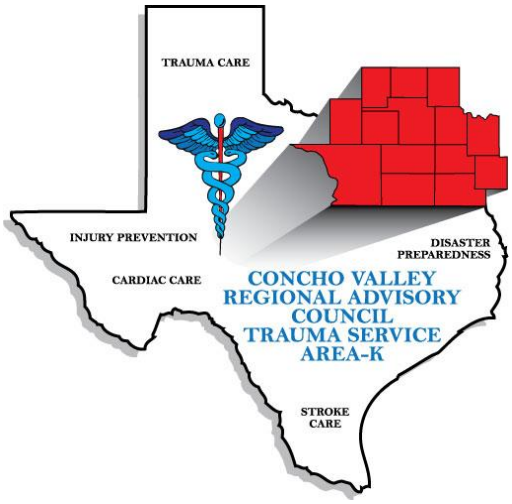



# Trauma System Plan

# TSA-K

# Concho Valley

# Regional Advisory Council

# TRAUMA SYSTEM DEVELOPMENT PLAN:

# TRAUMA SERVICE AREA K


Mailing Address
PO Box 60125
San Angelo, Texas 76906-0125

Physical Address
2030 Pulliam Street
Suite 2
San Angelo, TX 76905

Phone Numbers:
CVRAC Executive Director Cell #: 325-456-2370
Office #: 325-659-7198

TABLE OF CONTENTS

# Introduction

## History of Texas Trauma System

The goal of a trauma system is to reduce unnecessary death and disability related to traumatic injuries.

The purpose of a *Regional Trauma System Plan* is to assure that the trauma system will attain its important goal.

During the 71st legislative session (1989), House Bill 18 was passed directing the establishment of a statewide trauma system for Texas. Specific rules and regulations related to the development of the statewide system were identified and implemented.

The State of Texas is comprised of 254 counties and those counties are divided geographically into 22 Trauma Service Areas. A Regional Advisory Council (RAC) serves each Trauma Service Area.

The Regional Advisory Councils are charged with developing a system plan based on standard guidelines for implementing a comprehensive regional trauma care system.

The development of a regional plan is the ultimate responsibility of the participants in the RAC. Some elements of the plan are required, while others may be added to best reflect the needs of the community. While the Plan may have numerous components, its heart is the dedication of the professionals who transform these guidelines into reality.

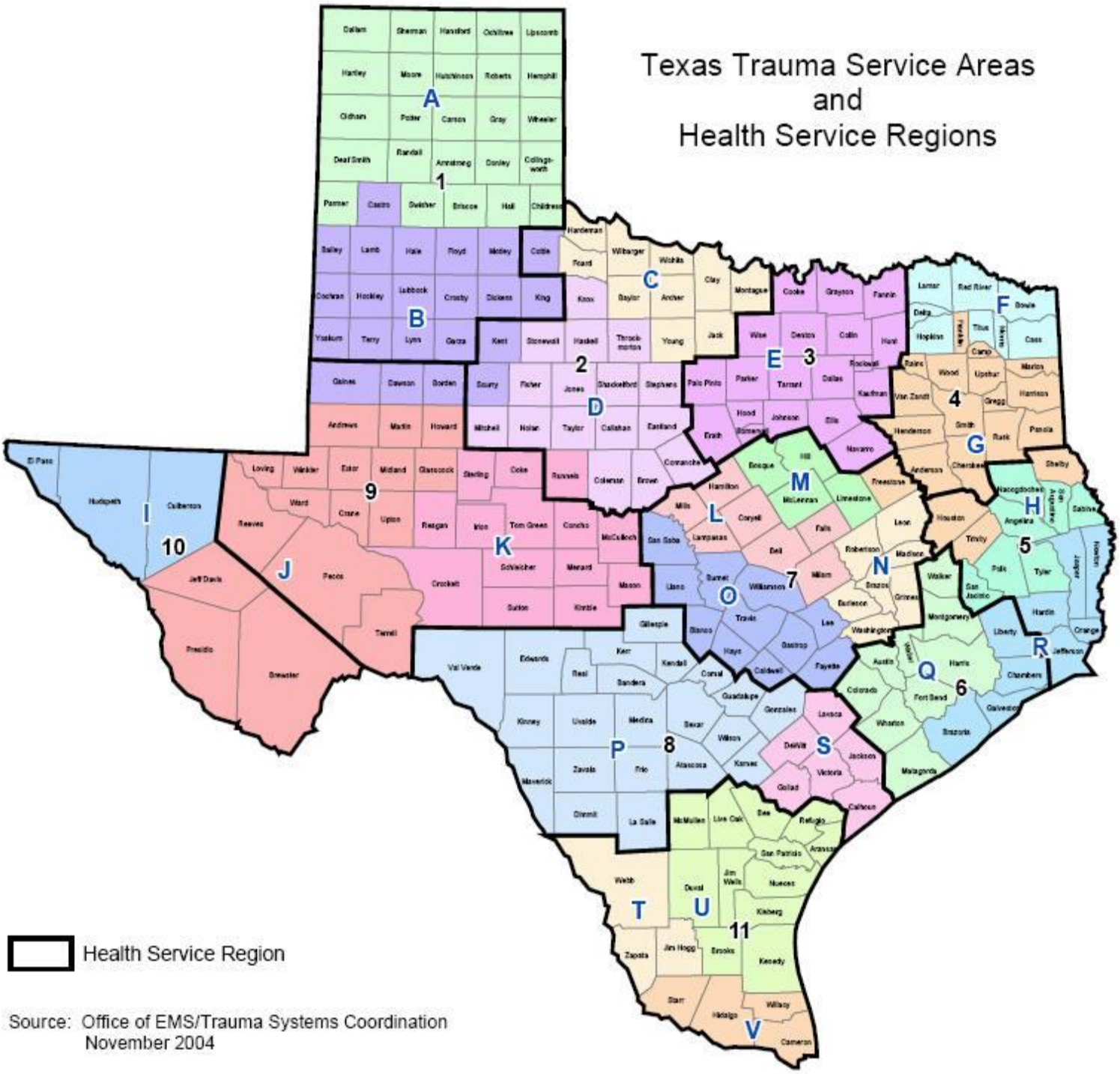
## **Demographics and Area Overview** –

Texas Trauma Service Area K consists of 14 counties with a population of 160,000+ people. There are 10 hospitals serving the region. Two of the hospitals are level 3 designated Trauma Facilities. Eight of the ten hospitals are in the rural/frontier area and seven are designated as Level IV Trauma Centers. Trauma Service Area K represents a classic example of the challenges in delivering care to trauma patients in the rural/frontier setting.

Trauma Service Area "K" (TSA-K) includes the following counties as designated by the state:

| | |
|---|---|
| **Coke** | **Menard** |
| **Concho** | **Reagan** |
| **Crockett** | **Runnels** |
| **Irion** | **Schleicher** |
| **Kimble** | **Sterling** |
| **Mason** | **Sutton** |
| **McCulloch** | **Tom Green** |

The City of San Angelo is the HUB of medical care within the Concho Valley. Shannon Medical Center is the Lead Trauma Facility for the Concho Valley Regional Advisory Council for TSA-K with a bed capacity of 407 and is designated as a Level III Trauma Center. San Angelo Community Medical Center is a 171 bed hospital in San Angelo and is also a designated Level III Trauma Center.


Texas Trauma Service Areas
and
Health Service Regions
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
S
T
U
V
1
2
3
4
5
6
7
8
9
10
11
Health Service Region
Source: Office of EMS/Trauma Systems Coordination
November 2004

## 2018 CONCHO VALLEY RAC K
## Regional Advisory Council Officers

| | |
|---|---|
| Chair | Jon-Michael Parker |
| Vice Chair | Ted Sandlin |
| Secretary | Bobbie Collom |
| Treasurer | Larry Collom and Bookkeeping Service of Oliver, Rainey, & Wojtek |

The CVRAC BYLAWS can be reviewed in the CVRAC BYLAWS Document.

## LIST OF TSA K EMS FIRMS

**East Coke County EMS**
EMS Manager: Steve Salmon
114 South Washington
PO Box 357
Bronte, Texas 76933
Office 325-224-3047
Fax 325-244-4327
Dispatch# 325-453-2511
Emergency Number 911
Number of Vehicles-1
Type of service-Volunteer
Level of service-BLS with ALS capabilities
Medical Director: Dr. Emmett Flynn

**West Coke County EMS**
EMS Manager: Steve Salmon
801 Hwy 208
Box1212
Robert Lee, Texas 76945
Office: 325-224-3047
Fax: 325-224-4327
Dispatch 325-453-2511
Emergency Number 911
Number of Vehicles-1
Type of service-Volunteer
Level of service-BLS
Medical Director: Dr. Emmett Flynn

**Eden EMS**
EMS Manager: Ricky Thomas
102 Gordon
Box 268
Eden, Texas 76837
Office: 325-869-5507
Fax: 325-869-5007
Dispatch: 325-869-4941
Emergency Number 911
Number of Vehicles-5
Types of Service-Paid
Level of Service-BLS with MICU capabilities
Medical Director: Dr. Pedro Castro

**Crockett County EMS**
EMS Manager: Eddie Martin
108 Medical Dr.
Box 577
Ozona, Texas 76943
Office 325-392-3404
Fax: 325-392-3605
Dispatch 325-392-2661
Emergency Number 911
Number of Vehicles-3
Type of Service-Paid
Level of Service-BLS with MICU capabilities
Medical Director: Dr. Marcus Sims

**Irion County EMS**
EMS Manager: Susie Campbell
209 North Parkview
Box 575
Mertzon, Texas 76941
Office: 325-315-0031
Fax: 325-835-7024
Dispatch: 325-835-2551
Emergency Number 911
Number of Vehicles-2
Type of Service-Volunteer
Level of Service-BLS with ALS capabilities
Medical Director: Dr. Emmett Flynn

**Kimble County EMS**
EMS Manager: Ted Sandlin
151 Hospital Dr.
Junction, Texas 76849
Phone: 325-446-3300
Fax: 325-446-4665
Emergency Number 911
Number of Vehicles-3
Type of Service- Paid
Level of Service-BLS with MICU capabilities
Medical Director: Dr. Alberto Noe Martinez

**Mason Ambulance Service**
EMS Manager: Thain Martin
220 Moody Street
Box 96
Mason, Texas 76856
Office: 325-347-6593
Fax: 325-347-0243
Dispatch 325-347-5252
Emergency Number 911
Number of Vehicles-2
Types of Service- Paid
Level of Service-BLS with MICU capabilities
Medical Director: Dr. Peter A. Coldwell

**Brady Fire/ EMS**
EMS Manager: Brian Meroney
216 West Commerce St.
Box 351
Brady, Texas 76825
Office 325-597-2311
Fax 325-597-1625
Dispatch: 325-597-2121
Emergency Number 911
Number of Vehicles- 3
Type of Service-Paid
Level of Service-BLS with MICU capabilities
Medical Director: Dr. Benham

**Reagan County EMS**
EMS Manager: Bill Fore
207 Plaza
Big Lake, Texas 76932
Office 325-884-3650
Fax 325-884-3396
Dispatch 325-884-2424
Emergency Number 911
Number of Vehicles-2
Type of Service- Paid
Level of Service-BLS with MICU capabilities
Medical Director: Dr. James Williams

**Ballinger Memorial Hospital EMS**
EMS Manager: Mike Goetz
608 Ave B
Box 617
Ballinger, Texas 76821
Office 325-365-2531
Fax 325-365-2662
Dispatch 325-365-5961
Emergency Number 911
Number of Vehicles-2
Type of Service-Hospital based/Paid
Level of Service-BLS with MICU capabilities
Medical Director: Dr. Bradly Bundrant

**Schleicher County EMS**
EMS Manager: Melissa Rodriguez
305 E. Murchison Ave.
PO Box 637
Eldorado, Texas 76936
Office: 325-853-3456
Fax: 325-834-4136
Dispatch: 325-853-2901
Emergency Number 911
Number of Vehicles-2
Type of Service- Volunteer
Level of Service-BLS with ALS capabilities
Medical Director: Dr. Walt Carroll

**Sterling County Volunteer EMS**
EMS Manager: Sheri Walker
516 4th street
Box 1036
Sterling City, Texas 76951
Office: 325-378-2512
Fax: 325-378-2514
Dispatch: 325-835-2551
Emergency Number 911
Number of Vehicles-2
Type of service-Volunteer
Level of service-BLS with MICU capabilities
Medical Director: Dr. Gordy Day

**Sutton County EMS**
EMS Manager: TJ Thorp
211 East 3rd Street
Box 455
Sonora, Texas 76950
Office 325-387-5132
Fax 325-387-3872
Dispatch: 325-387-2288
Emergency Number 911
Number of Vehicles-3
Type of Service- Paid
Level of Service-BLS with MICU capabilities
Medical Director: Dr. Charles Pajestka

**Shannon Health Systems AirMed1**
AirMed 1 Director of Service: Kathy Powell
120 East Harris Ave.
San Angelo, Texas 76903
Office 325-481-8588
Fax 325-657-8227
Dispatch 1-800-277-4354
Emergency Number 911
Number of Vehicles-1 Rotor Wing Aircraft
Type of Service-Air Paid
Level of Service-MICU
Medical Director: Charles Benham

**North Runnels Hospital EMS**
EMS Manager: Bobbie Collom
7821 E. Hwy 153
PO Box 185
Winters Texas 79567
Office: 325-754-4553
Fax: 325-754-3022
Dispatch: 325-365-5961
Emergency: 911
Number of vehicles: 2
Type of Service: Paid
Level of Service BLS with MICU capabilities
Medical Director Dr. Mark McKinnon

## Heart Of Texas Healthcare System EMS

EMS Manager: Alexandra Rowe
2008 Nine Road
Brady, Texas 76825
Office: 325-792-3575
Fax: 325-597-2280
Dispatch: 325-792-3575
Emergency Number
Number of Vehicles-2
Type of service-Paid
Level of service-BLS with MICU capabilities
Medical Director: Dr. Mark Ogden

## LIST OF TSA-K FIRST RESPONDERS

**Christoval VFD FRO**
FRO Director: Philip Montalvo
4636 Rudd Road
PO Box 193
Christoval, TX76935
Office 325-896-2532
Fax 325-896-2532
Emergency Number:
Number of Vehicles: (non- transport)
Type of Service: First responder
Level of Service: BLS
Medical Director: Dr. Emmett Flynn

## List Of TSA-K Hospitals

**Concho County Hospital**
Trauma Coordinator: Brenda Wright
Administrator: Bryan Lady
614 Eaker Street
Box 987
Eden, Texas 76837
Phone 325-869-5911
Fax 325-869-3861
Trauma Facility Designation: Level 4
Number of Beds: 16beds 4 ED
Emergency Room Medical Director: Dr. Feldhaus
Trauma Medical Director: Dr. Feldhaus

**Kimble Hospital**
Trauma Coordinator: Sue Gentry
Administrator: Bill Barnes
349 Reid Road
Junction, Texas 76849
Phone 325-446-3321
Fax 325-446-8165
Trauma Facility Designation Level 4
Number of Beds: 15 beds 5 ED
Trauma Medical Director: Dr. C. Utterback
Emergency Room Medical Director:

**Heart of Texas Health Care System**
Trauma Coordinator: Tina Shunk
Administrator: Tim Jones
2008 Nine Road
Box 1150
Brady, Texas 76825
Phone 325-597-2901
Fax 325-792-2280
Trauma Facility Designation Level 4
Number of Beds 25 beds 4 ED
Trauma Medical Director: Dr. Kevin Hodnett
Emergency Room Medical Director: Dr. Kevin Hodnett

**Reagan Memorial Hospital**
Trauma Coordinator: Jon-Michael Parker
Administrator:
1300 N. Main St
Big Lake, Texas 76932
Phone 325-884-5641
Fax 325-884-5865
Trauma Facility Designation Level: 4
Number of Beds 7 beds 4 ED
Trauma Medical Director: Dr. Joesph Sudolcan
Emergency Room Medical Director: Dr. Joesph Sudolcan

**Ballinger Memorial Hospital**
Trauma Coordinator: Dawn Fournier
Administrator: Rhett Fricke
608 Ave. B
Box 617
Ballinger, Texas76821
Phone 325-365-2531
Fax 325-365-5629
Trauma Facility Designation Level 4
Number of Beds 25 beds 3 ED
Trauma Medical Director: Dr. Bradley Bundrant
Emergency Room Medical Director: Dr. Bradley Bundrant

**Schleicher County Medical Center**
Trauma Coordinator: Vicki Farmer
Administrator: Paul Burke
102 North Hwy US 277.
Box
Eldorado, Texas 76936
Phone: 325-853-3900
Fax: 325-853-3976
Trauma Facility Designation Level 4
Number of Beds 14 beds 3 ED
Trauma Medical Director: Dr. Gordy Day
Emergency Room Medical Director: Dr. Gordy Day

**Lillian M. Hudspeth Memorial Hospital**
Trauma Coordinator:
Administrator: John Graves
308 Hudspeth
Box 455
Sonora, Texas 76950
Phone 325-387-1280
Fax 325-387-2396
Trauma Facility Designation Level 4
Number of Beds 12 beds 5 ED
Trauma Medical Director: Dr. Charles Pajestka
Emergency Room Medical Director: Dr. Charles Pajestka

**San Angelo Community Medical Center**
Trauma Coordinator: Amy Coats
Administrator: Buddy Daniels
3501 Knickerbocker Rd
San Angelo, Texas 76904
Phone: 325-947-6643
Fax: 325-947-6288
Trauma Facility Designation Level III
Number of Beds 171 beds 21 ED 12 ICU
Emergency Room Medical Director: Dr. Michael Murphy
Trauma Medical Director: Dr. Glenn Ihde

**Shannon Medical Center**
Trauma Coordinator: Kenneth Wamer
Administrator: Shane Plymell
120 E Harris
San Angelo, Texas 76903
Phone: 325-657-8372
Fax: 325-481-8407
Trauma Facility Designation Level III
Number of Beds 407 beds 30 ED 19 ICU
Emergency Room Medical Director: Charles Benham
Trauma Medical Director: Dr. Benton Brown

**North Runnels Hospital**
Trauma Coordinator: Bobbie Collom
Administrator: rIRichard Mathis
7821 E. Hwy 153
Po Box 185
Winters Texas 79567
Phone: 325-754-1317
Fax: 325-754-1208
Trauma Facility Designation: none
Number of Beds: 25 beds 3 ED
Trauma Medical Director: Dr. Mark McKinnon
Emergency Room Medical Director: Dr. Mark McKinnon

## PLAN REQUIREMENTS/COMPONENTS

## Organizational Structure

Chair

Executive Board (officers and Committee chairs)
Chair elect Treasure Secretary Trauma Chair Pre Hospital/Airmedical/Injury Prevention Chair / Education Chair HCC Chair
Acute Care Chair

Board of Directors
(A representative from each voting member (all participating Hospitals & EMS entities) of the CVRAC)

Executive Director
Follows the guidelines of the board

## Member Counties

- Coke
- Concho
- Crockett
- Irion
- Kimble
- Mason
- McCulloch
- Menard
- Reagan
- Runnels
- Schleicher
- Sterling
- Sutton
- Tom Green

## System Planning Participation

It is crucial that each involved entity be accountable for participation within the Regional Advisory Council for TSA-K to remain in compliance with standards set forth by the Department of State Health Services. Only with collective participation, can an effective and efficient trauma system plan function on a region-wide basis.

Regional Advisory Council meeting notices are e-mailed from the secretary or CVRAC office to the following, but not limited to:

| | |
|---|---|
| Hospitals | Voting Delegates |
| Physicians, various specialties | Non-Voting |
| EMS Agencies | Voting Delegates |
| K-RAC Executive Board Members | Ex Officio Members |

K-RAC Committee Chairs and Committee Members
Law enforcement, Fire, Disaster, DSHS, COG, Military and other personal

At each CVRAC General Assembly meeting, a general roster is placed for each attendee to sign-in by name and representing facility. These rosters serve as the identifiable means of tracking what facilities/agencies have been represented and are considered to be participating in the RAC.

Sign in rosters are also kept by individual committee chairs (and copy given to Secretary & Executive Director) and serve as further tracking information of what facilities are represented and participating in various committee-planning stages. Additional information may obtained from the CVRAC Bylaws or CVRAC Standard Operating Procedures (SOP).

## Trauma COMMITTEE

The Trauma will provide ongoing quality assessment and improvement activities designed to objectively and systematically monitor and evaluate the quality of patient care provided by both pre hospital and hospital entities within RAC-K of the Concho Valley, through systems analysis. The committee will identify and pursue opportunities to improve patient care and sustain improvement over time.

The Committee will institute a quality management program to be used throughout the region and will be responsible for continuous operations of that program.

The membership of the committee will consist of RAC-K members involved in both hospital and pre hospital care. The Committee will meet not less than once per quarter and will report activities to the Board of Directors.

## REGIONAL ADVISORY COUNCIL AREA K
## PROCESS IMPROVEMENT PLAN

**MISSION STATEMENT:**

The Trauma committee will provide ongoing process improvement activities designed to objectively and systematically monitor and evaluate the quality of trauma care provided by both pre-hospital and hospital entities within RAC-K of the Concho Valley. The committee will develop process improvement systems to assure continued regional trauma system development. The committee will provide a forum for trauma issues in RAC-K. The committee will conduct case review of trauma cases, make recommendations for improvement in trauma system processes and/or education of trauma providers in the TSA-K region as requested. The committee, through the above processes, will assist TSA-K in establishing a standard of trauma care within the region.

**GOALS OF THE Trauma COMMITTEE:**

- Improve communication between all entities
- Assure appropriate transfer decisions and processes
- Improve survival and reduce morbidity from injury

**INTRODUCTION:**

Member organizations concur that ongoing evaluation of the Trauma Care System through a well-defined process improvement program is the only way to improve trauma patient care and ultimately reduce mortality and morbidity.

Rapid transport and communications are crucial in the TSA-K region.

All member organizations agree that both entity based and system based PI are essential. System PI will examine the overall functioning of the system, components comprising the system from prehospital care to rehabilitation.

Hospital, EMS, and system PI processes will be developed to interact to improve care for the trauma patient.

**GUIDING PRINCIPLES:**

- Ongoing evaluation of the TSA-K Regional Trauma System
- Mandatory participation by all member organizations
- Committee members will be from General Membership and representative of all disciplines. Either the RAC Medical Director or a physician appointed by the Executive Committee shall review medical issues and make recommendations. The committee will meet not less than once per quarter and will report activities to the Executive Committee and/or General Membership meeting. Minutes will be documented of each meeting.
- The Trauma Committee Chair will be appointed by the CVRAC Chair and must be a member of the RAC-K Board of Directors who actively participates in the care of trauma patients. According to RAC-K bylaws, the chairperson shall also serve on the Executive Committee. The chairperson shall set meeting dates and notify committee members in advance of the date, time and place of the meeting.
- Development of a data gathering system and tool to allow systematic review required by the Department of State Health Services for hospital and prehospital providers treating major trauma patients.
- Data submitted to the Trauma Committee at least on a quarterly basis will be used for identification of system wide opportunities for improvement in trauma patient care. The Trauma Committee acts in an advisory capacity only.
- The voting delegate from each entity will be responsible for ensuring that data is submitted in a timely fashion each quarter to the chairperson.
- Specific criteria will be assessed at quarterly and annual intervals indicating problem areas or identification of issues needing monitoring.
- All TSA-K trauma deaths will be reviewed and each classified as preventable, potentially preventable, or non-preventable per entity using state trauma system protocol and with RAC review by request.

**DATA COLLECTION:**

Data for the preceding quarter will be provided to the chairperson on or before the last day of the month following the preceding quarter.

| Quarter | Date for Data to be sent into PI chairperson |
|---|---|
| 1st (Jan, Feb, Mar) | April 30 |
| 2nd (Apr, May, Jun) | July 31 |
| 3rd (Jul, Aug, Sep) | Oct 31 |
| 4th (Oct, Nov, Dec) | January 31 |

**IMPLEMENTATION OF PLAN:**

A. Collection of data to develop baselines
B. Analyze the data. Ensure validity and reliability of the data. Data analysis should be conducted using appropriate and accepted methods.
C. Adopt system standards and define audit filters
D. Compare data collected on quarterly basis to baseline data and adopted standards.
E. Identify opportunities for improvement. Set benchmarks in order to standardize practices which result in improved patient outcomes.
F. Recommend/conduct educational opportunities to improve system performance in identified areas. Corrective action plan may include:
    1. Guideline, protocol, or pathway development
    2. Educational offerings (case presentations, journal reading, posters, or videos)
    3. Enhanced resources, facilities, or communication
    4. Counseling
    5. Peer Review presentations
    6. Process improvement teams
    7. Referral to another committee
G. Recognize and reward exemplary performance.
H. Periodically review and revise audit filters.

# MEDICAL DIRECTION/OVERSIGHT Ad Hoc COMMITTEE

Texas Trauma Service Area K is frontier, rural and urban. The Medical Directors are experienced in emergency medical systems and trauma care, both pre hospital and hospital setting.

The Medical Direction/Oversight Ad Hoc Committee is involved in all the critical areas of the Regional Trauma System particularly field triage, pre hospital care and hospital care. The resources of the Medical Direction/Oversight Ad Hoc Committee will also be utilized for trauma prevention, disaster medical care, education and research. The Trauma Medical Directors of The Concho Valley RAC provides medical direction to all emergency transportation systems in the region that request direction.

Prehospital guidelines for all levels of EMS personnel are presently in place. The Prehospital/AirMedical committee and the Medical Direction/Oversight Ad Hoc Committee will review on an annual basis those protocols and revise if necessary. Should revisions occur the Prehospital/AirMedical committee and the Medical Direction/Over sight Committee will assist in educating the appropriate EMS personnel and will measure the results of such training with written tests.

The Prehospital/AirMedical committee and the Medical Direction/Oversight Ad Hoc Committee may conduct or sponsor periodic continuing education for EMS personnel. These may include skill performance, practice and observation. The committee may also participate in bypass and diversion decisions and disaster preparedness.

The members of the Medical Direction/Oversight Ad Hoc Committee will consist of Trauma Medical Directors and EMS Medical Directors of CVRAC TSA-K and Trauma Medical Directors of each entity within the RAC-K of Concho Valley. These members may provide guidance to the Executive Committee and general membership and maintain membership as an Ex Officio Member of CVRAC TSA-K and will not have voting rights within the RAC-K of Concho Valley.

The Medical Direction/Oversight Ad Hoc Committee will report results of each meeting to the Executive Committee. The Executive Committee will report activities of Medical Direction/Oversight Committee to the general membership at the next regular meeting.

# SYSTEM ACCESS

Advanced 911 is a regional system providing dedicated trunk lines, which allow direct routing of emergency calls. Routing is based on the telephone exchange area, not municipal boundaries. Automatic Number Identification (ANI) and Automatic Location Identification (ALI) are provided with Advanced 911.

## Enhanced 9-1-1

Enhanced 911 is a system, which automatically routes emergency calls to a pre-selected answering point based upon geographical location from which the call originated.

A 911 system operates by a caller dialing the digits 911, then the call is routed to the local telephone company central office there the telephone number or ANI is attached to the voice and sent to the Public Safety Answering Point. With Automatic Location Identification and Selective Routing, the call is sent to the Central Office and the Computer assigns an address to the phone number, then routes the call to the designated Public Safety Answering Point.

In TSA-K of the Concho Valley, the primary emergency communication system for public access is Advanced 911. The emergency communication systems provide citizens access to emergency communications to municipalities and counties in both incorporated and unincorporated areas in the TSA-K of the Concho Valley. This is plotted on a digitalized map. This process is used for both land lines as well as wireless.

## Communications Network

The Concho Valley Council of Governments administers the emergency communications network within the Concho Valley. All fourteen counties within the TSA-K of the Concho Valley have Advanced911 service.

## Strengths

Strengths of the current 911 system include:

1. System allows one phone call to activate police, fire and EMS agencies that respond within the area.
2. Some locations have provided PC's that assist in locating the caller within the area of service.
3. Many answering points are equipped with voice recording equipment, instant playback capabilities of previous telephone and or radio conversations. Answering point has access to language line interpretation services, the communication devices for deaf (TDD/TTY) as well as conference call capabilities.
4. Immediate activation of 911 with phone call and or disconnection, even though database information is not current.

## System Access

All coin operated telephones in the Concho Valley are programmed to offer free access to 911 without depositing coins into coin operated telephones.

## Educational Offerings

Public education within the TSA-K of the Concho Valley, involving the 911 system is provided by Concho Valley Council of Governments. Schools, Nursing Homes, Rotary Clubs, Lions Clubs, and Bilingual Education thru out the region is an example of what is offered.

Pre-hospital Triage Criteria

Major trauma patients are either categorized as "Critical" or "Urgent" on the Triage Decision Scheme.

Trauma centers are identified by the type of resources provided by the institution. Triage and transport protocols are based on the resources these hospitals provide.

Pediatric patients and patients with burn injuries are addressed specifically in the scheme. Patients with spinal cord injury are identified for appropriate treatment and transfer during the initial assessment. This includes Vital Signs, determination of the Glasgow Coma Scale and the Revised Trauma Score.

Patients who sustain major injuries require care at a Level I, Level II or Level III trauma center. They may be able to receive initial stabilization at a Level IV trauma center if the injury occurs in a rural area of TSA-K of the Concho Valley. Their clinical needs may include access to rapid transport to a Level I, Level II or Level III facility.

Demography of the population in the trauma service area is summarized in Appendix A.

The trauma service area has 16 ground EMS services and 1 air medical service providing emergency care and transport to trauma centers. The **List of EMS Firms** and **List of First Responders** show service level of each of these agencies.

Department of State Health Services, Bureau of Emergency Services is the regulatory agency for the emergency vehicles, equipment and personnel.

The trauma service area utilizes Basic 911 capabilities for accessing the EMS system. Emergency vehicles are dispatched based on the jurisdiction that the injured patients are injured in. Air medical transport via helicopter is available throughout the region with access via an 800 number.

Ground ambulances follow treatment and transportation Protocols authorized by their Medical Director. Assistance can be found in the Regional Guidelines of Concho Valley RAC-K manual. The air medical transport service utilizes treatment protocols authorized by their medical director. All protocols are based on national standards, including Pediatric Advanced Life Support (PALS), Advanced Cardiac Life Support (ACLS), BTLS (Basic Trauma Life Support), TNCC (Trauma Nurse Core Curriculum) and ATLS (Advanced Trauma Life Support).

Current licensed acute care facilities in the service area are listed in the **List of Hospitals**.

Prehospital guidelines are reviewed on an annual basis for revisions and refinement. Guideline update classes provide pre-hospital care personnel with information about changes in-patient care recommendations. The QA programs conduct case reviews in each facility or service within TSA-K of the Concho Valley. Each facility or service will forward statistical results to the Performance Improvement Committee of TSA-K of the Concho Valley.

Trauma facilities are notified of incoming patients via radio or cellular telephone from ambulances and aeromedical transportation.

# TRAUMA TREATMENT GUIDELINES

## PREHOSPITAL TRAUMA TRIAGE

The primary goal of prehospital trauma patient triage is to ensure that trauma patients will be identified, rapidly and accurately assessed, and based on identification of their actual or potential for serious injury, will be transported to the nearest appropriate TSA-K designated trauma facility.

### Purpose & Identification of the Trauma Patient

**Purpose:** In order to ensure the prompt availability of medical resources needed for optimal patient care, each trauma patient will be assessed for the presence of abnormal vital signs, obvious anatomic injury, mechanism of injury, and concurrent disease/predisposing factors.

**Definition:** The trauma patient is a victim of an external cause of injury that results in major or minor issue damage or destruction caused by intentional or unintentional exposure to thermal, mechanical, electrical, or chemical energy, or by asphyxia, drowning or hypothermia.

**System Triage**

1. Trauma patients in TSA-K with the following injuries will be taken directly to Shannon Medical Center or another appropriate designated trauma facility offering resources not available at SMC:
   - Patients with two or more proximal long bone fractures (excluding hip), open fractures (excluding digits), or major pelvic fractures
   - Patients with a Glasgow Coma Score of less than or equal to 13
   - Patient with significant extremity weakness or paralysis
   - Patient with amputation proximal to the wrist or ankle
   - Patient with penetrating injuries to the head, neck or torso
   - Patient with a systolic blood pressure less-than or equal-to 90; (patients age 65 years or older with systolic blood pressure less-than or equal-to 100); (children with a systolic blood pressure less-than or equal-to 70 mm Hg + 2 x age in years)
   - Patient requiring endotracheal intubation or exhibiting signs of respiratory compromise
   - Patient with flail-chest, multiple rib fractures, or subcutaneous air
   - Patient with Revised Trauma Score (RTS) less-than or equal-to 10
   - HR < 60 or >130.
   - Penetrating neck wound
   - GSW torso

2. If ground transport time to Shannon Medical Center, or San Angelo Community Medical Center Level III Hospitals for CVRAC TSA-K is greater than 30 minutes, or if lifesaving interventions (e.g. airway stabilization, chest tube insertion, etc.) are required for safe transport, contact medical control and or take the patient to the nearest medical facility and call for the helicopter transport to meet you at the local facility.

3. When on-scene EMS personnel are unable to establish on time contact with medical control at the nearest TSA-K designated trauma facility, off-line medical trauma triage criteria will be followed

4. When a trauma patient requires aeromedical evacuation, the patient is to be transported directly to Shannon Medical Center or the nearest appropriate designated trauma facility offering resources not available at Shannon Medical Center ( if it is determined that such resources are required in the treatment of the patient's injuries)

## Off-line Medical Control Trauma Triage Criteria

### Goal

Trauma patient will be identified, rapidly and accurately assessed, and based on identification of their actual or potential for serious injury, will be transported to the nearest appropriate TSA-K designated trauma facility where the patient can best receive definitive care. When on-line medical control is unavailable, EMS personnel will proceed to the nearest designated trauma facility without delay. Attempts to establish communication with the trauma facility should be continued while EMS is en route to the facility.

## Classification of Trauma Patients

Trauma patients in TSA-K classified according to severity of injury in order to determine the medical resources which may be required. In addition to the revised trauma score, EMS personnel will triage and transport trauma patients in TSA-K according to the following guidelines.

## Off-line Medical Control Trauma Triage Criteria

**Category 1.** Trauma Patients with the most severe injuries are classified as Category 1 patients. Patients with the following problems are included in this category and will require the medical resources available at TSA-K Level III Trauma Facility. When EMS personnel are unable to establish on-line medical control, these patients should be transported directly to Shannon Medical Center (or another appropriate trauma facility offering resources not available

at Shannon Medical Center), unless the patient's condition requires resuscitation and stabilization at the nearest appropriate designated trauma facility.

**Anatomic**

1. Penetrating injuries to head, neck or torso.
2. Two or more long bone fractures (femur, humerus).
3. Amputation proximal to wrist or ankle.
4. Patients with traumatic paralysis.
5. Pneumothorax, open sucking chest wound, or flail chest.
6. Major (unstable) pelvic fractures.
7. Penetrating injures proximal to elbow or knee, with any potential neurovascular injury.
8. Injury to extremity with absence of a pulse.
9. Pediatric patient with Burn > 10% TBSA.
10. Pediatric ejection from vehicle.

**Physiologic**

1. Inability to obtain satisfactory airway.
2. Patients requiring endotracheal intubation or exhibiting signs of respiratory compromise.
3. Systolic blood pressure less-than or equal-to 90; (patients age 85 years or older with systolic blood pressure less-than or equal-to 100); (children with a systolic blood pressure less-than or equal-to 70 mm Hg +2 x age in years).
4. Pulse rate < 60 or >130.
5. Respirations <9 or >29.
6. Revised Trauma Score <10. Pediatric Trauma score < 8.

**Neurologic**

GCS less-than or equal-to 10.
Spinal Cord Injury (complete or incomplete).

**Category 2.** Category 2 trauma patients are those who will require initial evaluation in the Emergency Department and may require the resources available at Shannon Medical Center. When EMS personnel are unable to establish on-line medical control, these patients may be transported directly to the nearest TSA-K Level III designated Trauma Facility for physician evaluation.

**Physiologic**

GCS greater than or equal to 10 and less than or equal to 12.
Systolic BP <100.
Loss of consciousness at scene or en route.
Gross hematuria.

Burn > 20% with any associated injury.

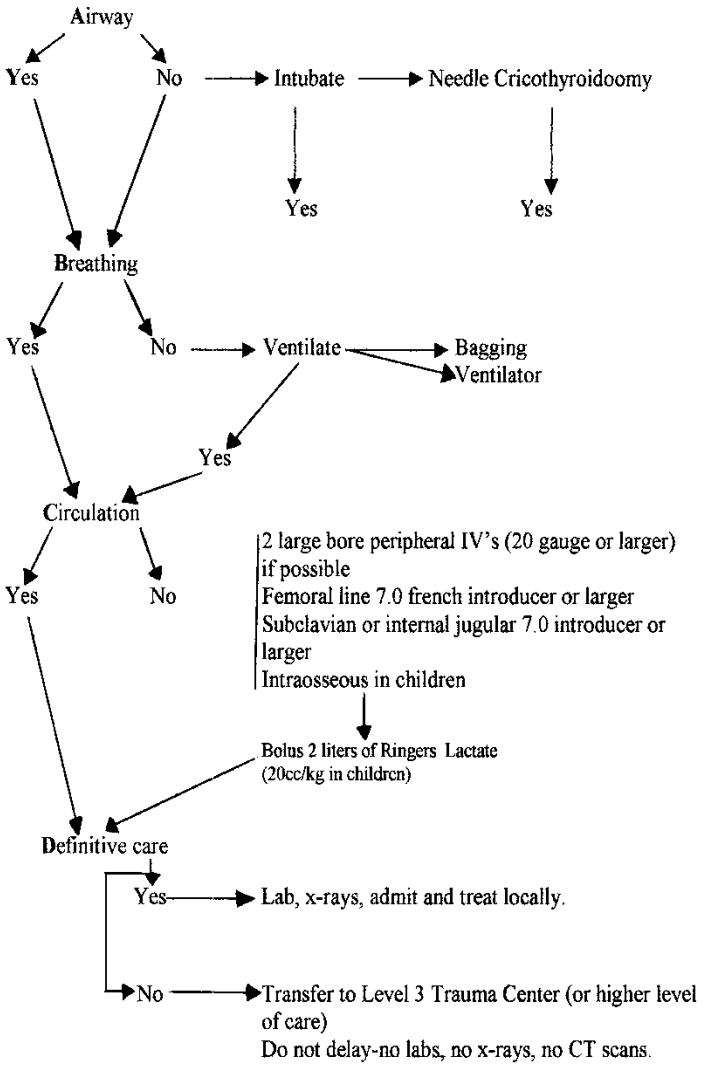
**Mechanism of Injury**

1. Motor vehicle crash with ejection of adult patient or death of occupant in the same vehicle.
2. Falls from more than 20ft.
3. Adult Auto-pedestrian injuries when vehicle speed >20 mph.
4. Any Pediatric car-pedestrian injury.
5. Motorcycle crash over 20 mph or separation of rider from bike.
6. High speed auto crash (>40 mph and/or extrication time >15 minutes).
7. Extrication time > 20 minutes.

**Category 3.** Category 3 trauma patients are those with injuries not classified as Category 1 or Category 2. When EMS personnel are unable to establish on-line medical control, these patients should be transported directly to the nearest appropriate TSA-K acute facility for physician evaluation.

1. Patients over age 65 with injuries not classified as Category 1 or Category 2.
2. Injured diabetic patients taking insulin.
3. Injured pregnant patients.
4. Injured immune-suppressed patients.
5. Falls from a distance > two times the height of the patient.
6. Auto-pedestrian injuries when speed <20 mph.
7. Toxic substance at scene in contact with the patient.
8. Low-speed (<20 mph) rollover.

**Concho Valley Regional Advisory Council**
**Rural Emergency Department Trauma Triage**




Shannon Trauma Transfer Phone Line: 1-800-277-4354
1-800-277-HELI

## GUIDELINES FOR DIVERSION

Under the present system each facility will designate a person (ED Physician, ED Director etc.) to be responsible for decisions regarding diversion.

1. Each facility will develop a procedure for their facility to be put on diversion status. These procedures shall be put in writing and presented to the RAC Hospital Committee.

   **Reasons for facilities to be put on diversion status:**

   *Trauma Surgeon is not available
   *Internal disaster
   *Specialty Surgeon (Neuro, Ortho) is not available
   *Specialty equipment (CT scanner, MRI is not available)
   *No Critical Care Beds available
   *No Acute Care Beds available

2. Hospital emergency department facilities will remain open during diversion status to ensure treatment and transport to appropriate levels of care.

3. Each facility must keep records showing why they were put on diversion.

4. Each facility must have policies and procedures for plans to open up critical-care beds. (If facility has an ICU)

5. Each facility must have a local Mass Casualty protocols and know how to activate the region-wide mass casualty plan. All facilities and EMS entities should complete the NIMS IS-700 Course.

6. Each Facility must outline in their diversion plan the notification process of neighboring facilities and those EMS agencies that primarily transport to that facility.

7. Diversion status will be updated in EMSystem daily at 0700 and 1900 for level III and 0700 for Level IV and with any diversion change.

**The Hospitals that currently have a policy/procedure in place are:**

Ballinger Memorial Hospital
Concho County Hospital
Heart of Texas Memorial Hospital
Hudspeth Memorial Hospital
Kimble County Hospital
San Angelo Community Medical Center
Schleicher County Medical Center
Shannon Medical Center
Reagan Memorial Hospital
North Runnels Hospital

## BYPASS PROTOCOLS

Bypass Protocols are addressed in the CVRAC Bypass Protocols SOP.

## CRITERIA FOR THE CONSIDERATION OF AIR MEDICAL TRANSPORT OF TRAUMA PATIENTS:

1. Lengthy extrication of the patient at the scene and the severity of the patient's injury require delivery of a critical care team to the scene.

2. One or more of the following mechanisms of injury with a motor vehicle accident is present:

    * There had been structural intrusion into the patient's space in the vehicle;
    * The patient was ejected from the vehicle;
    * Another person in the same vehicle died;
    * The patient was a pedestrian struck by a vehicle traveling more than 20 mph;
    * The patient was not wearing a safety belt in a car, which was overturned;
    * The patient was thrown from a motorcycle traveling more than 20 mph;
    * The front bumper of the vehicle was displaced to the rear by more than 30 inches, or the front axle was displaced to the rear.

3. The patient fell from a height of greater than 20 feet.

4. The patient experienced a penetrating injury between the mid-thigh and the head.

5. The patient experienced an amputation or near amputation and required timely evaluation for possible re-implantation.

6. The patient experienced a scalping or de-gloving injury.

7. The patient experienced a severe hemorrhage. Included are those patients with a systolic blood pressure of less than 90 mmHg after initial volume resuscitation and those requiring ongoing blood transfusions to maintain a stable blood pressure.

8. The patient experienced 2nd or 3rd degree burns of the face, hands, feet or perineum, or associated with an airway or inhalation injury.

9. The patient experienced, or had great potential to experience, injury to the spinal cord, spinal column, or neuralgic deficit.

10. The patient suffered injuries to the face or neck, which might result in an unstable or potentially unstable airway and might require invasive procedures to stabilize the airway.

11. The patient had a Revised Trauma Score that indicates a severe injury

12. The patient is a child less than five years of age with multiple traumatic injuries.

13. The patient is greater than 55 years of age and has multiple traumatic injuries, whether with or without preexisting illness, such as diabetes mellitus, coronary artery disease, chronic obstructive pulmonary disease or chronic renal failure.

14. The patient is an adult with respiratory rate of less than 10 or greater than 30 breaths per minute, or a heart rate of less than 60 or greater than 120 beats per minute.

15. Transport of patient will leave area without EMS coverage.

## Transfer of Trauma Patients

Patients evaluated at Level IV facilities should be considered for transfer to a higher level, designated facility if the following criteria exist:

| | |
|---|---|
| Adult | GSW to Torso (Chest, Back, Abdomen)<br>Penetrating Neck Wound<br>GCS < 10<br>SBP < 90 mmHg following fluid resuscitation according to ATLS guidelines or requirement for blood transfusion<br>HR > 130 bpm following fluid resuscitation according to ATLS Guidelines or requirement for blood transfusion<br>RTS < 10<br>LOC followed by lucid interval followed by LOC |
| Pediatric | Penetrating trauma to neck, chest, abdomen<br>GCS < 13<br>RTS < 11<br>Pediatric trauma Score < 8<br>LOC followed by lucid interval followed by LOC |
| Burn | Adult 2nd degree burn > 25% TBSA<br>Child 2nd degree burn > 20% TBSA<br>All 3rd degree burns > 10% TBSA<br>All burns involving hands, feet, face, ears, and/or perineum<br>Significant inhalation injury<br>All burns with associated major trauma*<br>All burns to high risk patients whose pre-existing medical disorders could complicate management, prolong recovery or affect mortality<br>*Patients meeting any other criteria should be considered for direct transfer to a Burn Unit. |

Sexual Assault patients to SANE Program – Contact local law enforcement agency for referral to SANE nurse. Cities with SANE program include San Angelo, San Antonio, Abilene, Dallas, and Austin.

Trauma patients requiring specialized treatment or specialized care are identified via the Triage Decision Scheme. Transfer to an appropriate facility is based on this criteria.

.

Inter-hospital transfers must be arranged through each individual facility's mechanism for acceptance of transfers.

**Trauma**

| | | |
|---|---|---|
| Shannon Medical Center | 325-481-8400 | 800-277-4354 |

**Acute Care Facility**

| | |
|---|---|
| San Angelo Community Medical Center | 325-947-6427 |

**Pediatrics**

| | |
|---|---|
| Children's Medical Center of Dallas | 800-262-0988 |
| Cook Children's Hospital | 817-885-4000 |
| Children's Hospital of San Antonio | 210-704-2011 |
| Del Children's | 512-324-5315 |
| Methodist Children's Hospital | 800-863-7892 |

**Burns**

| | |
|---|---|
| San Antonio Military Medical Center | 210-222-2876 |
| University Medical Center Lubbock | 806-743-3111 |
| Parkland Hospital Dallas | 214-590-8281 |

# REHABILITATION

## LOCAL RESOURCES:

**West Texas Rehabilitation Center (WTRC**). There are two locations of the facility, one in San Angelo and one in Abilene. The local facility is the one located in San Angelo. It provides services on an outpatient basis only.

Based on a multidisciplinary approach, the Institute delivers care in numerous areas: physical therapy; occupational therapy; speech/language pathology; drug screenings; post offer/pre-employment screenings; job site evaluation and modification; functional capacity evaluations; stress/pain management; physician directed specialty clinics/seminars; home healthcare; heated pool therapy; whirlpool therapy; orthotic and prosthetic services; pediatric PT and OT services; estate planning services; parent case management; social services; the Hand Program: Parkinson's Program; dysphasia evaluation and treatment, and much more.

The Center accepts referrals from over 120 counties in Texas. A physician referral is required in order to have the patient's insurance consider payment. All patients with rehabilitative potential are evaluated and rehabilitative consults are done within 48 hours of admission.

The Center has a contractual agreement with Shannon Home Health located in San Angelo. There is no present involvement with the Trauma System.

**Shannon Medical Center REHAB UNIT**- The Rehabilitation Unit will provide comprehensive inpatient rehabilitation services to individuals with orthopedic, neurological, and other conditions that have resulted in a loss of function in activities of daily living, mobility, cognition, or communication and who can reasonably be expected to benefit from the services provided.

The Rehabilitation Department will serve individuals who require rehabilitative services and who can be reasonable expected to benefit from the services provided.

- Neurological disorder, including multiple sclerosis, motor neuron disease, polyneuropathy, muscular dystrophy, Parkinson's Disease, spinal cord injury, stroke, trauma to the brain.
- Orthopedic conditions, including fracture, dislocation, multiple trauma, joint replacement, post-surgical rehabilitation.

- Connective tissue disorder, including polyarthritis, rheumatoid arthritis, lupus erythematosus.
- Communication disorder, including aphasia, dysarthria.
- Need for post-surgical rehabilitation
- Decrease in activities of daily living.
- Pain associated with limited function
- Reduced range of motion
- Sensory impairment
- Communication difficulties
- Swallowing disorder
- Reduced locomotion
- Reduced transfer ability
- Wounds requiring debridement and/or dressing
- Musculoskeletal dysfunction

Type and Ages of Patients

The Rehabilitation Unit provides care for any patient over the age of 16 who meets the above criteria. Patients under 16 will be considered on a case by case basis.

Methods Used to Assess and Meet Patient Care Needs

The Rehabilitation Unit addresses the needs of the patient with the use of an interdisciplinary treatment approach.

- Participates in Interdisciplinary treatment planning meetings
- Participates in discharge planning meetings and activities
- Participates in unit meetings related to care planning
- Communication essential information about patient care to the appropriate individuals using approved facility mechanisms of communication (documentation, verbal communication, meetings, etc.)

  Nursing, Physical Therapy, Occupational Therapy and Speech Therapy will develop a plan of care that includes:
- A list of the noted problems, deficits or dysfunctions
- A prioritization of those needs.
- Interventions to address the problems, deficits or dysfunction
- Time-linked goals that specify specific levels of progress expected.
- Criteria that would allow patient to move to a less restrictive environment if appropriate.
- The patient's personal goals for treatment.
- Specific goals related ADL, learning and working.

- Prognosis for goal achievement
- Barriers to achievement of the treatment goals.
- Facilitators to achievement of the treatment goals.
- Precautions to be followed during treatment
- Potential discharge needs for education, equipment, placement

**Support Services**
Support services are provided 24 hours a day and/or on an on call basis.

**Availability of Necessary Staff**
The staff is composed of RN's, LVN's, NT's NA's, CNA's, US's, PT's, PTA's, OT's, COTA's, SLP's, and therapy aides. All are required to meet the appropriate competency qualifications specific to the patient population served on this unit.

**Level of Care to Meet Patient Needs**
Each service is responsible for the implementation of the department specific plan of care, for measuring progress to and for the communicating progress and patient needs to the team.

Recognized Standards or Practice Guidelines
Nursing will closely follow standards as established by the Association of Rehabilitation Nursing Practice, Physical Medicine will closely follow the standards as defined in PT, OT, and SLT Practice Act.

**SAN ANGELO COMMUNITY MEDICAL CENTER** offers a full spectrum of therapy services that includes physical, occupational, and speech therapy. These services are available for hospital acute care patients that meet criteria for skilled therapy involvement. Physical and occupational therapy is also provided for short stay rehab of joint replacement patients in the Joint Center located on the second floor of the hospital. Outpatient therapy services are provided in our outpatient clinic located at 3605 Executive Drive in the WTMA building.

**TRAUMA REGISTRY PLAN**

## GOALS:

To develop and maintain a trauma reporting and analysis system, which will meet requirements of the Department of State Health Services for Trauma Registry, including:

1. Assure that each health care entity and EMS within the RAC-K is collection and transmitting trauma patient data.
2. Identification of the amount of uncompensated trauma care expenditures in Hospitals and EMS units within RAC-K , at least yearly.

## OVERALL GOAL;

To improve trauma patient care in the region.

## Strategies for Accomplishing the Goals:

1. Use the standard data set developed by Department of State Health Services as a basis for collection of pre hospital patient data.
2. Coordinate and assist the various health care entities and EMS units within the RAC-K to facilitate data collection and reporting.
3. Quarterly verification of transmission to the trauma registry.
4. Continue to re-evaluate the program at least annually.

## INJURY PREVENTION

The member agencies of TSA-K realize that injury prevention is an integral component of trauma care and have undertaken aggressive educational programs. Region wide these events include Shattered Dreams, spring injury prevention programs and multi-topic symposiums. The RAC is a supporter of SafeKids San Angelo and works in conjunction with that agency to provide injury prevention programs throughout the region.

### ALTERNATE DISPUTE RESOLUTION

**Alternate Dispute Resolution is address in the CVRAC Alternate Dispute Resolution SOP.**

## HOSPITAL BED CAPACITY

At the local hospital level, decisions as to how to deal with large influx of patients will include:

- Implementing the hospital emergency management plan and bioterrorism response plan
- Clearing all non-emergency patients and visitors from the ED
- Canceling non-emergency surgeries another elective procedures
- Developing discharge instructions for non-contagious patients
- Discharging patients to other acute care facilities out of the affected geographical area, or to long-term care or home care and assuring that the level of care required by these patients can be met
- Increasing stock supplies of antibiotics
- Determining the availability and sources of additional medical equipment such as ventilators and IV pumps and other equipment normally rented.
- Deciding when it is safe to discharge patients with communicable diseases and developing specific discharge instructions including recommendations for caregiver protection, handwashing, disinfecting of the environment, and post-mortem care.
- Deciding the maximum capacity of the morgue.
- Convert outpatient procedure beds into inpatient beds
- Open the 24 beds for Surge Capacity at Shannon St. Johns Campus.

Decision to designate one regional facility as a bioterrorist hospital or if all hospitals will share equally in the influx of patients will be made cooperatively between the facilities and local/regional emergency operations centers.

## 5.9 – ISOLATION AND QUARANTINE

The Regional facilities have the following 24 isolation beds available:

BALLINGER MEMORIAL HOSPITAL __0___
HEART OF TEXAS MEMORIAL HOSPITAL _1
CONCHO COUNTY HOSPITAL _2____
KIMBLE COUNTY HOSPITAL _1___
SAN ANGELO COMMUNITY MEDICAL CENTER __4___
SHANNON MEDICAL CENTER _11 + 1 Neonatal____
HUDSPETH MEMORIAL HOSPITAL _1____
RIVERCREST HOSPITAL __2___
REAGAN MEMORIAL HOSPITAL ___1__
SCHLEICHER COUNTY HOSPITAL __0___