Systems Acts were passed in an effort to begin building a system of comprehensive emergency care. With the assistance of federal money, communities and health service agencies began to work together in planning, establishing and evaluating emergency medical services. This marked the beginning of regionalization and system implementation.

In 1985 the National Academy of Science published another study on trauma care entitled *Injury in America*. The study concluded that progress in injury control and treatment had changed little since their original report 20 years earlier. This brought about a renewed effort by the government to introduce bills to provide funding to focus on this problem. After many failed efforts, a compromise bill, The Trauma Care Systems Planning and Development Act, was passed by Congress and signed into law. The law allowed the Health and Human Services Department to award grants to be used in developing, implementing and monitoring of state-wide trauma systems. Awards were to be contingent upon individual states creating and submitting annual trauma plans that were in accordance with existing standards of good trauma care. The law established an advisory committee to assist in the assessment of national trauma care needs and developing model trauma system plans. The law also created funding for research and development of programs that seek to improve rural emergency medical service. The development of a national trauma care system was begun.

Although a long way from the days of Napoleon’s wars, the same problems concerning the injured patient exist. The fact that even in the later part of the 20<sup>th</sup> century efforts continue to address the need of rapid assessment, treatment and transport to a well-equipped and well-trained hospital speaks to the perniciousness of this problem. Dealing with the needs of patients, physicians, emergency medical personnel,

and the politics and economics of municipalities and hospitals makes the continued development of a systematic and comprehensive trauma system difficult. But with the proper use of public education and the continued support for the medical and political communities, creating a trauma system that will make a difference is within reach.

## **WHAT IS A TRAUMA CARE SYSTEM?**

A trauma care system is an organized approach to acutely injured patients on a regional, state and national level. Optimally, this system should be comprised of access to care, pre-hospital care, hospital care and rehabilitation. Also, since it is of equal importance to include a societal approach to trauma care, a system must include prevention, education, research, economics, and quality assurance. The goal of such a system is to decrease the incidence of trauma, provide quality care for all victims, prevent unnecessary death and disability, contain costs and assure quality of trauma care throughout the system.

## **RESPONSIBILITIES OF NATIONAL, STATE AND REGIONAL TRAUMA SYSTEMS**

Most of the initiative for the development of a comprehensive trauma system came from the Federal Government. However, because of the inherent differences each state has in geography, human and financial resources, politics, population, etc., each state was given the initiative to design a trauma system that would meet its own needs. To accomplish this, the states designated a lead agency to be the authority for program administration and system development. For the majority of the states, this responsibility was given to the state's EMS Bureau.

It was the responsibility of the lead agency to ensure the state built a trauma system with these essential components of a regional trauma system:

- A formal process for designating trauma centers.
- Use of the American College of Surgeons standards for trauma centers.
- A legal authority responsible for trauma care designation.
- Use of independent survey teams from other areas for trauma center designation.
- Trauma center distribution based on patient volume or population density.
- Written triage criteria including local hospital bypass.
- Ongoing monitoring systems for trauma centers.
- Statewide coverage by trauma centers.

Once the criteria was established, the lead agency (Texas Department of Health) was to divide the states into regional trauma areas and offer the education and funding to begin to develop a regional system to care for the trauma patient.

## **HISTORY OF FAR WEST TEXAS & SOUTHERN NEW MEXICO REGIONAL ADVISORY COUNCIL ON TRAUMA**

Far West Texas was identified as one of twenty-two (22) Trauma Service Areas in Texas and was given the designation of TSA-I. The first organizational meeting of the Far West Texas Regional Area Council on Trauma was held in June 1992. During this and subsequent meetings, bylaws and membership criteria were established and the Far West Texas RAC (BorderRAC) was officially recognized by the Texas Department of

Health in 1994.

Unfortunately, the first years of existence for BorderRAC were difficult. Because of some dissension between hospitals and services and a lack of leadership and direction, BorderRAC failed to offer any positive outcome. The committee languished and few meetings were held until the summer of 1994. It was at this time that Brewster and Jeff Davis Counties joined TSA-J.

University Medical Center of El Paso (UMC), as the lead agency in the region, took a leadership role in assisting BorderRAC regain momentum. A new Trauma Nurse Coordinator was hired at UMC and, through her efforts BorderRAC began to realize its role in trauma care. With funding and technical assistance from UMC, BorderRAC began to offer educational seminars, established a 1-800 trauma transfer number and began to reach out to the healthcare community for assistance in reestablishing BorderRAC's membership roles. Soon, BorderRAC had reorganized, amended the bylaws, added new membership, created a logo, applied for and received 501(c)(3) status and expanded to include the southern part of New Mexico. BorderRAC has since been recognized as the Far West Texas & Southern New Mexico Regional Advisory Council on Trauma.

BorderRAC encompasses the Texas counties of El Paso, Hudspeth, and Culberson. New Mexico counties are Otero, Dona Ana, Sierra, Luna, Grant, Catron and Hidalgo. Within the region are urban, rural and frontier areas. The trauma service area represents 38,927 square miles with an estimated population of one million.

Since its creation, the Far West Texas & Southern New Mexico Regional Advisory Council on Trauma has grown in its activities and influence. Activities include:

- Participation in the development of the New Mexico regional trauma councils.
- Participation in regional planning for all hazards disaster preparedness.
- Establishment of the Trauma System Enhancement Regional Grant Program.
- Annual Trauma Gala.
- Annual regional trauma/disaster seminar.
- Regional trauma registry.
- Annual Southwest Trauma Tour bicycle ride
- Support of community education programs:
  - Establishment of local safe communities program.
  - Bicycle safety program.
  - Teen drinking and driving.
  - Local education events.
  - Underage Drinking Initiative.

BorderRAC has also had preliminary discussions regarding the establishment of a bi-national registry program with Juarez, Mexico.

In 2004, BorderRAC acquired the full time services of an Executive Director. The ability to have an individual, whose full time responsibilities are to assist the BorderRAC Board and members, has allowed the development of the individual BorderRAC committees.

In recent years, BorderRAC has made great strides in the preparation of the medical community for disaster situations. In 2006, BorderRAC completed a Regional Medical Communications System that allows the small counties in the region to communicate not only with the El Paso emergency community, but also with each other to coordinate responses in the region. BorderRAC was identified as the liaison for local hospitals within the El Paso Emergency Operations Center (EOC). A BorderRAC liaison serves as a member of the Medical

Operations Cell within the EOC.

The hospitals in the region, continue to work together to identify target areas to improve patient care in the areas of emergency healthcare. Legislative direction has expanded to include not only trauma but pediatrics, cardiac, stroke and disaster response. BorderRAC has served as the grantee for HRSA/OASPR Hospital Preparedness grant assist regional hospitals to identify preparedness needs and working to address these.

BorderRAC is the sponsoring organization for the region's Medical Reserve Corps. This group of individuals is available to assist in local and regional emergencies that require medical personnel.

BorderRAC serves as the impartial group available to provide a place for discussion in many circumstances no in the BorderRAC's mainstream of designated medical healthcare. New team members are added to the traditional members to address these new and exciting opportunities.

# PLAN REQUIREMENTS

## **REGIONAL DESCRIPTION**

BorderRAC, the *Far West Texas and Southern New Mexico Regional Advisory Council on Trauma and Emergency Healthcare*, catchment area encompasses three counties in Far West Texas (El Paso, Culberson and Hudspeth) and six counties in southwestern New Mexico (Dona Ana, Luna, Grant, Hidalgo, Sierra and Catron). The entire area is mostly rural with some areas designated as frontier. The only urban centers are El Paso and El Paso County. The population of the far west Texas counties is 745,948. Las Cruces and Dona Ana County have a population base of 72,678 in Las Cruces and 147,896 in the county. As seen by the geographical makeup, the primary challenge of the RAC is to address the problems created by extreme distances to be traveled for definitive care.

## **ORGANIZATIONAL STRUCTURE AND MEETINGS**

BorderRAC is organized with bylaws and has organizational leadership provided by the Board of Directors. The Board consists of the Executive Committee (officers), standing committee chairs and members at-large. The Board of Directors meets monthly. Agendas are developed and distributed. BorderRAC membership is represented by emergency healthcare providers in west Texas and southern New Mexico. BorderRAC General Membership meetings are held quarterly. Two meetings a year are held in El Paso, one in southern New Mexico and one in an outlying area of Texas.

## **ORGANIZATION PARTICIPATION**

General membership requires members represent a hospital, an educational agency involved in training purposes for emergency healthcare, an emergency medical service, or physician involved with emergency healthcare; or a service which provides care to patients.

BorderRAC has agency participation requirements delineated in the by-laws that are established by the General Membership. Funding received through the Texas Department of State Health Services is tied to BorderRAC participation, increasing the Texas hospital and EMS agency participation. New Mexico has no similar legislative mandate. The BorderRAC Board has membership from New Mexico, so information is obtained from and disseminated to the New Mexico contingent.

The BorderRAC Executive Director and Chair are available to visit all outlying hospitals and EMS services to share information, survey their needs, offer assistance and increase communication.

## **STANDING COMMITTEES**

Provisions for standing committees are included in the bylaws. Committee chairs are selected by the membership of the committee for a one-year term. Each standing committee will have at least four meetings per year as required by the bylaws.

### **Board of Directors**

**Mission:** To facilitate the development or achievement of organizational goals.

**Goals:**

- Coordinate the functioning and synergy of the standing committees.
- Administration of the Trauma System Enhancement Regional Grant Program (see Addenda 2).

### **Prevention Committee**

**Mission:** To facilitate and promote prevention and safety programs throughout TSA-I and Southern New Mexico.

**Goals:**

- Provide prevention education to the public via Health/Safety Fairs and presentations. Educational materials will be provided depending on the target population (parents, teenagers, etc.) and the topics of presentations on display will depend on the need of the target population.
- Expand Prevention network with community coalitions and coordinate safety/injury prevention efforts already in existence to avoid duplication and support state/nation-wide prevention programs. Programs will consist of activities, which will increase public understanding of the trauma care system and encourage the prevention and reduction of injuries through education.
- Prevention programs will be based upon regional registry data.
- Programs will be rotated among participating hospital and pre-hospital providers.
- Prevention programs will be presented in conjunction with rural RAC General Membership meetings, as possible. (See Addenda 3)

### **EMS Committee**

**Mission:** To serve as a liaison for pre-hospital providers within this region to include the monitoring of system development, coordination of activities, performance improvement, and pre-hospital training.

**Goals:**

- With the assistance of BorderRAC, EMS services review and revise inclusive emergency healthcare treatment and transport protocols. These protocols will include a training and evaluation component.
- In conjunction with the Hospital Committee, review and revise hospital bypass/diversion policies that take into account EMS as well as hospital priorities.
- Perform an annual region-wide system status survey to determine EMS equipment resources.
- Review all relevant EMS service protocols to ensure compliance with accepted trauma treatment modalities.
- An Annual needs assessment is performed to guide training and development needs.

### **Hospital Committee**

**Mission:** To serve as a liaison between health care facilities within this region to include the monitoring of system development, coordination of activities, performance improvement, and hospital training.

**Goals:**

- Review and revise patient diversion/bypass policies.
- Review and revise the region-wide Hospital treatment and inter-facility transfer protocol.
- Perform a hospital needs assessment survey.
- Review and revise a RAC trauma transfer form.
- Host regularly scheduled subcommittees for Cardiac, Pediatrics and Stroke care.

### **System Performance Improvement Committee**

**Mission:** To monitor the performance of identified performance improvement indicators as it relates to the quality of patient care.

- Make recommendations regarding system enhancement and/or improvements.
- Inter-local liaison committees may be formed to provide comprehensive review of issues with greater local participation. Information/inquiries may be originated at either the System Performance Improvement Committee or the liaison committee. In either case, the summary of discussions will be reflected in the minutes of the System Performance Improvement Committee.

**Goals:**

- Hold routine meetings to review emergency healthcare data.
- Develop a PI Committee with representation from hospital, rehabilitation and EMS systems in both Texas and New Mexico.
- Establish PI indicators to review trauma patient care in RAC area.
- Use data to identify system-wide and provider specific educational needs.
- Refer educational needs identified to the Medical Education Sub Committee for their review, coordination and design of educational activities.
- Maintain a confidentiality agreement for committee members.

### **Regional Registry Sub-Committee**

**Mission:** To develop and maintain a regional trauma data base that is accurate, consistent, and serves as the means by which to document successes and identify opportunities to improve the trauma system.

UMC is contracted by BorderRAC to maintain the regional registry. Participation guidelines require all hospitals and EMS agencies submit data to the regional registry as outlined in the by-laws. Responsibilities include maintaining the hardware, software, and training to ensure the regional registry is compliant in meeting the Texas Department of State Health Services registry standards for trauma center designation and BorderRAC rules and regulations. UMC also provides educational updates to the local registrars to maintain the integrity of the data base operations.

**Goals:**

- Maintain operations manual with definitions for the data elements being abstracted.
- Obtain a list of data elements from each facility.
- Define prevention data elements to support regional projects.

- Maintain policies for the BorderRAC Registry to include issues such as access, confidentiality, etc.
- Download data to present to the state from the Regional Registry at least quarterly.

The committees of the organization have matured and are now using the registry data to support their activities. Researchers, public health, and other community organizations have become aware of the database and the value of its information to their work (Addenda 4).

#### **Emergency Preparedness & Response Committee**

**Mission:** To coordinate preparedness and responses to acute medical mass casualty and disaster situations.

**Goals:**

- Participate in regional disaster exercises.
- Design and implement a region-wide mass casualty incident (MCI) and hazardous material incident response protocol and drill.
- Develop the acute medical care role within the Medical Operations Cell of the Emergency Operations Center.

# PLAN COMPONENTS

## SYSTEM ACCESS

In TSA- I and New Mexico EMS Region 2, both Basic and Enhanced 911 emergency answering services are available depending upon the capability of the Public Safety Answering Point (PSAP). Many of the PSAPs are staffed by certified Emergency Medical Dispatchers capable of providing pre-arrival self-help instructions to the caller.

Reaching a 911 PSAP is relatively easy in the urban areas such as El Paso, Texas and Las Cruces, New Mexico. However much of the area within the Far West Texas and Southern New Mexico RAC is very rugged terrain and is frontier in nature with a very low population density and a significant level of poverty. Because of this characteristic telephones may not be readily available and cell phone service is limited due to a scarcity of cell phone tower sites. This often leads to delays in emergency notification and resource dispatch. Through the years various solutions to this problem have been proposed, however no viable alternative is present.

## COMMUNICATIONS

For the purposes of discussion, Emergency Medical Services communications can be divided into two types, dispatch and medical.

- Dispatch refers to the initial alert which triggers the EMS response, additional follow-up information relating to the call response and primary coordination of responding agencies.
- Medical communications involves such things as information being relayed to the receiving hospital, on-line medical control communications and coordination of the response among various EMS assets and agencies.

### DISPATCH

Each geographical area is served by a separate PSAP which also serves as a consolidated communications center. Dispatch communications are handled primarily on Very High Frequency (VHF) channels used commonly by all public safety agencies in that jurisdiction. The exceptions to this are the City of El Paso, Texas, the City of Las Cruces, New Mexico and Dona Ana County, New Mexico. Both cities utilize 800 MHz trunked communications systems for public safety communications and the rural areas of Dona Ana County are dispatched on UHF channels. Responders are generally alerted through an encoder/decoder system (pagers).

### MEDICAL

With the exception of the City of El Paso's Fire Medical Services which uses 800MHz, all medical communications throughout the BorderRAC area are conducted on one of the ten FCC designated UHF frequencies.

In 1974 New Mexico inaugurated a statewide Emergency Medical Services Communications System (EMSCOM). This system has served the state well since then. It consists of a series of strategically located repeaters around the state. These repeaters are on the Federal Communications Commission designated Ultra High Frequency EMS band, are linked by microwave and feed into a control center in Santa Fe. Each hospital and ambulance in the state is a participant in the network allowing radio communications anywhere within the state, telephone patching services and resource access.

Las Cruces, New Mexico area communications currently are coordinated through the Mesilla Valley Regional Dispatch Authority (MVRDA), a consolidated city/county resource. MVRDA maintains 800 MHz as well as UHF and VHF communications capabilities. This enables a significant level of inter-operability and resource management.

From the inception of the modern EMS program in El Paso communications, including medical communications were handled on the ten channels of EMS UHF frequencies. The City of El Paso converted all public safety communications to the 800MHz trunked frequencies in the early 1990's

When the City of El Paso moved to the 800 MHz trunked system, one frequency of the EMS UHF band (Med 2) was left in place at a repeater on the Franklin Mountains. This channel was intended for use of transient New Mexico ambulances in route to El Paso Hospitals. This channel is controlled by the El Paso Fire Department Communications Center and provides a direct link to El Paso resources through patching into the City's 800 MHz communications system.

In 2006 BorderRAC completed a project that allows communication throughout the Far West Texas area of TSA- I. This project, BorderRAC Regional Communications Network, created a system of three strategically located repeaters operating on the Ultra High Frequency Emergency Medical Services band. It is compatible with the New Mexico EMSCOM network and allows a very high degree of interoperability among emergency healthcare and disaster providers in both states. It consists of base stations in PSAPs in the rural area, linkages to all hospitals and direct communications capabilities between providers, both ground as well as air. This network is linked directly to the Communications Center of the El Paso Fire Department. This communication center not only connects the network to all El Paso area hospitals and the Regional Poison Control Center but can create a link from the RAC Network to Med 2 in El Paso and the EMSCOM system through the Columbus repeater. As a result of this project and the earlier EMSCOM network all EMS providers in the BorderRAC area have direct medical communication capabilities with each other and with all resources in both states.

In 2006 BorderRAC funded and developed a new repeater site in Columbus, New Mexico, on the Mexican border. This repeater station not only is part of the New Mexico EMSCOM system but also is linked to the El Paso Fire Department Communications Center thus allowing direct communications between New Mexico resources and those from Texas. As a result of this inter-state cooperation responses and asset management along the border have been markedly enhanced.

## **MEDICAL OVERSIGHT**

Pre-hospital medical oversight is provided through a variety of means depending upon the provider agency. In Texas, only state licensed providers are required to have a Medical Director. First Responder (non-transport) agencies are not required to be licensed. Almost without exception, the First Responder organizations in TSA- I are not licensed providers and thus do not have a Medical Director.

All of the EMS transport providers in TSA- I have Medical Direction, however at this point there is no over all Regional Medical Director nor is there universal access to on-line Medical Control. This is an identified pre-hospital issue within BorderRAC as there is concern over a lack of consistent emergency healthcare protocols, varying standards of care, as well as limited access to medical consultation for rural and frontier providers.

The New Mexico participants in BorderRAC utilize individual Medical Directors by agency. On-line Medical control is provided by the receiving hospital.

## **PRE-HOSPITAL PATIENT CATEGORIZATION**

Whenever an emergency patient is being considered for transport to a hospital for treatment, many factors come into play in the triage decision making process. First, dispatch centers have to determine severity of injury, scene location and resource availability before dispatch. Once the EMS service has been dispatched and arrives on the scene the EMS personnel have to determine severity, treatment and nearest appropriate hospital for transport.

A protocol for triaging and making transport destination decision for patients in the pre-hospital environment has been adopted by BorderRAC. Specific protocols are found in the specific injury or illness chapters.

## **HELICOPTER ACTIVATION**

The RAC has only one helicopter provider in the area. Due to the large frontier area of our region, a protocol was implemented to notify the agency early to allow them to complete pre-launch checks prior to the official request for assistance. This allows them to launch air medical evacuation quickly when needed.

Determination of appropriate method of transport is based on the Pre-Hospital Trauma Patient Categorization.

Because of the terrain of the area, it was necessary to create pre-determined landing zones. Working with the air medical provider, landing zones with the latitude and longitude for each have been identified. The ground provider will pre-select the most appropriate helicopter patient transfer point and provide that information when the initial call is made for service.

## **REGIONAL MEDICAL CONTROL**

Regional Medical Control for the largest provider (El Paso Fire Department) is located at the lead facility. While other EMS agencies have off-line medical control, access to and ability to communicate with the lead facility or receiving facility exists.

On-line medical control for EMS personnel utilizes ambulance-based radios, regional repeaters and hospital based communications in order to utilize the appropriate resources available for the injured patient.

## **BYPASS AND DIVERSION PROTOCOLS**

Hospital diversion of ambulances has been an issue across the nation for a number of years. In the early part of the 1990's a policy to control hospital diversion was developed in El Paso. At the time this was somewhat innovative as the practice was out of control in most communities. This policy came about through collaborative efforts on the part of the various hospital administrators and the leadership of the City of El Paso's Department of Emergency Medical Services.

The policy sets limits on the number of hospitals which may be on diversion simultaneously, defines allowable time periods for diversion and establishes acceptable causes for a diversion request. This policy was subsequently adopted by all of the providers in the area.

It is administered through the El Paso Fire Department Communication Center who makes the ultimate decision on the allowance of a diversion. It has stood the test of time with periodic modifications reflecting changing community needs and resources. The unique factor is that it is based upon consensus and this has allowed the policy to endure. (Addenda 6)

## **HOSPITAL TREATMENT & INTERFACILITY TRANSFER PROTOCOLS**

## **SYSTEM PERFORMANCE IMPROVEMENT PLAN**

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

The Medical Audit / System Performance Improvement Committee serves as the oversight committee from Hospital and Pre-hospital Committees, and providers ensure system-wide, multidisciplinary performance improvement.

# TRAUMA

## PRE-HOSPITAL PATIENT CATEGORIZATION

A protocol for triaging and making transport destination decisions for trauma patients in the pre-hospital environment has been adopted by BorderRAC (Addenda 5). This protocol is adapted from the American College of Surgeons recommended policy. All pre-hospital provider and receiving hospital personnel have been trained in the use of this protocol. Posters in various sizes have been printed and are generally posted in prominent locations in Emergency Departments and on ambulance action walls. The protocol is reviewed periodically and updated as needed.

## MASS CASUALTY TRIAGE

The START system of triage has been adopted as the standard within the BorderRAC area in both states. All personnel in pre-hospital provider agencies have been trained in its use. Each emergency response unit of participating agencies has been issued a START kit to carry and have available for deployment.

In order to ensure familiarity on the part of both hospital and pre-hospital personnel a program of “Triage Tuesdays” has been implemented. On each Tuesday, all providers are encouraged to triage each patient that they come in contact with by utilizing the START system. BorderRAC replaces all triage tags used during this exercise.

## HOSPITAL TRAUMA TREATMENT & INTER-FACILITY TRANSFER PROTOCOL

Every designated hospital in our TSA has developed a protocol system to care for injured patients commensurate with the resources available in their facility and community. The lead facility maintains a 1-800 number for the TSA in order facilitate timely access to the appropriate level of trauma care.

On average, the approval process for the acceptance of an injured patient to the lead facility is 15 minutes (time of call from referring institution to call back from accepting facility with physician and administrative approval). BorderRAC has set a standard for referring facilities to have patients transferred out to a higher level of care within 2 hours of ED admission. (Addenda 7). The purpose of these protocols is to insure the unobstructed transfer of trauma patients from the scene or between hospitals to appropriate definitive care.

BorderRAC has developed a Trauma Transfer Form to assist referring institutions in communicating pertinent data about injured patients to the accepting facility. The form has been formally approved by the BorderRAC general membership but its utilization is not mandated.

All designated trauma facilities in the Texas component of BorderRAC have transfer agreements in place with UMC of El Paso, the region’s lead facility. The lack of transfer agreements with facilities within or outside the region does not in anyway affect the timeliness of transfers from those facilities to UMC or WBAMC. The lead facility also has transfer agreements in place with University Medical Center in Lubbock and Parkland in Dallas for burn care.

If a hospital receives a Level I trauma patient, EMS will respond to that hospital’s request for transfer to UMC as if it was a Level I trauma scene call. The transferring hospital will call UMC on the 800 line as EMS is responding to their hospital.

Weaknesses in our system include non-designated facilities not utilizing established transfer protocols. All are working to comply with the protocols established.

## **PLAN FOR DESIGNATION OF TRAUMA FACILITIES**

Many facilities in the region have successfully completed designation surveys and more are in the process. Each BorderRAC member provides assistance as possible to others seeking designation. (Addenda 8)

All facilities in the region are expected to follow facility triage criteria. Compliance is monitored by the Medical Audit / System Performance Improvement Committee.

Our region has one Level I and one Level II facility within El Paso County. The volume of high level trauma victims does not support the designation of additional facilities above Level IV. This allows appropriate triage and transfer of Level I trauma patients to an appropriate facility which has a higher trauma capability.

New Mexico has a fledgling trauma system and has just recently reorganized and encouraged facilities to become designated. Several facilities within the BorderRAC region are seeking Level III and IV designation. In addition, several of the New Mexico facilities are participating in the New Mexico Trauma Registry.

## PRE-HOSPITAL TRAUMA PATIENT CATEGORIZATION

### Level I Trauma Patient:

Transport to a Trauma Center with lights & sirens. Contact Trauma Center enroute. Expect Trauma Team Activation.

Criteria: Any trauma patient who meets any of the following criteria:

- **Airway** – Respiratory Compromise/obstruction and/or intubation. Uncontrollable airway in a rural or frontier area the patient may be diverted to the closest appropriate facility.
- **Breathing** – Respiratory rate of less than 10/min. or greater than 30/min.
- **Circulation** – Systolic BP less than 90 mm/Hg. Vital sign changes associated with trauma.
- **Disability** – GCS 13 or less.

**OR** has any of the following injuries:

- Any penetrating injury to the head, neck or torso.
- Any gunshot wound proximal to the knee or elbow.
- Flail chest.
- Two (2) or more proximal long bone fractures.
- Limb paralysis.
- Amputation proximal to the ankle or wrist.
- Unstable pelvic fractures.
- Open depressed skull fractures.

### Level II Trauma Patient:

Transport to Trauma Center without lights and siren. Contact Trauma Center enroute.

Patients with no level I criteria, but with the following mechanisms of injury:

- Ejection from vehicle
- Extrication > 20 minutes
- Falls greater than 20 feet
- Unrestrained rollover MVC
- MVC with speed > 40 mph
- Occupied passenger space intrusion > 12 inches
- Auto versus Pedestrian > 5 mph
- Motorcycle collision > 20 mph and/or separation
- Burns meeting Level II criteria
- Death of passenger from same vehicle (not ejected)

### Level III Trauma Patient:

Transport without lights and siren to patient's choice of hospital.

Stable trauma patients not meeting Level I or Level II criteria.

# STROKE

The American Stroke Association's Task Force on the Development of Stroke Systems identified three critical functions of stroke systems. These functions are:

1. Ensure effective interaction and collaboration among the agencies, services, and people involved in providing prevention and the timely identification, transport, treatment, and rehabilitation of individual stroke patients in a locality or region.
2. Promote the use of an organized, standardized approach in each facility and component of the system.
3. Identify performance measures (both process and outcomes measures) and include a mechanism for evaluating effectiveness through which the entire system and its individual components continue to evolve and improve.

This Plan has been developed in accordance with generally accepted Stroke guidelines and procedures for implementation of a comprehensive Emergency Medical Services (EMS) and Stroke System plan. This plan does not establish a legal standard of care, but rather is intended as an aid to decision-making in general patient care scenarios. It is not intended to supersede the physician's prerogative to order treatment.

## **Pre-hospital Triage**

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

In order to ensure the prompt availability of medical resources needed for optimal patient care, each patient will be assessed for the presence of abnormal vital signs, Los Angeles Pre-hospital Stroke Scale, and concurrent disease/predisposing factors.

### **BLS/First Responder**

1. ABC's
2. Vital Signs
  - a. LOC, HR, RR, BP, SpO2 (titrate O2 to keep SpO2 >95%)
    - i. Be prepared to assist with ventilations if necessary
  - b. Take V/S q15 minutes for stable patients and q5 minutes for unstable patients
3. Obtain History
  - a. Attempt to find out when signs/symptoms of stroke began or last time patient was seen without signs and symptoms of stroke
  - b. Give consideration to other causes of altered LOC
4. Check Blood Glucose Level
5. Perform LAPSS
6. If time permits, complete Thrombolytic Therapy Checklist
7. For patients exhibiting hemiparesis, protect patient's extremities

### **ALS**

8. Establish IV (largest gauge possible, preferably at least 18g) and run at TKO rate or place saline-lock.
9. If hypoglycemia is present, treat as per local protocol

### **Paramedic**

10. Place patient on cardiac monitor
11. Obtain 12-Lead ECG

Patient's should be transported without delay to a designated Stroke Center. For rural/frontier areas, consideration should be given to air-evac for these patients. Ensure that all pertinent findings are relayed to the receiving facility.

Identify "Code Brain" in report to receiving facility. Be prepared to relay pertinent patient information including results of LAPSS.

### **Stroke Facility Definitions/Designation**

- Level I - Comprehensive Stroke Center (CSC) is defined as a facility or system with the necessary personnel, infrastructure, expertise, and programs to diagnose and treat stroke patients who require a high intensity of medical and surgical care, specialized tests, or interventional therapies. This center requires survey by The Joint Commission or other approved surveying body and **designation by the Texas Department of State Health Services.**
- Level II - A Primary Stroke Center (PSC) has the necessary staffing, infrastructure, and programs to stabilize and treat most acute stroke patients. This center requires survey by The Joint Commission or other approved surveying body and **designation by the Texas Department of State Health Services.**
- Level III - Support Stroke Facilities ("SSFs") provide timely access to stroke care but may not be able to meet all the criteria specified in the Level 1(CSCs) and Level 2 (PSCs) guidelines. This center requires survey by a DSHS approved surveying body and **designation by the Texas Department of State Health Services.** These facilities should be utilizing a "drip and ship" model to provide initial triage and treatment followed by early transfer to a designated stroke center.
- Stroke Capable - Acute care hospitals in TSA I that have not received designation by the Texas Department of State Health Services may participate in the regional facility triage plan by submitting to BorderRAC, documentation that confirms the facility commitment and capability to care for stroke patients. This status is available only for six months while the facility works toward designation by the Texas Department of State Health Services.

Required documentation includes a letter from the Hospital CEO indicating the Hospital's commitment to caring for the stroke patient and must identify:

- the level of designation the hospitals is seeking,
- Identification of a Stroke Medical Director,
- Identification of a Stroke Nurse Coordinator,
- Attestation as to the presence of written protocols for the provision of stroke team activation, triage, admission and transfer criteria for stroke patients, 24-hour coverage of CT technician who is present at the patient's bedside within 30 minutes, and protocols for the administration of thrombolytics,
- Transfer agreements in place with designated stroke centers, and
- Participation in BorderRAC stroke system plan performance improvement, including data collection.

### **Facility Triage and Bypass**

Suspected stroke patients will be safely and rapidly transported to the nearest appropriate stroke facility within TSA I. Consideration of the following will assist to better identify appropriate patient transport location:

- Level A Stroke – stroke symptom onset of less than 3 hours. Level A Stroke patients may be initially transported to the closest stroke designated or stroke **capable** facility for initial treatment and consideration of interventional treatment.
- Level B Stroke – stroke symptom onset of greater than 3 hours and less than 8 hours. Level B stroke patients shall be immediately transported to a Designated Primary Stroke Center within TSA I.
- Level C Stroke – stroke symptom onset of greater than 8 hours. Level C Stroke patients should be transported to a designated stroke center.

When in doubt, patients should be transported to a designated stroke center. If unable to establish and/or maintain an adequate airway, the patient should be taken to the nearest acute care facility for stabilization.

### **Helicopter Activation**

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

1. Helicopter activation/scene response should be considered when it can reduce transportation time for patients with onset of symptoms between 3 and 8 hours.
2. Patients transported via helicopter should be taken to the nearest Designated Primary Stroke Center.

### **Capability Limitations**

TSA-I stroke facilities will communicate “capability limitation” status promptly to regional EMS and other facilities through EMSsystem in order to ensure that stroke patients are transported to the nearest appropriate stroke facility.

### **Inter-Hospital Transfers**

Stroke patients with special needs may be transferred within the region to a Designated Primary Stroke Center for assessment and treatment. If resource needs exceed current regional capabilities, transfer to another Designated Stroke Center outside the region should be expedited.

Stroke patients in TSA-I are transported according to patient need, availability resources, and environmental conditions. Transport via BLS, ALS, or MICU ground ambulance is available throughout the Region. Air Medical transport (fixed and roto wing) is also available in this Region.

### **Stroke Patient Rehabilitation**

Rehabilitation and continued care of the stroke patient will be a coordinated effort involving but not limited to the stroke patient, the patient’s family, physicians, stroke facility and referring facility. The goal of this region is to provide the best possible care for a stroke survivor.

## **Prevention Education**

Public education will be directed at primary prevention targeted at high risk populations and their immediate families and will focus on signs and symptoms of stroke, as well as the need to rapidly access the emergency healthcare system.

## **System Performance Improvement**

A regional system performance improvement program will identify opportunities for treatment efficiencies within the system and also allow targeted education. Steps will be taken to create a regional registry of stroke patients.

In order to demonstrate active participation in the Regional Stroke System, all regional partners shall participate in data collection. Goals of data collection will be to identify:

- Numbers of patients
- Demographic propensities
- Types of strokes
- Types of treatment provided
- Timelines for providing treatment
- Measurement of outcomes

Consolidated data will be provided to the Stroke Sub-Committee to further advance the Regional Stroke System.

References: Schwamm, L. , et.al, (2005) Recommendations for the Establishment of Stroke Systems of Care: Recommendations From the American Stroke Association's Task Force on the Development of Stroke Systems, *Stroke*, 36; 690-703.

Addenda 1

**2009-2010 Board of Directors**

<p>Todd Haugen, BA, NREMT-P, LP, Chair  Quality Improvement Director – EMS Division  Texas Tech University Health Sciences Center  4801 Alberta Avenue  El Paso, TX 79905-2709  915-545-7344</p>	<p>Roberta (Bert) Corbell, RN, Vice-Chair  Director, Trauma Services  Del Sol Medical Center  10301 Gateway West  El Paso, TX 79925-7701  915- 629-3434</p>
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<p>Jose Franco, EMT-B Texas Member-At-Large  Superintendent - Fort Hancock ISD  Fort Hancock, TX 79839  915-769-3811</p>	<p>David Palafox, MD, Community Member-At-Large  Medical Director - El Paso First Healthplans, Inc  2501 North Mesa  El Paso, TX 79902  915-532-3778</p>
<p>Caryn Iverson, RN, Immediate Past Chair  Chief Nursing Officer  Las Palmas Medical Center  1801 N. Oregon St.  El Paso, TX 79902-3524  915-521-1238</p>	<p>Marian Davis, Chair –Emergency Preparedness and  Response Committee  Safety Officer - Del Sol Medical Center  10301 Gateway West  El Paso, TX 79925-7701  915-594-5811</p>
<p>Ahmed Badr, MD, Physician-At-Large  Chair, Department of Anesthesiology  Texas Tech University Health Science Center  4801 Alberta Avenue  El Paso, TX 79905-2709</p>	<p>Yvonne Acosta – Community Member-At-Large  Attorney at Law  1100 Chase Tower  201 East Main Drive  El Paso, Texas 79901</p>

## Addenda 2

### Trauma System Enhancement Regional Grant Program

#### Guidelines

##### Program Goals

The Far West Texas & Southern New Mexico Regional Advisory Council on Trauma accepts proposals for local grants to increase the availability and quality of emergency trauma care for both far west Texas and southern New Mexico. Programs must demonstrate a positive impact on emergency trauma care in the area. Types of projects that are acceptable for funding include training, specialty training related to trauma, equipment, research topics related to emergency trauma care, computers for data collection and injury prevention programs.

##### Performance Requirements

The grant provides the funding for approved projects and associated costs that are reasonable and necessary and are incurred after the award is made and during the stated contract period only. Funding can be withheld and a request for the return of funds may occur if the stated requirements of this grant are not met.

For EMS certification projects, proof of successful certification must be submitted within 45 days following the end of the contract period. It will be the responsibility of the grant recipient to maintain a record of all costs and activities related to the administration of the project.

##### Applicant Eligibility

Proposals will be accepted from any organization. If such organizations are not currently active members of BorderRAC, if accepted, the organization will be expected to become an active member. Active membership in good standing will receive first priority.

##### Advanced Life Support Projects:

Any project that involves advanced life support will require the signature of a medical director on the application page. ALS projects include, but are not limited to, items such as the purchase of monitor/defibrillator, pacer units, automated external defibrillators and ALS training.

##### Computer Related Projects:

Any project involving the purchase of computers and related items must be thoroughly described in the proposal. A description of the make and model of both the computer and printer and any software is also essential. Computer use must be for trauma system related program.

##### Types of Assistance:

This program only provides funds for approved costs associated with the project. Examples of costs that are NOT applicable for funding include items such as salaries, fringe benefits, in-direct costs, disposable supplies, and day to day operating expenses ( fuel, rent insurance payments, etc.). Vehicles, land purchases and any construction do not qualify.

In cases where a project is not completed or the full allocation of funding is not used, the Far West Texas & Southern New Mexico Regional Advisory Council on Trauma may redistribute funds at its discretion. BorderRAC reserves the right to fund a project at any level it feels appropriate.

#### Incurring Costs and Rejection of Proposals

The TSA-I reserves the right to reject any or all applications and is not liable for any costs incurred by the applicant. Any costs incurred in the preparation the application shall be borne by the applicant.

## Addenda 3

### Injury Prevention Plan

Injury Prevention activities will be determined based on information derived from the regional registry data and recommendations by the Trauma Coordinators. Several programs are on-going.

**Bicycle Safety and Helmet Giveaway Display:** this format is best suited for safety and health fairs. A display provides visual talking points regarding the use of helmets. Printed material is distributed and individuals (primarily children) are measured and fitted for bicycle helmets provided by the RAC.

**Safety on Wheels:** this program is provided for forums of students in grades three through six. A presentation, including the "egg drop" demonstration, is provided on the importance of helmets when riding bicycles, scooters, or skateboards. A 10 minute video is shown, again emphasizing the importance of helmets. One each of the bicycle, scooter and skateboard is given away and each of these students is provided helmets.

**Senior Fall Safety:** this program is provided at senior health fairs and discusses the multitude of issues that can precipitate falls. A display provides information about understanding and taking prescribed medications, having vision checked regularly, making sure the home is safe, and utilizing the correct apparatus when reaching for items in high areas. "Safe", locking step stools are distributed at these events.

**Underage Drinking Initiative:** BorderRAC co-sponsors this annual event with the El Paso Police Department. The local high schools support a poster contest that conveys the down-side of teenage drinking. The posters are submitted and a group of individuals determine the best poster. The students with the top 10 posters are honored at a luncheon and prizes are given to these students.

**Safety Town:** BorderRAC co-sponsors the annual event with the El Paso Police Department and Bassett Place Mall. The program teaches four to six year olds the importance of understanding street signs and following the rules of road safety. They are taught where to cross at streets, what a stop sign is and what it means and what street lights mean. They are instructed on the importance of wearing helmets when they ride their bicycles. BorderRAC distributes bicycle helmets to each of these students.

Addenda 4

REGIONAL TRAUMA REGISTRY  
DATA REQUEST FORM

Name \_\_\_\_\_ Department \_\_\_\_\_

Hospital \_\_\_\_\_ Fax # \_\_\_\_\_

Phone Number \_\_\_\_\_ Date Request Received \_\_\_\_\_

Reason for Request \_\_\_\_\_

Date Needed: \_\_\_\_\_

Confidentiality Agreement

- I agree any information containing patient identifiers will be accessible only to those party to this agreement.
- I agree individual patient identities will remain confidential if the data are publicly presented or published.
- I agree to state the source of information on any publication or presentations.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Date Range	Data Needed

Query Name: Count Range: Gather File: Report Name:	Query Name: Count Range: Gather File: Report Name:
Query Name: Count Range: Gather File: Report Name:	Query Name: Count Range: Gather File: Report Name:

Date Completed: \_\_\_\_\_ Registry Committee Chair: \_\_\_\_\_

## Addenda 5

## Addenda 6

### Diversion Protocol

#### Plan Component: System Diversion Protocol

**Policy:** To ensure that the limited trauma emergency healthcare resources in our TSA are managed and utilized in a manner that preserves the availability of these services for the injured patient

**Protocol:**

1. Diversion is not allowed for El Paso facilities. Facilities may request Overload status when hospital emergency departments are severely congested. Overload status may be requested for two hours with one extension of an additional two hours. Each facility has a designated person responsible for decisions regarding overload and a procedure for placing their hospital on Overload.
2. Each facility keeps records detailing why and how long they were on Overload status. All facilities have internal policies and procedures to mobilize resources during times of peak utilization to minimize the amount of time spent on Overload.
3. To go on Overload, a facility must contact the regional communications center and request they be placed on emergency department Overload. If a facility has not updated the communication center regarding extension of Overload status, they are automatically opened.
4. When three facilities request that EMS place them on Overload status, the regional communications center opens all facilities and will not entertain a request for Overload from any facility for the next 6 hours.

At times of high utilization, all of the local facilities, both trauma and non-trauma have agreed to remain open to critical medical patients and allow UMC to stay closed to critical medical patients in order to preserve the lead facility's ability to care for trauma patients. When WBAMC is closed to trauma, UMC may go on divert to critical medical when there are only two ICU beds available. When WBAMC has one ICU bed available, UMC may go on divert when there is only one ICU bed available.

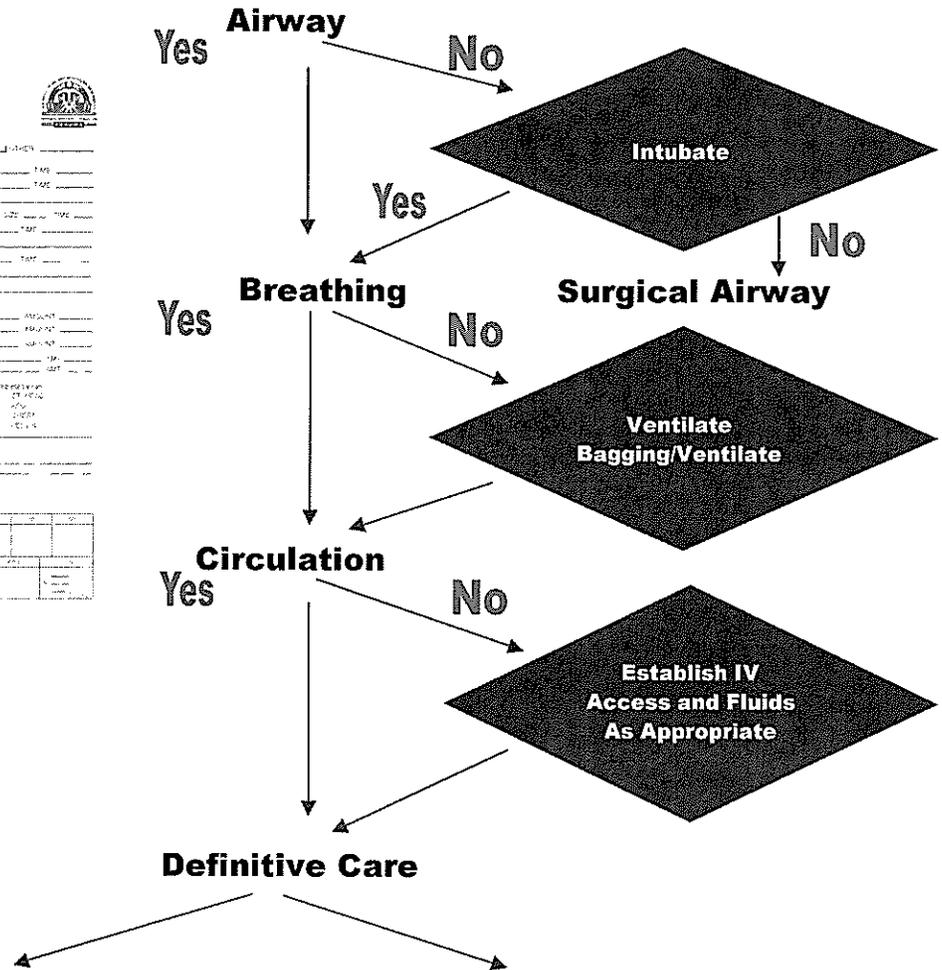
5. If a hospital receives a Level I trauma patient, EMS will respond to that hospital's request for transfer to UMC as if it was a Level I trauma scene call. The transferring hospital will call UMC on the 800 line as EMS is responding to their hospital.

Compliance with this protocol will be reviewed through the System Performance Improvement Committee.

**FAR WEST TEXAS AND SOUTHERN NEW MEXICO RAC  
HOSPITAL TRAUMA TREATMENT  
AND  
INTERFACILITY TRANSFER PROTOCOL**

**TRAUMA TRANSFER FORM**

PATIENT NAME _____			
MEDICAL RECORD NUMBER _____		PROCEDURES: <input type="checkbox"/> TRAUMA <input type="checkbox"/> OTHER _____	
DOB: _____ AGE: _____ SEX: _____	HISTORY OF CURRENT INJURY: _____		
MECHANISM OF INJURY: _____			
PROTECTIVE DEVICES USED: <input type="checkbox"/> SEATBELT <input type="checkbox"/> AIR BAGS			
VITAL SIGNS ON ARRIVAL: _____			
TREATMENT RENDERED TO THE PATIENT: _____			
MEDICATIONS: _____			
VITAL SIGNS AT DEPARTURE: _____			



High Energy Event-Risk for Severe Injury

- \*Ejection from vehicle
- \*Death of occupant in same vehicle
- \*Auto crash with significant vehicular body damage
- \*Significant Fall
- \*Auto rollover
- \*Bent steering wheel
- \*Auto-pedestrian impact
- \*Significant motorcycle, ATV, or bicycle impact
- \*Significant assault or altercation

Labs, Xrays  
Evaluate for transfer or treat locally

Multisystem Blunt or Penetrating Trauma with Unstable Vital Signs

- \*Hemodynamic Compromise (BP<90 systolic)
- \*Respiratory Compromise (RR<10 or >29)
- \*Altered Mental State (with GCS<12)

Anatomical Injury

- \*Penetrating injury of head, neck, groin, or torso
- \*Combination of burns >20% or involving face, airway, hands or feet
- \*Amputation above wrist or ankle
- \*Flail Chest
- \*Two or more long bone fractures
- \*Open or depressed skull fractures
- \*Unstable pelvis or suspected pelvic fracture

**ACTIVATE TRAUMA SYSTEM  
1-800-473-8440**  
Prepare to transfer to Trauma Center  
**DO NOT DELAY – Do not perform detailed diagnostic studies  
i.e., DPL or CT Scan**  
**GOAL: TRANSFER WITHIN (2) HOURS OF ARRIVAL**

## HOSPITAL DESIGNATION GRID

### TRAUMA

HOSPITAL	DESIGNATED	SEEKING DESIGNATION
Culberson County Hospital	IV	
Del Sol Medical Center		III
Gerald Champion	III	
Gila Regional		
Las Palmas Medical Center	IV	
Memorial Medical Center		
Mimbres Memorial Hospital		
Mountain View Hospital		
Physician's Hospital		
Providence Memorial Hospital	IV	
Sierra Medical Center	IV	
Sierra Providence East Medical Center		
UMC of El Paso	I	
William Beaumont Army Medical Center	III	

### STROKE

HOSPITAL	DESIGNATED	SEEKING DESIGNATION
Culberson County Hospital		
Del Sol Medical Center		
Gerald Champion		
Gila Regional		
Las Palmas Medical Center		II
Memorial Medical Center		
Mimbres Memorial Hospital		
Mountain View Hospital		
Physician's Hospital		
Providence Memorial Hospital	II	
Sierra Medical Center		II
Sierra Providence East Medical Center		
UMC of El Paso		
William Beaumont Army Medical Center		



## System Performance Improvement Plan

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

The authority and responsibility for regional performance improvement ultimately rests with BorderRAC.

Figure: 25 TAC §157.123(c)

The Texas EMS/Trauma System is a network of regional EMS/trauma systems.

Each regional EMS/trauma system has a regional advisory council (RAC) that is held accountable by the Texas Department of Health for developing, implementing, and monitoring a regional EMS/trauma system plan. These plans facilitate trauma and emergency health care system networking within the RAC's own trauma service areas (TSA) or among a group of TSAs.

E= Essential criteria

D= Desired criteria

H.	A regional performance improvement (PI) program is developed and implemented.	E
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This can be accomplished in a comprehensive, integrated manner through the work of the Medical Audit / System Improvement Committee with assistance and cooperation of other standing committees.

The goals for the system performance improvement in the Far West Texas & Southern New Mexico Regional Advisory Council on Trauma are to establish a method for monitoring and evaluating system performance over time and to assess the impact of trauma system development on regional morbidity and mortality. The objectives of the program are to:

1. identify regional trauma data filters which reflect the process and outcome of trauma care in far west Texas and southern New Mexico,
2. provide a multidisciplinary forum for trauma surgeons and trauma care providers to evaluate trauma patient outcomes from a system perspective and to assure the optimal delivery of trauma care,
3. facilitate the sharing of information, knowledge, and scientific data, and
4. establish a process for medical oversight of regional trauma and EMS operations.

Membership:

- Physician and/or Trauma Medical Director from each Trauma Center
- Trauma Coordinator from each hospital
- EMS Performance Improvement Coordinator
- New Mexico EMS
- Members of the regional registry committee
- Members of the General Membership with cases on the agenda

#### Scope and Process:

The Medical Audit / System Performance Improvement Committee serves as the oversight committee from Hospital and Pre-hospital Committees, and providers ensure system-wide, multidisciplinary performance improvement.

The committee will determine the type of data and manner of collection, set the agenda for the SPI process at the scheduled meetings of the committee, and identify the events and indicators to be evaluated and monitored. Indicator identification will be based on high risk, high volume, and problem prone parameters. Indicators will be objective, measurable markers that reflect trauma resources, procedural / patient care techniques, and/or systems/providers outcomes.

PI data will be collected by the Trauma Coordinators and from the regional and state trauma registries. Sentinel events will be used to focus attention on specific situations/occurrences of major significance to patient care.

Occurrences will be evaluated from a system outcomes perspective and sentinel events will be evaluated on a case-by-case basis. Root-cause analysis will be conducted on each area identified as an opportunity for improvement. Activities and educational offerings will be presented to address knowledge deficits and case presentations or other appropriate mediums will be designated to address systems and behavioral problems. All actions will focus on the opportunity to improve patient care and systems operation. The results from committee activities will be summarized and communicated to BorderRAC. Problems identified that require further action will be shared with persons and entities involved for follow-up and loop closure.

Referrals for cases of indicator “fall-out” will be forwarded to the Trauma Coordinator or other designated individual at the respective agency. The referral form is located at the end of this plan.

The functions and effectiveness of the BorderRAC performance improvement process will be evaluated on an annual basis in conjunction with the annual review of bylaws. All PI activities and committee proceedings are strictly confidential. Individual involved in PI management activities will not be asked to review cases in which they are professionally involved, but will be given the opportunity to participate in the review process.

#### Confidentiality:

All information and materials provided and/or presented during PI meetings are strictly

confidential. Persons who attend meetings are required to sign a statement of confidentiality. Committee members engaged in medical care review have protection from disclosure of proceedings. Citations from the Texas Health and Safety Code include:

Sec. 773.095. RECORDS AND PROCEEDINGS CONFIDENTIAL. (a) The proceedings and records of organized committees of hospitals, medical societies, emergency medical services providers, emergency medical services and trauma care systems, or first responder organizations relating to the review, evaluation, or improvement of an emergency medical services provider, a first responder organization, an emergency medical services and trauma care system, or emergency medical services personnel are confidential and not subject to disclosure by court subpoena or otherwise.

(b) The records and proceedings may be used by the committee and the committee members only in the exercise of proper committee functions.

(c) This section does not apply to records made or maintained in the regular course of business by an emergency medical services provider, a first responder organization, or emergency medical services personnel.

Amended by Acts 1991, 72<sup>nd</sup> Leg., ch. 605, Sec. 8, eff. Sept. 1, 1991. Amended by Acts 1997, 75<sup>th</sup> Leg., ch. 435, Sec. 7, eff. Sept. 1, 1997; Acts 2001, 77<sup>th</sup> Leg., ch. 874, Sec. 6, eff. Sept. 1, 2001.

Sec. 773.096. IMMUNITY FOR COMMITTEE MEMBERS. A member of an organized committee under Section 773.095 is not liable for damages to a person for an action taken or recommendation made within the scope of the functions of the committee if the committee member acts without malice and in the reasonable belief that the action or recommendation is warranted by the facts known to the committee member.

Added by Acts 1991, 72<sup>nd</sup> Leg., ch. 605, Sec. 8, eff. Sept. 1, 1991.

System Performance Improvement Indicators:

BorderRAC facility data related to the following PI indicators are reviewed at the monthly meetings.

Indicators include:

1. Trauma deaths (excluding those pronounced dead on arrival to the Emergency Department).
2. ED length of stay greater than two hours at the referring facility.
3. Triage to an inappropriate facility.
4. Admission to the hospital other than Level I or Level II facilities with an ISS greater than 15.
5. Perceived problem with the care of any trauma patient.



Addenda

**SYSTEM PERFORMANCE IMPROVEMENT  
Agency Referral and Response Form**

Hospital: \_\_\_\_\_ Admission Date: \_\_\_\_\_ . Case #: \_\_\_\_\_

Patient's Name: \_\_\_\_\_ D.O.B.: \_\_\_\_\_ Gender: M

MOI: \_\_\_\_\_

Patient Injuries: \_\_\_\_\_

- Indicator/Issue of Concern:

Please identify issues related to the above indicator and the facility's steps to resolve the issue.

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**Determination:**  Provider Related  System Related  Unable to Determine

**Contributing Factors for Provider Related:**

DD Delay in Diagnosis  ED Error in Diagnosis  EJ Error in Judgment  ET Error in Technique

**Preventability:**  NP Non-Preventable  PP Potentially Preventable  PRV Preventable

**Corrective Strategies:**

None  Trend  Enhanced Resources  Letter to: \_\_\_\_\_

Education  Counseling  PI Team  Refer To: \_\_\_\_\_

Practice Guidelines/Protocol  Discussion with \_\_\_\_\_  Other: \_\_\_\_\_

\_\_\_\_\_  
Printed Name of Person Completing Report

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

Privileged and confidential record. Protected by Texas Health & Safety Code 161.031; Texas Medical Practice Act, Texas Occupations Code 151.001 et. seq.; N.M. Laws 1979, ch. 169, & 5.

