

# 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 RMOB 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 (RMOB) 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.

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