



BorderRAC

TSA-I

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
Revised: April 2010
Revised: April 2011
Reviewed: September 2012
Revised: March 2014
Reviewed: December 2016
Reviewed: June 2017
Reviewed: August 2018
Reviewed: August 2020
Revised: July 2022
Reviewed: June 2023
Revised November 2024

TABLE OF CONTENTS

- I. Introduction
 - A. History of Trauma Care
 - B. Definition of Trauma System
 - C. Responsibilities of National, State, & Regional Trauma Systems
 - D. History of Far West Texas & Southern New Mexico Regional Advisory Council on Trauma
 - E. Regional Description
 - F. Organizational Structure & Meetings
 - G. Organizational Participation
 - H. Standing Committees

- II. Plan Components
 - A. System Access
 - B. Communications
 - C. Medical Oversight
 - D. Helicopter Activation
 - E. Regional Medical Control
 - F. Bypass and Diversion Policy
 - G. System Performance Improvement
 - H. Hospital Regional Guidelines and Plans

- III. Trauma PLAN
 - A. EMS Triage
 - B. Pre-hospital Patient Categorization
 - C. Mass Casualty Triage
 - D. Hospital Designation of Trauma Facilities
 - E. Hospital Trauma Treatment & Inter-facility Transfer Protocol
 - F. Hospital Regional Guidelines (Addenda)

- IV. STROKE PLAN
 - A. System of Care
 - B. Dispatch
 - C. Pre-hospital Triage
 - D. Stroke Facility Definitions/Designation
 - E. Facility Triage and Bypass
 - F. Mobile Stroke Unit
 - G. Helicopter Activation
 - H. Capability Limitations
 - I. Inter-Hospital Transfers
 - J. Documentation
 - K. Stroke Patient Rehabilitation
 - L. Prevention Education
 - M. System Performance Improvement
 - N. Regional Stroke Treatment Guidelines
 - O. Special Populations
 - P. Level of Harm

V. Addenda

1. Board of Directors
2. Trauma Enhancement Regional Grant Application
3. Prevention Plan
4. DIVERSION PROTOCOL
5. INTERFACILITY TRANSFER PROTOCOL
6. HOSPITAL DESIGNATION GRID
7. System Performance Improvement Plan
8. Regional Guidelines
 - i. Best Practice Guidelines: Pelvic Fractures
 - ii. BorderRAC Child Maltreatment Guideline
 - iii. BorderRAC Texas EMS Wristband Guideline
 - iv. Child Maltreatment Algorithm
 - v. ED Postpartum Preeclampsia Checklist
 - vi. EMS MIST Time Out Report
 - vii. EMS MIST Time Out Report Video
 - viii. EMResource Guideline
 - ix. EMS Stroke Transport Algorithm
 - x. Firefighter Transport Guideline TSA I
 - xi. Prehospital Trauma Patient Categorization
 - xii. Prehospital Thrombolytic Checklist
 - xiii. Regional Cardiac – STEMI Plan (with addenda)
 - xiv. Regional Replantation and Revascularization Algorithm
 - xv. Regional Sexual Assault Patient Referral Process and Algorithm
 - xvi. Regional Stroke Program Thrombolytic Monitoring Tool
 - xvii. Regional Stroke Plan (with addenda)
 - xviii. Regional Stroke Transfer Checklist
9. Regional Plans available on request:
 - i. BorderRAC RMOC JAS (Job Action Sheets)
 - ii. Special Pathogen High Consequence Infectious Disease (HCID) Annex
 - iii. TSA I Pediatric Surge Plan
 - iv. TSA I, J, K Regional Chemical Surge Annex
 - v. Regional Medical Operations Center (RMOC) Plan
 - vi. TSA I, J, K Regional Radiation Emergency Surge Annex
 - vii. TSA I BorderRAC Health Care Coalition Response Plan
 - viii. TSA- I Healthcare Coalition Preparedness and Response Strategies Procedures for Progressive Mitigation, Planning, Response, and Recovery
 - ix. TSA I Mass Casualty Burn Plan
 - x. TSA-I RAC Healthcare Facilities Hazard and Vulnerability Analysis (HVA)
 - xi. TSA-I Healthcare Coalition Preparedness and Response Strategies High-Consequence Infectious Diseases

Additional resources and references are available on the website.

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 20th 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.

Thomason General Hospital (now UMC El Paso) as the lead agency in the region, took a leadership role in assisting BorderRAC regain momentum. A new Trauma Nurse Coordinator was hired at Thomason and, through her efforts BorderRAC began to realize its role in trauma care. With funding and technical assistance from Thomason, 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 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.

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.

Prevention Committee

Mission: To facilitate and promote prevention and safety programs throughout the BorderRAC region.

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.

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 Trauma 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 Trauma 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.

Stroke Subcommittee 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 for stroke care within the region.

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.

Physician Advisory Group provides a venue for closed review of referred events or cases to identify opportunities for system process improvement from past performance, deviation from standards of care and successes.

Any matters regarding at-risk issues will be referred to the PAG. Written notification will be provided to those who are requested to attend those sessions. Nothing in this session shall require or authorize the giving of names or other information which would constitute an invasion of privacy or otherwise unnecessarily divulge the particular facts concerning the closed session.

2. **Professional Education Subcommittee** provides opportunities for delivering and improving the quality, safety, and cost-effectiveness of
3. patient care and outcomes by encouraging the development of professional education and individual self-assessment and self-directed learning repertoire for the betterment of the region.

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.

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.

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.

EMERGENCY HEALTHCARE SYSTEM 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. Over 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.

- o 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.
- o Medical communications involve such things as information being relayed to the receiving hospital, online 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

Except for 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 interoperability 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 1990s.

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 the use of transient New Mexico ambulances en route to El Paso Hospitals. This channel is operated by BorderRAC with access to 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.

The 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 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.

An additional repeater site was placed 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 interstate 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 EMS transport providers in TSA-I have Medical Direction; however, at this point, there is no overall Regional Medical Director, nor is there universal access to online 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. Online Medical control is provided by the receiving hospital, and New Mexico operates under a scope of practice methodology as opposed to the Texas delegation of practice.

HELICOPTER ACTIVATION

Air Methods provides helicopter service to the area. Due to the large frontier area of our region, guidelines were implemented for early activation 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 methods 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.

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

BYPASS AND DIVERSION POLICY

If a hospital suffers an internal disaster, e.g., flooding, fire, etc., the hospital may indicate a Closed status on EMResource. The hospital will receive a call from BorderRAC to obtain information, query unmet needs, and communicate the situation to other hospitals.

BorderRAC has a no-diversion policy that 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 creates a system where hospitals may notify EMS of their overload status. In such cases, EMS may communicate to patients the hospital status and give them an opportunity to request a hospital that may have a shorter waiting time. If the patient wants to be treated at that facility or the prehospital patient categorization directs transport to that facility, the overload status has no bearing on the EMS destination. The policy sets limits on the number of hospitals that may be on overload simultaneously and defines allowable time periods for overload. This policy was subsequently adopted by all the providers in the area.

It is administered through the El Paso Fire Department Communication Center, which makes the ultimate decision on the allowance of a diversion. This process has stood the test of time with periodic modifications reflecting changing community needs and resources.

SYSTEM PERFORMANCE IMPROVEMENT

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 meets the stated goals. The System Performance Improvement Committee, with representation from hospital, rehabilitation, and EMS systems in both Texas and New Mexico, and a mix of physician leaders, is chaired by a physician, has the authority and responsibility to monitor identified performance improvement indicators through, but not limited to, case reviews, as it relates to the quality of patient care.

The Committee makes recommendations regarding system enhancement and/or improvements.

Goals include:

- Utilize standardized measures to evaluate patient and system outcomes that include the levels of harm. Obtain and analyze data to identify system-wide and provider-specific educational needs.
- SPI Committee Establish PI indicators to review trauma patient care by utilizing evidence-based

best practices to improve outcomes for patients, as well as healthcare providers, and promote the Culture of Safety across all entities of the system.

- Ensure broad representation of emergency healthcare stakeholders that demonstrate involvement in their regional activities and diversity to maximize opportunities for system improvement.
- Continuous introspection and critical evaluation are essential tools vital to optimal patient care in rigorous emergency healthcare systems. In turn, the strength of performance improvement (PI) programs is predicated upon timely and accurate data.

Resources for system data analysis include

- Central Trauma Regional Registry DI-ESO
- Regional Data Collaborative (RDC)
- Develop specific user-defined standard reports and analytical tools for stakeholder defined data queries.

The System Performance Improvement Committee serves as the oversight committee to ensure system-wide, multidisciplinary performance improvement. The authority and responsibility for regional performance improvement ultimately rest with BorderRAC. This is accomplished in a comprehensive, integrated manner through the work of the System Improvement Committee with the assistance and cooperation of other standing committees.

Physician Advisory Group (PAG) provides a venue for closed review of referred events or cases to identify opportunities for system process improvement from past performance, deviation from standards of care, and successes.

Any matters regarding at-risk issues will be referred to the PAG. Written notification will be provided to those who are requested to attend those sessions. Nothing in this session shall require or authorize the giving of names or other information that would constitute an invasion of privacy or otherwise unnecessarily divulge the particular facts concerning the closed session. A confidentiality agreement for committee members is maintained.

Statement of Confidentiality - Medical performance improvement provides an objective mechanism to evaluate trauma and emergency care; facilitates the sharing of information, knowledge, and scientific data; and provides a forum for medical directors and other physicians to review the performance of the regional systems to assure the optimal delivery of trauma and emergency care.

Committee members engaged in medical care review have protection from disclosure of proceedings, under Section 773.095 RECORDS OF PROCEEDINGS CONFIDENTIAL of the Texas Health and Safety Code, as follows:

- (a) The proceedings and records of organized committees of facilities, medical societies, emergency medical service providers, or first responder organizations relating to the review, evaluation, or improvement of an emergency medical services provider, a first responder organization, 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 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.

Section 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.”

PI data is collected by all committees using either established registries or specially designed data

collection tools. Data is utilized by each committee to evaluate care and processes within the specific system of care. Referrals for cases of indicator “fall-out” are forwarded to BorderRAC by the system coordinators or other designated individuals at the respective agencies. These are trended for reporting to the SPI Committee.

Sentinel event occurrences are evaluated from a system outcomes perspective and will be evaluated on a case-by-case basis by the PAG. All information and materials provided and/or presented during PAG meetings are strictly confidential. Analysis will be conducted in each area to identify morbidity and mortality with and without opportunity. All actions will focus on the opportunity to improve patient care and system operations. The results from committee activities will be summarized and communicated to the RAC. Problems identified that require further action will be shared with the people and entities involved for follow-up and loop closure.

HOSPITAL REGIONAL GUIDELINES

Regional plans and operational and treatment guidelines are developed by committees and approved by the System Performance Improvement Committee and are available on the BorderRAC website or on request.

Guidelines on the website:

- [Best Practice Guidelines: Pelvic Fractures](#)
- [BorderRAC Child Maltreatment Guideline](#)
- [BorderRAC Texas EMS Wristband Guideline](#)
- [Child Maltreatment Algorithm](#)
- [ED Postpartum Preeclampsia Checklist](#)
- [EMS MIST Time Out Report](#)
- [EMS MIST Time Out Report Video](#)
- [EMResource Guideline](#)
- [EMS Stroke Transport Algorithm](#)
- [Firefighter Transport Guideline TSA I](#)
- [Prehospital Trauma Patient Categorization](#)
- [Prehospital Thrombolytic Checklist](#)
- [Regional Cardiac – STEMI Plan \(with addenda\)](#)
- [Regional Replantation and Revascularization Algorithm](#)
- [Regional Sexual Assault Patient Referral Process and Algorithm](#)
- [Regional Stroke Program Thrombolytic Monitoring Tool](#)
- [Regional Stroke Plan \(with addenda\)](#)
- [Regional Stroke Transfer Checklist](#)

Regional Plans available on request:

- BorderRAC RMOC JAS (Job Action Sheets)
- Special Pathogen High Consequence Infectious Disease (HCID) Annex
- TSA I Pediatric Surge Plan
- TSA I, J, K Regional Chemical Surge Annex
- Regional Medical Operations Center (RMOC) Plan
- TSA I, J, K Regional Radiation Emergency Surge Annex
- TSA I BorderRAC Health Care Coalition Response Plan
- TSA- I Healthcare Coalition Preparedness and Response Strategies Procedures for Progressive Mitigation, Planning, Response, and Recovery
- TSA I Mass Casualty Burn Plan
- TSA-I RAC Healthcare Facilities Hazard and Vulnerability Analysis (HVA)
- TSA-I Healthcare Coalition Preparedness and Response Strategies High-Consequence Infectious Diseases

Additional resources and references are available on the website.

REGIONAL TRAUMA PLAN

SYSTEM COORDINATION AND PATIENT FLOW

EMS

TRIAGE

The START system of triage has been adopted as the standard within the BorderRAC area. 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.

BorderRAC EMS agencies utilized Texas EMS wristbands for all transports to hospitals, interfacility transfers, and/or other BorderRAC identified situations. Wristbands are used to track individuals during mass casualty incidents, evacuations, and disasters. The purpose of the wristband is to link pre-hospital and hospital records across electronic medical record systems and throughout the continuum of care by enhancing patient tracking using a unique identifier

All BorderRAC EMS and Hospitals are enrolled in Pulsara for patient tracking purposes and real-time information. Pulsara platform is a HIPAA-compliant, secure, easy-to-use app that unites the entire care team between different agencies, departments, or organizations (rural or urban). The app is used to communicate event-based real-time patient information, team notifications, image sharing, audio/video calls, and ETA. By utilizing the platform, treatment times can be reduced as well and errors and transfers are simplified.

Upon arrival at the hospital, an EMS Time Out Report (MIST report) is provided to the receiving physician and hospital staff. The concise report entails key information in the areas of Mechanism or Medical Complaint (M), injuries or illness identified (I), signs and symptoms (S), and treatments (T).

PRE-HOSPITAL TRAUMA PATIENT CATEGORIZATION

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

Whenever an emergency patient is considered for transport to a hospital for treatment, many factors come into play in the triage decision-making process. First, dispatch centers identify scene location, initial resource needs based on the injury report, and resource availability before dispatch. Once the EMS service arrives on the scene, the EMS personnel determine severity, treatment, and the nearest appropriate hospital for transport.

Pre-hospital trauma patient categorization and hospital adult and pediatric capability for transport are identified in the guideline.

MASS CASUALTY TRIAGE

Depending on the size of the incident, the region transitions to SALT for large-scale mass casualty

incidents. This, along with a defined distribution plan to the higher levels of trauma care, will allow rapid removal from the scene while allowing hospitals the opportunity to fully activate their internal trauma surge plans. If patients arrive by means other than EMS, hospital staff must apply a Texas EMS wristband from the hospital supply and associate the patient with the MCI incident in Pulsara.

Firefighter Transport Guidelines provide criteria and transport safety guidelines that should transport by a non-licensed ambulance be considered.

HOSPITALS

DESIGNATION OF TRAUMA FACILITIES

The region has designated one Level I and two Level II facilities. There are 3 Level III (including a military hospital) and two Level IV facilities. There are two pediatric hospitals, both with pediatric transport teams. This allows appropriate triage and transfer of Level I trauma patients to an appropriate facility that has a higher trauma capability. Hospital capabilities for trauma destination are found in the Pre-hospital trauma patient categorization.

For hospitals seeking a higher designation level, a request must be submitted to the System Performance Improvement Committee identifying their readiness and requesting a change to the patient transport schema, which will allow them to receive patients that meet their sought-after level of designation for survey purposes. BorderRAC supports facilities through the designation process by providing guidance on regional guidelines, reviewing rules, and attending trauma surveys.

HOSPITAL TRAUMA TREATMENT & INTER-FACILITY TRANSFER PROTOCOL

Every designated hospital in our TSA has developed a 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 to facilitate timely access to the appropriate level of trauma care. EMResource is utilized to provide broad information on capabilities such as hand, ophthalmology, and OMFS coverage.

While some patients are considered auto-accept, 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 critical patients transferred out to a higher level of care within 2 hours of ED admission. The purpose of these protocols is to ensure the unobstructed transfer of trauma patients from the scene or between hospitals to appropriate definitive care.

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 outside the region does not in any way affect the timeliness of transfers from those facilities to the Level I or Level II facilities. 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 requiring transfer, EMS will respond to that hospital's request for transfer to UMC as if it were a Level I trauma scene call. The transferring hospital will call UMC on the 1-800 line as EMS is responding to their hospital.

HOSPITAL REGIONAL GUIDELINES

Regional plans, and operational and treatment guidelines are developed by committees and approved by the System Performance Improvement Committee and are available on the BorderRAC website. Plans and guidelines appropriate to this chapter include:

- [Best Practice Guidelines: Pelvic Fractures](#)
- [BorderRAC Child Maltreatment Guideline](#)
- [BorderRAC Texas EMS Wristband Guideline Child Maltreatment Algorithm](#)
- [EMS MIST Time Out Report](#)
- [EMS MIST Time Out Report Video](#)
- [Firefighter Transport Guideline TSA I](#)
- [Regional Replantation and Revascularization Algorithm](#)
- [Regional Sexual Assault Patient Referral Process and Algorithm](#)

Additional regional guidelines and plans are available on the website. Additional resources and references are available on the website.

Regional Stroke Program

The BorderRAC Stroke System of Care functions to:

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 outcome measures) and include a mechanism for evaluating effectiveness through which the entire system and its individual components continue to evolve and improve.

This Plan was 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.

Dispatch

Early access to the emergency system is critical for patients experiencing a stroke. Dispatchers operate under standardized, written, often computerized (Computer Assisted Dispatch) protocols. Such protocols are developed nationally and then modified locally or regionally. The ideal system has intense quality improvement programs to ensure that dispatchers follow protocols and procedures correctly and consistently.

Pre-hospital Triage

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

To ensure the prompt availability of medical resources needed for optimal patient care, patients with stroke symptomology will be assessed using the Los Angeles Prehospital Stroke Scale (LAPSS). If the LAPSS is positive, the severity (the potential of an emergency large vessel occlusion) will be assessed for utilizing the Los Angeles Motor Score (LAMS).

Patients should be transported without delay to a designated Stroke Center. For rural/frontier areas, consideration should be given to air evacuation for these patients. Identify "Code Brain" in the report to the receiving facility. Be prepared to relay pertinent patient information, including results of LAPSS and LAMS. To determine severity, if the LAPSS is positive for stroke, the Los Angeles Motor Scale (LAMS) will be performed to assess for the potential of a Large Vessel Occlusion (LVO). A LAMS score of ≥ 4 is indicative of an LVO and should be transferred to a Comprehensive Stroke Center.

Assess and document current medications for any Novel Oral Anti-Coagulants (NOAC).

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 a survey by an approved surveying body and designation by the Texas Department of State Health Services.
- **Level II – Advanced Primary Stroke Center (APSC)** has the necessary staffing, infrastructure, and programs to stabilize and treat acute stroke patients and has 24/7 endovascular capability. This center requires a survey by an approved surveying body and designation by the Texas Department of State Health Services.
- **Level III - Primary Stroke Center (PSC)** has the necessary staffing, infrastructure, and programs to stabilize and treat most acute stroke patients. This center requires a survey by an approved surveying body and designation by the Texas Department of State Health Services. The Joint Commission also identifies Primary Stroke Centers as centers that provide services with critical elements to achieve long-term success in improving outcomes.
- **Level IV – Acute Stroke-Ready Center** – has the necessary staffing and infrastructure to provide immediate and time-critical care to the stroke patient, including initial emergency evaluation and screening, stroke scale assessment, and, if indicated, thrombolytic treatment prior to transfer to a higher level of stroke-capable center.

When a facility in the BorderRAC Region decides to proceed with initial stroke designation or upgrade of current stroke designation, the facility shall formally notify the RAC of its plans to seek stroke designation and at what level. The facility will address the System Performance Improvement Committee, attesting to its readiness to proceed and anticipated timeline. Once readiness is confirmed, the System Performance Improvement Committee will allow regional EMS agencies to change transport destinations. This change is provided for six months to allow the facility to build a pool of patients for the survey while not prolonging the preparation and survey scheduling.

Facility Triage and Bypass

Rapid and accurate detection of stroke by prehospital providers at the time of first contact is crucial for the timely initiation of appropriate treatment. Prehospital triage includes the on-scene assessment utilizing the Los Angeles Prehospital Stroke Scale (LAPSS) to identify potential stroke victims. To determine severity, if the LAPSS is positive for stroke, the Los Angeles Motor Scale (LAMS) will be performed to assess for the potential of a Large Vessel Occlusion (LVO). A LAMS score of ≥ 4 is indicative of an LVO.

Suspected stroke patients will be safely and rapidly transported to the nearest appropriate stroke facility within TSA I. 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.

[Addendum – EMS Stroke Transport Algorithm](#)

Mobile Stroke Unit

UMC El Paso Mobile Stroke Team is integrated into the emergency dispatch system. If a dispatcher believes the patient is experiencing stroke-like symptoms, the UMC Mobile Stroke Team may be immediately dispatched to the scene to provide rapid scan time, immediate imaging, and onboard treatment.

Helicopter Activation

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

- Helicopter activation/scene response should be considered when it could reduce transportation time for patients with onset of symptoms between 3 and 24 hours.
- Patients transported via helicopter should be taken to the most appropriate stroke facility.

Capability Limitations

TSA-I-designated stroke facilities will communicate capability limitations promptly to regional EMS and other facilities by identifying CT scan capability in EMResource. This will ensure that stroke patients are transported to the nearest appropriate stroke facility. If the patient is on Novel Anti-Coagulants (NAC), transfer to a stroke facility with reversal capability.

Inter-Hospital Transfers

Stroke patients with special needs may be transferred within the region to an appropriate stroke facility for assessment and treatment. If resource needs exceed current regional capabilities, transfer to a higher level of care stroke facility outside the region should be expedited.

Stroke patients in TSA-I are transported according to patient need, availability of resources, and environmental conditions. Transport via BLS, ALS, or MICU ground ambulance is available throughout the Region. A medical professional competent in thrombolytic therapy and NIH Stroke Scale assessments MUST accompany the patient for infusion monitoring. Air Medical transport (fixed and rotor wing) is also available in this Region.

A Stroke Transfer Checklist is available for inter-hospital transfers.

[Addendum -Stroke Transfer Checklist](#): Indicators of when to consider a transfer

Hemorrhagic Stroke

- Large volume intracerebral hematoma
- greater than 5cm on CT
- Concern for expanding hematoma
- Rapidly declining mental status,
- especially requiring intubation

- Hunt Hess score > 3

Ischemic Stroke

- NIHSS > 4
- Signs & symptoms consistent with large vessel occlusion: LAMS \geq 4
- “Give and Go”
- Stroke in the young (<55 years of age)

Efforts to facilitate access and transitions in care should focus on reducing disparities in stroke care.

Consideration of the following will assist in better identifying the appropriate patient transport location.

- **Urban** areas have abundant healthcare resources, with access to one or more TSCs/CSCs within 30 minutes transport time by EMS ground
- **Suburban** areas may have access to both community hospitals and suburban or urban advanced stroke centers with a 30-60 minute transport time by EMS air or ground
- **Rural** areas have limited local general healthcare resources and ground EMS transport times not within 60 minutes but may be one within 60 minutes by air.

Documentation

A 24-hour documentation tool will be utilized for all patients transferred from one facility to another. This will heighten the continuity of care and ensure all elements of patient monitoring are documented.

[Addendum-Thrombolytic Monitoring tool](#)

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 and reduce mortality, maximize recovery, and prevent recurrent stroke and cardiovascular events.

Prevention Education

Public education will be directed at primary and secondary prevention targeting populations at increased risk for stroke and poor outcomes after stroke and their immediate families, and will focus on signs and symptoms of stroke, risk factors, as well as the need to rapidly access the emergency healthcare system (by calling 9-1-1) and recovery.

System Performance Improvement

A regional system performance improvement program will identify opportunities for treatment efficiencies within the system and allow targeted education. Data is collected utilizing the RAC Data Collaborative as the data reservoir. In order to demonstrate active participation in the Regional Stroke System, all regional partners shall participate in data collection.

The goals of data collection will be to identify:

- Number of patients
- Demographic propensities
- Types of strokes
- Types of treatment provided
- Timelines for providing treatment
- Measurement of outcomes
- Time of initiation of the transfer process and receipt at the receiving hospital
- Criteria by which patients are considered for endovascular treatment

Referral filters include:

- EMS: Positive stroke scale – Code Brain not communicated
- EMS: Patient transported to an inappropriate facility based on LAPSS/LAMS
- Delay in diagnosis
- DIDO > 60 min for transfers
- Thrombolytic indicated, not given
- Neuro-intervention indicated, not given (or missed window)

- Patient diagnosed with stroke was discharged from the original hospital and reappeared at another hospital within 30 days. The committee will determine data elements to be reviewed for system performance. Consolidated data will be provided to the Stroke Sub-Committee and to the System Performance Committee to further advance the Regional Stroke System of Care.

Regional Stroke Treatment Guidelines

- All care will be facilitated by hospital and EMS evidence-based treatment protocols.
- All hospitals will utilize recognized clinical practice guidelines such as those published by the American Heart Association/American Stroke Association and the Brain Attack Coalition.

Special Populations

Pediatrics

Strokes are primarily associated with adults; however, the management of pediatric stroke patients requires specialized care. Challenges include managing urgent sedation and imaging. Hospitals in the region utilize Image Gently to avoid overexposure to radiation. Risk factors and causes of pediatric stroke differ from adult stroke patients. Obtaining a perinatal history on any child with a collection of symptoms to determine predisposition to stroke. The risk of stroke in children peaks in the perinatal period and is the greatest during the first year of life.

Perinatal factors that may contribute to a stroke may include

- Maternal history of infertility
- Chorioamnionitis
- Premature rupture of membranes
- Maternal preeclampsia

Pediatric comorbidities

- Congenital Heart Disease
- Moya-Moya disease
- Abnormalities of the arteries of the brain
- Autoimmune Disorders
- Blood Clotting Disorders
- Sickle Cell Anemia

Common pediatric stroke mimics: alcoholic intoxication, cerebral infections, drug overdose, hypoglycemia, hyperglycemia, genetic/metabolic disorders, atypical migraines, neuropathies (e.g., Bell's palsy), seizure, post-ictal state, and tumors.

Maternal

Women with cardiovascular disease or specific pregnancy-related conditions are at increased risk for thromboembolic stroke in the 6 weeks postpartum, and the risk remains elevated up to 12 weeks postpartum. The primary cause of maternal death is hemorrhagic stroke caused by untreated severe hypertension.

A regional MOM Band was created and placed on patients with preeclampsia or severe hypertension to wear for 6 weeks after discharge. It serves as a reminder for patients or family members to tell health care providers that they recently had a baby.

The band helps health care providers to instantly recognize that the patient is at risk for preeclampsia and promotes more timely and appropriate care. EMS, ED, and L&D units may perform stroke assessment for postpartum patients presenting with elevated blood pressure SBP \geq 160 and/or DBP \geq 110 and symptoms of preeclampsia and/or stroke. A checklist is available for Emergency Department guidance.

[Addendum- ED Postpartum Preeclampsia Checklist.](#)

Bariatric

CT scans are available for imaging for persons with obesity and/or morbid obesity with a maximum load weight of 675 pounds (308 Kg). A list of local CT scans and weight capability for bariatric outpatient imaging is available.

[Addendum- CT Outpatient Imaging](#)

Levels of Harm

Regional aggregated data is reviewed to identify and address any system process opportunities that may affect patient outcomes.

For example, if regional data demonstrates a delay in door-in-door-out (**DIDO**) times, this can be cross-referenced with NIHSS and Modified Rankin Score (mRS), treatment therapies, arrival mode and times, etc., and analyzed for process improvement measures.

The **NIHSS** measures the level of brain damage from a stroke along with physical and cognitive impairment.

Modified Rankin Score (mRS) is a disability scale for outcome measures.

Regional plans, and operational and treatment guidelines are developed by committees and approved by the System Performance Improvement Committee and are available on the BorderRAC website. Plans and guidelines appropriate to this chapter include:

- [BorderRAC Texas EMS Wristband Guideline](#)
- [ED Postpartum Preeclampsia Checklist](#)
- [EMS MIST Time Out Report](#)
- [EMS MIST Time Out Report Video](#)
- [EMS Stroke Transport Algorithm](#)
- [Prehospital Thrombolytic Checklist](#)
- [Regional Stroke Program Thrombolytic Monitoring Tool](#)
- [Regional Stroke Plan \(with addenda\)](#)
- [Regional Stroke Transfer Checklist](#)

Addenda 1

Board of Directors (see website)

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

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 the 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. Such details will be entered in EMResource to alert EMS agencies.

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 were 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.

Addenda 5
INTERFACILITY TRANSFER PROTOCOL

Addenda 6

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	III
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		
Sierra Vista Hospital		
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		
Sierra Vista Hospital		
UMC of El Paso	I	
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)

<p>The Texas EMS/Trauma System is a network of regional EMS/trauma systems.</p> <p>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.</p> <p>E= Essential criteria D= Desired criteria</p>	
<p>H. A regional performance improvement (PI) program is developed and implemented.</p>	<p>E</p>

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

BorderRAC

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.



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:

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.

Review Dates:

- 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
- Revised: April 2010