STRAC
Southwest Texas Regional Advisory Council

Trauma Program Manager Orientation Manual

2016

Trauma Program Manager Orientation Manual

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Introduction

Welcome to the trauma and emergency healthcare system in Southwest Texas and thank you for your interest in learning more about the trauma program in Southwest Texas. You will find this manual beneficial as you embark upon this role and we encourage you to retain a copy of this text as it may serve as reference material later in your career.

TRAUMA CARE HISTORY IN TEXAS

Trauma care has evolved into a specialty of many local and regional hospitals over recent decades. Trauma centers have established high quality, comprehensive medical services to patients. The public relies on trauma centers to provide emergency services in settings ranging from high density urban areas to distant rural critical access facilities. Regardless of where your program is located, it provides critical services in a timely manner to patients who often need lifesaving measures. As a Trauma Program Manager or Coordinator (TPM/C), it is your primary responsibility to ensure patients are receiving the best care possible. This is often accomplished by compilation and analysis of data, policy review, and continuous performance improvement patient safety initiatives. The following chapters will provide an overview of many aspects of trauma care and acts as a guide to help you succeed in your new role as a TPM/C.

REGIONAL ADVISORY COUNCIL (RAC) AND TRAUMA SERVICE AREA HISTORY

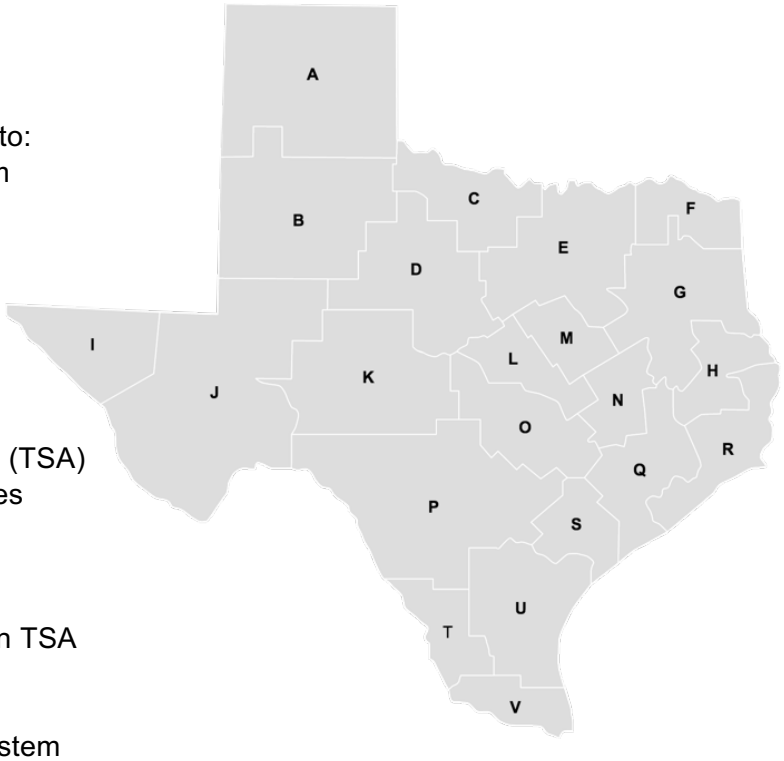
Regional Advisory Councils (RACs) are designated by the Texas Department of State Health Services as the administrative bodies to develop, implement and maintain the regional trauma and emergency healthcare system for the counties within their designated Trauma Service Areas (A - V). There are 22 RAC's in Texas. RACs work closely with their area Hospitals, EMS Agencies, and other organizations for improvement in healthcare and emergency preparedness. SEE INSET MAP AND APPENDIX A

TRAUMA SYSTEM LEGISLATION

Omnibus Rural Health Care Rescue Act

May 1989 –

- Texas Trauma System enables legislation to:
  - Develop Statewide Trauma System
    - Designate Trauma Facilities
    - Implement Trauma Registry
    - Ensure Patient Care



Texas Board of Health
Major Provisions
January 1992

- Divide State into 22 Trauma Service Areas (TSA)
- Each TSA must have minimum of 3 counties
- Each must have a lead Trauma Facility
- Each TSA May Be Re-Aligned
- Established Regional Advisory Councils
  - Represents Interested Healthcare in TSA
  - Must Be A Voluntary Entity
  - Must Be Recognized By Bureau
  - Must Develop Regional Trauma System

RACs are the administrative bodies responsible for trauma system oversight within the bounds of a given Trauma Service Area in Texas. Each of the 22 RACs is tasked with developing, implementing, and monitoring a regional emergency medical service trauma system plan. Generally, RAC stakeholders are comprised of healthcare entities and other concerned citizens with an interest in improving and organizing trauma care. As

such, not every Regional Advisory Council is structured the same. However, each RAC has the same objectives – to reduce the incidence of trauma through education, data collection, data analysis and performance improvement. Typically, this is accomplished via the provision of educational programs and performance improvement efforts designed to offer every provider guidance and motive to reduce the incidence of trauma, as well as improve outcomes of trauma patients.

TRAUMA CENTER LEVELS

The leveling of Trauma Centers is based on the capabilities of each individual hospital and combined with the needs of the region. The Texas Department of State Health Services (DSHS) is responsible for the designation process on a three-year cycle. DSHS utilizes American College of Surgeons for verification of Level I and Level II Trauma Centers in Texas. DSHS utilizes Texas EMS and Trauma Acute Care Foundation (TETAF) for the survey process of Level III and Level IV Trauma Centers in Texas. Basic definitions of each trauma level are outlined below: SOURCES: AMERICAN COLLEGE OF SURGEONS: RESOURCES FOR OPTIMAL CARE OF THE INJURED PATIENT (ORANGE BOOK); AMERICAN TRAUMA SOCIETY; TEXAS DEPARTMENT OF STATE HEALTH SERVICES

LEVEL I (COMPREHENSIVE)

A Level I trauma center should be a regional resource center and generally serves large cities or population-dense areas. This institution should serve as the lead hospital for a system. In larger population-dense areas, more than one Level I trauma center may be needed. All Level I institutions are expected to manage large numbers of severely injured patients.

- Key elements of a Level I Trauma Center include 24-hour in-house coverage by general surgeons, and prompt availability of care in specialties such as orthopedic surgery, neurosurgery, anesthesiology, emergency medicine, radiology, internal medicine and critical care. Other capabilities include cardiac, hand, pediatric, microvascular surgery and hemodialysis. The Level I Trauma Center provides leadership in prevention, public education and continuing education of the trauma team members. The Level I Trauma Center is committed to continued improvement through a comprehensive quality assessment program and an organized research effort to help direct new innovations in trauma care.

LEVEL II (MAJOR)

A Level II trauma center provides comprehensive trauma care in two distinct environments that have been recognized in the ongoing verification program sponsored by the ACS-COT. The first environment is a population-dense area in which a Level II trauma center may supplement the clinical activity and expertise of a Level I institution. In this scenario, the Level I and II trauma centers should work together to optimize resources expended to care for all injured patients in their area. This implies a cooperative environment between institutions that allows patients to flow between hospitals, depending on resources and clinical expertise and matched to patient need.

The second Level II environment occurs in less population-dense areas. The Level II hospital serves as the lead trauma facility for a geographic area when a Level I institution is not geographically close enough to do so. Many rural areas use this model. This lead trauma hospital should have an outreach program that provides support to smaller institutions in the same service area.

- Key elements of a Level II Trauma Center include 24-hour immediate coverage by general surgeons, as well as coverage by the specialties of orthopedic surgery, neurosurgery, anesthesiology, emergency medicine, radiology and critical care. Tertiary care needs such as cardiac surgery, hemodialysis and microvascular surgery may be referred to a Level I Trauma Center. The Level II Trauma Center is committed to trauma prevention and to continuing education of the trauma team members. The Level II Trauma Center is dedicated to continued improvement in trauma care through a comprehensive quality assessment program.

LEVEL III (ADVANCED)
A Level III trauma center should have the capability to initially manage the majority of injured patients and have transfer agreements with Level I or II trauma centers for seriously injured patients whose needs exceed the facility's resources. A Level III trauma center must have continuous general surgical coverage; it is expected that the surgeon will be in the emergency department on patient arrival, with adequate notification from the field. The maximum acceptable response time is 30 minutes for the highest level of activation, tracked from patient arrival. A Level III trauma center actively participates on the appropriate RAC; has appropriate services for dealing with stressful events available to emergency/trauma care providers; and submits data to the Texas EMS/Trauma Registry. A free-standing children's facility, in addition to meeting the requirements listed in this section, must meet the current ACS essential criteria for a verified Level III trauma center.

- Key elements of a Level III Trauma Center include 24-hour immediate coverage by emergency medicine physicians and the prompt availability of general surgeons and anesthesiologists. The Level III program is dedicated to continued improvement in trauma care through a comprehensive quality assessment program. The Level III Trauma Center has developed transfer agreements for patients requiring more comprehensive care at a Level I or Level II Trauma Center. A Level III Trauma Center is committed to the continued education of the nursing and allied health personnel or the trauma team. It must be involved with prevention and must have an active outreach program for its referring communities. The Level III Trauma Center is also dedicated to improving trauma care through a comprehensive quality assessment program.

LEVEL IV (BASIC)
Most Level IV hospitals are in rural locations and usually supplement care within a larger trauma system. These facilities provide initial evaluation and assessment of injured patients, but most patients will require transfer to higher-level trauma centers. A Level IV facility must have 24-hour emergency coverage by a physician or midlevel provider. Specialty coverage may or may not be available, but a well-organized resuscitation team is important. Well-defined transfer plans are essential and, it is expected that the physician or midlevel provider will be in the emergency department on patient arrival, with adequate notification from the field. The maximum acceptable response time is 30 minutes for the highest level of activation, tracked from patient arrival.

A defining difference between Level IV centers and higher-level trauma centers is the absence of continuous surgical and/or orthopedic coverage. The emergency department at Level IV centers must be continuously available for resuscitation, with coverage by a registered nurse and physician or midlevel provider, and it must have a physician director. Primary care physicians usually lead the evaluation and resuscitation at these facilities, with the assistance of midlevel providers. These providers must maintain current Advanced Trauma Life Support® certification as part of their competencies in trauma. To maintain knowledge of current, evidence-based trauma guidelines, all providers should attend trauma-related continuing medical education (CME) of at least 8 hours yearly.

The Level IV center actively participates on the appropriate RAC; has appropriate services for dealing with stressful events available to emergency/trauma care providers; and submits data to the Texas EMS/Trauma Registry.

- Key elements of a Level IV Trauma Center include basic emergency department facilities to implement ATLS protocols and 24-hour laboratory coverage. Transfer to higher level trauma centers follows the guidelines outlined in formal transfer agreements. The Level IV center is committed to continued improvement of these trauma care activities through a formal quality assessment program. The Level IV center should be involved in prevention, outreach and education within its community

Regional Trauma System

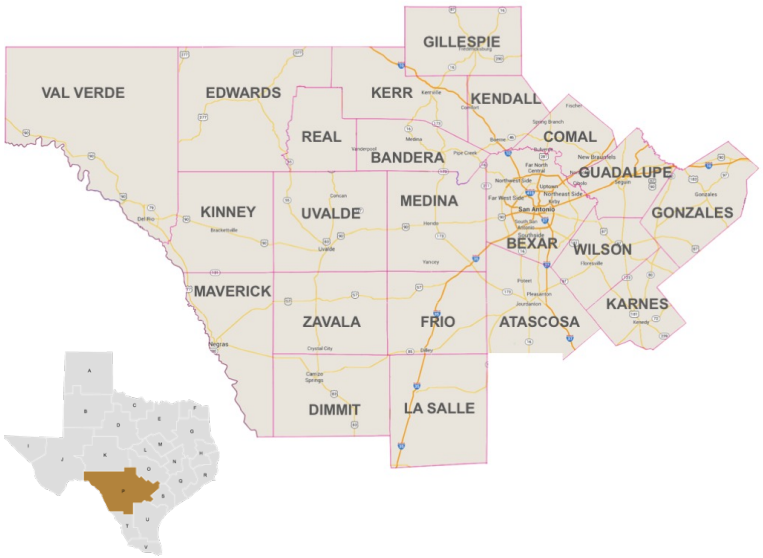
STRAC

The Southwest Texas Regional Advisory Council (STRAC) is designated by the Texas Department of State Health Services (DSHS) to develop, implement and maintain the regional trauma and emergency healthcare system for the 22 counties in Trauma Service Area - P (TSA-P). TSA-P has a mixture of urban, suburban, rural and frontier areas, from the 7th largest city in the US to the Mexican border, encompassing over 26,000 square miles in southwest Texas. STRAC is one of twenty-two regional advisory councils in Texas that comprise the Texas Trauma / Emergency Healthcare system.

SEE INSET MAP AND APPENDIX B

STRAC is a 501c3 non-profit, tax-exempt member organization consisting of 53 general and specialty hospitals, including 2 Level I Trauma Centers, 14 PCI centers, 11 Stroke centers, air medical providers, and over 70 EMS agencies.

A leader in the Texas Trauma System, STRAC has been recognized twice as the Texas RAC of the Year (2000 and 2008). STRAC oversees dozens of essential programs and projects for the trauma and emergency healthcare system in and around San Antonio, Texas, partnering with members, local governments and other non-governmental organizations.



MISSION

To reduce death / disability related to trauma, disaster, and acute illness through implementation of well-planned and coordinated regional emergency response systems.

VISION

We will be the model regional trauma, disaster, and emergency healthcare system in the united states that results in the lowest risk-adjusted mortality for emergency healthcare conditions.

CONTACTS

The STRAC office is located in the County of Bexar in the City of San Antonio, Texas.

Southwest Texas Regional Advisory Council
7500 West U.S. Highway 90
AT&T Building, Suite 200
San Antonio, Texas 78227

Main Phone Number: 210-233-5850
Emerg. Response: 210-233-5815
Fax Number: 210-233-5851
General Inquiries: info@strac.org
Technical Support: support@strac.org
Financial Inquiries: accounting@strac.org

MEDCOM

MEDCOM is a rapid trauma transfer process utilizing a central answering point (i.e. one-call center) designed to connect rural referring trauma facilities to the tertiary receiving trauma centers. Auto acceptance criteria was designed to expedite the transfer process of a trauma patient. What used to take upwards of 1-2 hours is accomplished in an average of 10 minutes through direct contact with Trauma Surgeons at one of San Antonio's Trauma Centers. The MEDCOM number is 210-233-5815. SEE APPENDIX C FOR MEDCOM TRANSFER FORM

HOSPITAL PREPAREDNESS AND RESPONSE

The Hospital Preparedness Program (HPP) provides leadership and funding through grants and cooperative agreements to improve surge capacity and enhance community and hospital preparedness for public health emergencies. The program is managed by the Office of the Assistant Secretary for Preparedness and Response, (ASPR) which provides programmatic oversight and works with its partners such as STRAC to ensure that the program's goals are met or exceeded. This funding is used to support programs STRAC and its members implement to help strengthen public health emergency preparedness in several ways.

Regional programs supporting hospital preparedness are coordinated through the STRAC Emergency Preparedness and Response Division and led by STRAC member organizations to develop and maintain regional standards and guidelines for decontamination, emergency and non-emergent communications, critical infrastructure support, evacuations, national and state-level patient surge, mass casualty incidents, force protection, epidemiological response, natural and man-made disaster planning, preparedness and response.

Regional response assets, capabilities, and standards are coordinated through the Emergency Medical Task Force Coordinator, a full-time position at STRAC in the Emergency Preparedness and Response Division. Assets and capabilities include ambulance strike teams, registered nurse strike teams, multi-patient ambulances (AMBUS), mobile medical units, ambulance staging management, and medical incident support teams.

COMMITTEES

The STRAC coordinates regional initiatives through well-defined committees to provide an open, consensus-driven environment across all relevant disciplines in the development of regional guidelines, processes and educational opportunities to facilitate efficient and appropriate prehospital and hospital care of patients who suffer from acute, time-dependent pathologies.

The STRAC defines these as Acute Care Committees or EMS/Hospital Disaster Group (EHDG) Committees. A few of the standing committees are included below:

ACUTE CARE COMMITTEES*

Trauma Coordinators
Trauma Performance Improvement
Cardiac Systems
Cardiac Systems PI
Cardiac Coordinators
Stroke Systems
Stroke Systems PI
Stroke Coordinators
Perinatal Systems
Emergency Dept. Operations
EMS Medical Directors
EMS (Prehospital)

EHDG COMMITTEES*

Mobile Integrated Healthcare
Education
EMS / Hospital Disaster Group
Infection Control
Mental Health
Field Data Collection
Security Directors / Unified ID
Materials & Facilities Managers
DECON / Radiation Safety Officers
Communications
Regional Medical Operations Center
Hospital Plans / Advisory Group
Exercise

**List contains a sample of standing committees and may not be representative of an exhaustive or comprehensive list. Committees may include one or more subcommittees or workgroups as needed to achieve specific goals.*

JOINING COMMITTEES

Interested parties may request to be included in applicable STRAC committee email distribution lists to obtain committee updates, follow peer discussions, and receive meeting announcements by sending a request to info@strac.org. Please include your full name, affiliated organization(s), title, work email address, and phone number when requesting inclusion in a committee.

PARTICIPATION REQUIREMENTS
STRAC membership consists of all aspects of the trauma patient care continuum. However, EMS and hospital members have regulatory requirements to fulfill by maintaining "active participation" in the RAC. All members are encouraged to be active participants, but the STRAC reports the active participation of EMS providers, hospitals and first responder organizations to the Texas Dept. of State Health Services (DSHS) for funding eligibility and other regulatory functions. STRAC's fiscal year is identical to the DSHS fiscal year, which begins September 1 and ends August 31. The first meeting is the annual meeting each October.

Trauma Data Reporting
Reporting of trauma data should occur at least monthly to STRAC and quarterly to DSHS.

Hospital active participation requirements SEE APPENDIX D FOR COMPREHENSIVE PARTICIPATION REQIUREMENTS

1. Attend at least 50% of general STRAC meetings (3 of 6) annually.
2. Participate at a minimum in at least 50% of appropriate committee(s) annually:
    a. EMS/Hospital Disaster Group (All Hospitals)
    b. Regional Trauma System Committee (All designated Trauma Centers)
    c. Regional Cardiac Systems (All designated PCI centers)
    d. Regional Stroke Systems (All designated Stroke centers)
3. Pay annual dues of $15/licensed bed*.
    *Hospitals receive a $3/licensed bed dues discount for participation in the data project. Questions regarding dues and payments may be submitted to accounting@strac.org.
4. Designated Trauma / Stroke / PCI centers must comply with applicable memorandum of understanding, letters of attestation, STRAC Clinical Guidelines, triage criteria and participate in the appropriate data collections process for the service line(s).

Data Collection

DEFINING A TRAUMA PATIENT SOURCE: TEXAS ADMINISTRATIVE CODE § 157

A trauma patient is defined as:
- All patients with at least one ICD-9 code of 800 - 959.9
- Any critically injured person who has been evaluated by a physician, a registered nurse, or emergency medical services personnel, and found to require medical care in a trauma facility

A major trauma patient is defined as:
A person with injuries, or potential injuries, severe enough to benefit from treatment at a trauma facility. These patients may or may not present with alterations in vital signs or level of consciousness or obvious significant injuries (see severe trauma patient), but have been involved in an incident which results in a high index of suspicion for significant injury and/or disability. Co-morbid factors such as age and/or the presence of significant medical problems should also be considered. These patients should initiate a system's or health care entity's trauma response, including prehospital triage to a designated trauma facility. For performance improvement purposes, these patients are also identified retrospectively by an injury severity score of 9 or above.

A severe trauma patient is defined as:
A person with injuries or potential injuries that require treatment at a tertiary trauma facility. These patients may be identified by an alteration in vital signs and/or level of consciousness or by the presence of significant injuries and shall initiate a system's and/or health care entity's highest level of trauma response including prehospital triage to a designated trauma facility. For performance improvement purposes, these patients are also identified retrospectively by an injury severity score of 15 or above.

INCLUSION CRITERIA FOR TRAUMA REGISTRY
The DSHS criteria is the **minimum standard** for inclusion however, each facility can determine additional inclusion criteria as needed. Such as snake bites, consults, etc.

At a minimum per DSHS criteria:
- All trauma team activations (including those discharged from the ED)
- All trauma deaths or dead on arrivals (DOAs)
- All major and severe trauma admissions for greater than 23hours
- Transfers-in and transfers-out
- Readmissions within 48hours after discharge

LOCATING PATIENTS IN YOUR HOSPITAL
There are many methods to acquire real-time or near-time location of trauma patients.

Methods for obtaining real-time or near real-time trauma patients' location:
- Daily census
- ED activity logs
- Transfer logs
- Admission logs
- Electronic Medical Record (EMR) reports
- Patient rounding
- Other

Concurrent identification and review assists with timely feedback and meaningful performance improvement initiatives. Concurrent trauma registry entry allows for real time statistical reporting, as well as meeting compliance with registry standards.

AUDIT FILTERS SEE APPENDIX E FOR LEVEL III AND APPENDIX F FOR LEVEL IV TRAUMA CENTER AUDIT FILTERS
The State Level III and Level IV audit filters can be found in the Texas Administrative Code , Title 25, Part 1, Chapter 157, Rule §157.25.

As your trauma program matures, additional audit filters should be developed and monitored based on the needs of the trauma program. Audit filters should include special populations (i.e. burns, pediatrics, geriatrics, etc). As you review trauma patients, these PI filters offer a flag to dig deeper into the case to find issues and processes that have potential to improve. PI filters don't necessarily mean something is wrong or bad, it just offers the opportunity to find out more information.

Organize Your Patient Tracking along with PI
There are as many different ways of organizing your patient tracking and PI as there are trauma coordinators. Find a system that makes sense for you. Some use binders with paper copies, others use various spreadsheets. Organize it in a way that you can find anything you may be asked for and so that you know where you're at with PI feedback and follow up items.

Trauma Registry SOURCE: HTTPS://WWW.DSHS.TEXAS.GOV/INJURY/DEFAULT.SHTM
The Mission of the Texas Department of State Health Services Injury Epidemiology & Surveillance Branch is to improve the health of Texans by reducing morbidity and mortality resulting from unintentional and intentional injuries.

The Vision is to continually improve the surveillance of reportable events through the use of the EMS & Trauma Registries and other population-based data sources, assess Texas' EMS and trauma care systems utilizing epidemiological principles and public health best practices, and to share knowledge through data dissemination, presentations, and reports for the benefit of public health.

In addition, the Injury Epidemiology & Surveillance Branch analyzes data collected on all calls by the Texas Poison Center Network (TPCN), which consists of six poison centers that cover the entire state. Each year, the TPCN receives over 150,000 cases about potentially adverse exposures to a wide variety of substances.

EMS & Trauma Registries SOURCE: HTTPS://WWW.DSHS.TEXAS.GOV/INJURY/DEFAULT.SHTM
The EMS & Trauma Registries is made up of five registries:

- EMS Registry
- Traumatic Brain Injury Registry;
- Spinal Cord Injury Registry;
- Submersion Registry;
- and other acute Traumatic Injury Registry.

The EMS & Trauma Registries are a statewide passive surveillance system that collects reportable event data from EMS providers, hospitals, Justices of the Peace, Medical Examiners, and rehabilitation facilities. Texas is home to one of the largest EMS registries in the United States with more than 2.6 million EMS runs received annually.

Data Dictionaries and Definitions
There are custom, regional, state and national required data elements.

DSHS has adopted the NTDB data dictionary. Data Dictionary is also helpful to print off and have next to you as begin entering patients. http://www.ntdsdictionary.org/dataElements/datasetDictionary.html

STRAC Regional Trauma Registry Data Dictionary
www.strac.org/trauma

Software
digital innovation incorporated www.dicorp.com
http://www.dicorp.com/contact-us/technical-support-services/
All of the hosptials in the STRAC region use Collector and are upgrading (or have already upgraded to V5 Trauma.)

STRAC Request for EMS Runsheets Access from ePCR
Please send an email to tabletpcr@strac.org. Include your name, title, and hospital.

Designated trauma centers of all levels are encouraged to submit to the National Trauma Data Bank, however Level I and Level II are required.

The NTDB publishes annual benchmark reports. NTDB also has tutorials on their website. For additional information please visit the NTDB website at https://www.ntdbdatacenter.com

Performance Improvement and Patient Safety

WHAT IS PERFORMANCE IMPROVEMENT AND PATIENT SAFETY (PIPS)?
PIPS is a confidential systematic review and discussion of the trauma patients care with continuing monitoring of processes, systems, and the impact both have on outcomes. Trauma PIPS is a multi-step process vital to the existence of your trauma program by documenting the quality of trauma care you provide while providing direction to continually improve.

PIPS is not intended to be punitive, but is designed to identify opportunities to improve the care of the trauma patient.

WHY DO PIPS IN YOUR TRAUMA CENTER?
PIPS is required by the state trauma system in order to be designated as a trauma center. The Rural Trauma Team Development Course (RTTDC) manual quote captures the concept very well: "Without a free and broad ranging review of its own outcomes, a hospital is doomed to keep performing a potentially sub-optimal level."

All trauma programs are quality programs so we must constantly strive to provide the best care to all injured patients. Elements of your PI process include:

- Issue identification
- Analysis
- Corrective actions to address issue
- Implementation
- Evaluation of effect
- Loop closure

The goal of Performance Improvement is to improve patient care and outcomes while preventing repetitions of substandard care. Recommendation would be to attend a Trauma Outcomes and Performance Improvement Course (TOPIC) and Texas Trauma Designation Education Course (TTDEC). These and many other educational opportunities may be found on www.strac.org.

IDENTIFICATION OF PI ISSUES FOR REVIEW
Potential sources include, but are not limited to:

- EMS documentation and medical record
  - Compare care delivered to standards of care
  - Did care adhere to or deviate from clinical practice guidelines (CPGs)
- Feedback from providers – email, verbal
- For admitted patients – daily rounds
- Feedback from tertiary trauma centers
  - Autopsies Potential identification of missed injuries
  - Can be used to determine if appropriate lifesaving intervetions were provided
  - Assist to accurately describe injuries in the trauma registry
- Reports from external agencies – as regional PI and data improves
- Audit filters SEE APPENDIX E FOR LEVEL III AND APPENDIX F FOR LEVEL IV TRAUMA CENTER AUDIT FILTERS

LEVELS OF REVIEW

1. Primary Review

- Goal of primary review is to identify and validate issues
  - Responsibility of the trauma program manager/trauma coordinator
  - Validation of information is key – develop a detailed timeline of the entire episode of care
  - There are several courses of actions that may follow the primary review:
    - Resolution of the issue/loop closed
    - If your findings indicate a need for further review, refer the issue on to the trauma medical director
    - Track and trend the issue for reoccurrence

Reoccurring issues warranting tracking and trending should be complied as overall compliance. Issue Examples: Nursing documentation of GCS, VS, Tetanus; Presence of EMS runsheets. Example: Community EMS runsheet is missing from a medical record, continue to trend to see if a true issue, and if persist address this issue with the EMS agency.

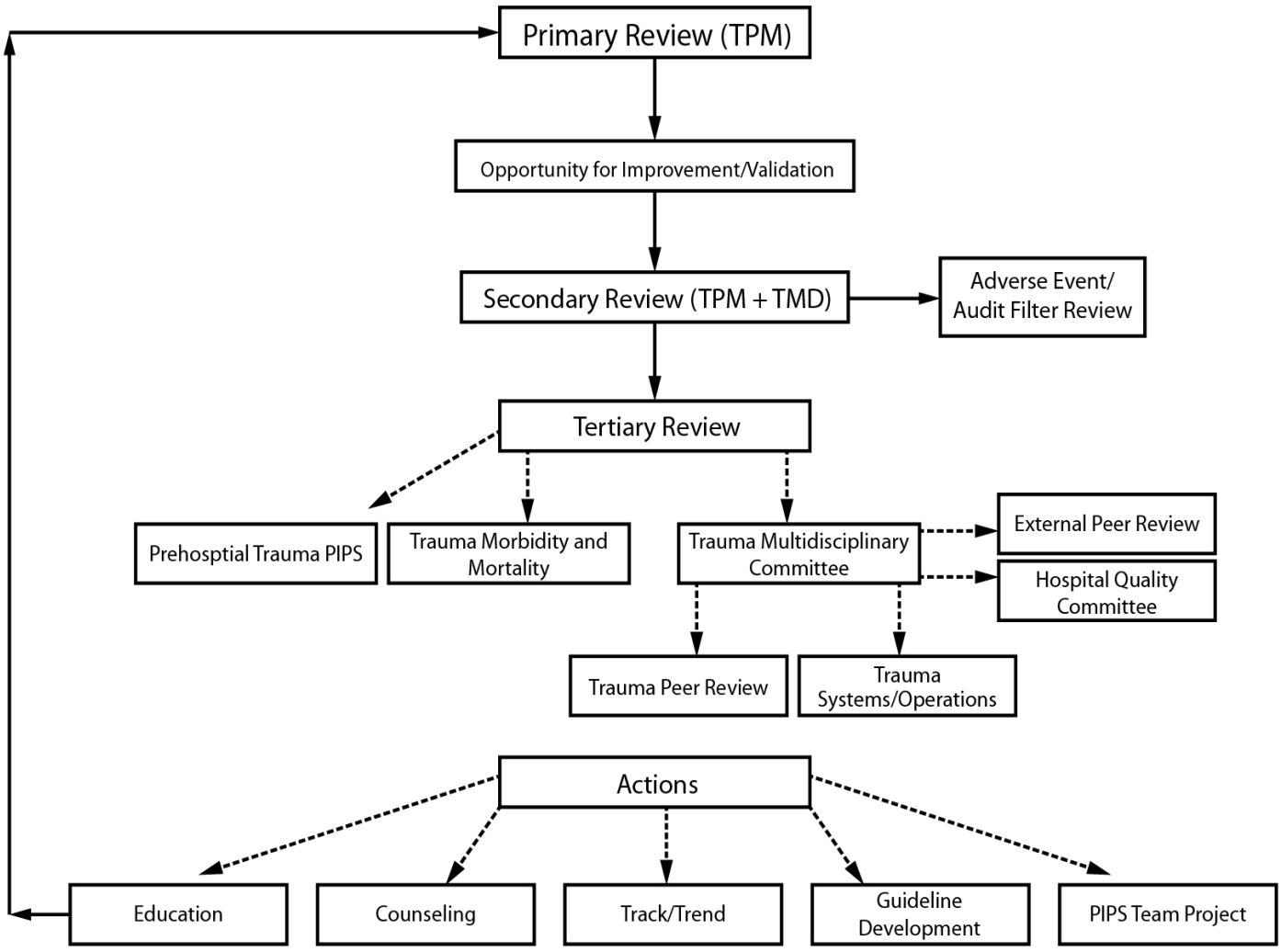
2. Secondary Review

- Goal of secondary review is in-depth evaluation of identified events
  - Responsibility of Trauma Medical Director (TMD) – determines if standard of care is met according to national standards (ATLS, etc.).
  - There are several courses of actions that may follow the secondary review:
    - Resolution of issue/loop closed
    - Referral for further review can be escalated to a specialty group (ie orthopedics) or multidisciplinary peer review committee (PI committee).

3. Tertiary Review

- This is a structured review by a multi-disciplinary group (in-house, system-wide or regional)
- Goal of the tertiary review is to determine course of action to provide loop closure and assigned preventability
- Cases appropriate for committee review
  - Deaths
  - Transfers out
  - Unexpected outcomes
  - Review requested by trauma stakeholder
  - Sentinel events
  - System issues
  - Policy/protocol non-compliance
  - Low volume populations such as pediatrics, pregnant women, burns
- Can include STRAC Regional PI if regional involvement is required. SEE APPENDIX G FOR STRAC PI CASE REVIEW REQUEST FORM
- There are several courses of action that may follow the tertiary review:
  - Mortality determination/judgment as non-preventable, potential preventable or preventable.
    - Mortality with opportunities for improvement provides a gross measure of individual or system errors that were evident in individual and aggregate cases.
  - Mortality without opportunities for improvement. Provides a gross measure of in which no individual or system errors identified in individual or aggregate cases. Corrective action plan is initiated – this will be explained in detail under Action Plan section.

Trauma PIPS Levels of Review



(TMD) INDICATES TRAUMA MEDICAL DIRECTOR, AND (TPM) INDICATES TRAUMA PROGRAM MANAGER.
SOURCE: AMERICAN COLLEGE OF SURGEONS: RESOURCES FOR OPTIMAL CARE OF THE INJURED PATIENT (ORANGE BOOK)

TRACKING PI ACTIVITIES

It is important you have a consistent way to track what you and your team are doing from time of issue identification to loop closure. There is an example included below. This will also help you organize your PI materials to show to reviewers at your site visit. Make note of every conversation and email you sent related to a particular case, “Sent case 12459 to Dr. Jones for review 09-10-2013”.

SEE APPENDIX H FOR REGIONAL PI TRACKING FORM

SEE APPENDIX I FOR REGIONAL PI M&M LIST

ACTION PLAN DEVELOPMENT
Once an opportunity for improvement is identified through your PI process, appropriate action must be taken to prevent similar future adverse events.

Each issue should have an action plan.

Examples of corrective actions:
- Guideline / protocol development
- Focused PI workgroup
- Education
- System enhancements
- Remediation / counseling
- External review

There may be times your action plan will require more than one corrective action.

Guideline/Protocol Development
- Goal of a Clinical Practice Guideline (CPG) is to decrease variation in practice
- Establishes the standard of care for all providers and provides clinical direction
- Can be clinical or administrative
    - Clinical → Anti-coagulation Reversal
    - Administrative → Trauma Call Expectations
- Should be evidence based
- Best if drafted with input from appropriate stakeholders
- In the development of your CPG, do not re-invent the wheel. Chances are high that if your trauma center needs a CPG about a topic others have also. Use available resources to find what others have developed and use that as a starting point. CPG's should be applicable to your institution and/or region. Some of your available resources for CPG's include:
    - Contact the Trauma Program Manager at a tertiary trauma center in the region
    - Clinical practice guidelines can be found at the following professional organization websites:
        - Eastern Association for the Surgery of Trauma – www.east.org
        - Pediatric Trauma Society – www.pediatrictraumasociety.org
        - Brain Trauma Foundation – www.braintrauma.org
        - American College of Emergency Physicians – www.acep.org
        - Western Trauma Association – www.westerntraumaassociation.org
        - Joint Theatre System - http://www.usaisr.amedd.army.mil/cpgs.html
    - Query other trauma professionals through organizational list serves (Example: Society of Trauma Nurses)
- All CPG's must be monitored for compliance and achievement of desired outcome.
    - For example, over the past 6 months your PI process identified an increase in poor outcomes for major trauma patients transferred from your hospital to the Level 1 trauma center and internal review attributed this to variation in resuscitation practice including late blood administration. As part of your action plan a guideline for Initial Management of Major Trauma was developed to include early blood administration. Monitoring would include:
        - Outcomes → rate of poor outcomes decreases, decrease in time from identification of shock to blood administration
        - Processes → 100% compliance with ED education regarding PMG
- Frequency of monitoring will depend on volume → if low volume occurrence can review each case
- For more frequent occurrences helpful to look at data in aggregate

Focused PI Workgroup

- Workgroup of stakeholders to work on specific issueMust have oversight by trauma center leadership
- Use available data to determine effectiveness of suggested changes
    - For example, it is noted that frequently there is no temperature documented on the trauma flow sheet and nurses are not utilizing warming measures consistently. A workgroup of ED nurses with an interest in trauma is formed to try to improve this problem. They use chart review to look at documentation of temperatures, use of warming measures and temperature of the patient at first destination from the ED. After solutions are implemented the same metrics will be used to determine success.

Education

Examples of education action plan:

- Invite a speaker to present on area of identified knowledge deficit
- Address need at nursing competencies
    - For example, case review demonstrated a knowledge/comfort deficit with pediatric medication dosing. Every ED nurse as part of annual competencies was required to take a medication test and return demonstration pediatric drug calculations and dosing.
    - See nursing competencies developed by STRAC Education Committee
- Distribute new CPG's with appropriate training on-line education
- Newsletters
- Conferences

System Enhancements

Examples:

- Resources (staff, support staff, equipment, pharmaceuticals)
    - The state site review at your visit identifies the trauma coordinator needs more dedicated time for trauma
    - A delay in care is identified because mannitol is not available in the ED and has to come from pharmacy – develop a system to ensure needed pharmaceuticals are available for the team
    - Child had a bad outcome because inappropriate ETT size was used– implement the Broselow system and ensure appropriate equipment is available
- Facilities
    - There is no helipad at your hospital. You create a process by which part of the parking lot is made into a helipad.
- Communication
    - Development of additional forms of communication such as MEDCOM, websites, EMSystems, listserves, group pages, etc.

Remediation/Counseling

- Remediation/Counseling is rarely utilized to address PI issues and is usually most effective for behavior related issues
- Should be done as soon as possible after the event
- Requires direct communication Delivered by Trauma Medical Director or Nurse Manager depending on who is involved.
- Must be documented
    - The TMD has a one on one conversation with his colleague regarding his poor documentation for trauma activations. He then sends a memo to the trauma coordinator outlining the conversation and action items that came from the meeting.
- Look for trends and changes in behavior for loop closure
- Mitigation plan may include involving administration and removing provider from trauma panel

External Review

- Sometimes it is helpful with a small staff to have an outside provider review a case
- The resources at the level 1 and 2 trauma centers can help with this review
- Regional PI Committee should be utilized for system problems or issues that can not be resolved between institutions
- Your trauma site visit will also provide an external review of your care and processes

MEETING STRUCTURE

The trauma program is required to have a forum in which all system and trauma deaths and other issues are reviewed and discussed. The actual structure of how this will be operationalized is left up to each trauma center.

One option is a physician peer review committee to review provider related issues. Corrective actions and judgments are referred to trauma program leadership and should be chaired by the trauma medical director. In centers where there is a separate physician PI meeting, there should also be a multi-disciplinary PI meeting to review all identified issues.

Attendees should include: (as applicable)

- Emergency department (physician and nursing) representatives
- Radiology representative
- Surgeons
- Orthopedic representative
- Anesthesia representative
- ICU representative
- Trauma registrar
- TMD and TPM/trauma coordinator
- Administration
- EMS
- Pediatrics
- Rehab specialists
- NP/PA's involved in trauma care
- Social services
- Educator

Meeting frequency should be at least quarterly. All information presented at trauma PI meetings is confidential and protected by Texas Peer Review Statute. Attendance should be recorded for each meeting to so that all disciplines are involved. Minutes from the trauma PI meetings should be written to include in-depth critical review.

SEE APPENDIX H FOR REGIONAL PI TRACKING FORM

SEE APPENDIX I FOR REGIONAL PI M&M LIST

EVENT RESOLUTION

Event Resolution refers to the ability of your trauma program to show you have resolved an identified issue. Event refers to the cycle of monitoring, identifying, resolving and monitoring again. Your resolution should address the key aspects of the problem. In laymen's terms "We have solved the problem and here is the proof". Remember that some events take a long time to resolve. Remember that some events may never be resolved.

RESOURCES

- Never hesitate to call the Trauma Program Manager / Trauma Coordinator at the Level I or Level II trauma center that serves as your tertiary referral center. All are well versed in PI and the PI process and will be more than willing to help answer any question you may have.
- There are also several on-line resources that might be helpful:
    - TOPIC by Society of Trauma Nurses (STN): http://www.traumanurses.org/topic
    - ACS Orange Book: https://www.facs.org/quality%20programs/trauma/vrc/resources
    - ACS Committee on Trauma: https://www.facs.org/quality-programs/trauma/publications

SEE APPENDIX J FOR TRAUMA PERFORMANCE IMPROVEMENT PLAN TEMPLATE

Injury Prevention

Your Injury Prevention Program can become whatever you envision, however should be driven based on mechanism of injury patterns. The challenge will be in deciding on a focus, gathering the information, and finally implementing your plan.

For designation purposes, documentation of all injury prevention activities in your hospital, community and region is crucial. Include other programs hosted by your facility, not just those from the trauma program. Create a binder to store this information.

The STRAC Regional Injury Prevention Committee meets to provide an open, consensus-driven environment across all relevant disciplines in the development of regional guidelines, processes and educational opportunities to facilitate injury prevention programs, projects and campaigns in an effort to better education the public and healthcare workers in the communities we serve. Some of the many campaigns and projects coordinated through STRAC include but are not limited to:

- Fall Awareness
- Driving Safety
- Child Heat Stroke
- Water Safety
- Head Injury Awareness
- Heat Safety

STRAC REGIONAL INJURY PREVENTION CONSORTIUM COMMITTEE

This group was formed by reaching out to community partners (healthcare and non-healthcare) with an interest in injury prevention efforts as well as current injury prevention programs. Participating resources include: department of transportation, local energy providers, public safety agencies, and community health providers. For more information about the STRAC Regional IP Consortium or to attend the next meeting, please send a message to info@strac.org.

STRAC IP Committee website
http://www.strac.org/injury_prevention

DEVELOPING LOCAL IP INITIATIVES
Partnering with local organizations and agencies is a great way to develop a local injury prevention initiative. To effectively reach your community, you may may benefit from engaging several stakeholders such as the ones listed below:

- **Community Department of Human Services**
  - They will help find the correct contact person to help you with your current project.
  - Contact: Contact your county directly
- **Local Law Enforcement**
  - Network with your law enforcement partners to develop strategies regarding injury prevention.
  - Contact your local Sheriff's Office and Police Department
- **Physical Therapy Department**
  - Partnering with your own PT department can often help you determine patterns of learning needs and can assist you with getting your message out.
- **Texas Department of Transportation**
  - Excellent resource for informational statistics and general road safe injury prevention.
- **MADD**
  - This can be a great resource in your community to develop an injury prevention campaign regarding drunk driving.
  - You can find your local office here: http://www.madd.org/local-offices/
- **WATCH Coalition**
  - This coalition had participation by nurses, physicians, EMS providers, public health, medical examiners, public health, child advocacy groups, and STRAC employees. A poster was developed for region-wide use. The message was sent through the community by newspaper and television news coverage.
  - http://www.voicessa.org/watersafety
- **Centers for Disease Control and Prevention**
  - Another excellent resource of information, free pamphlets, statistics and even podcasts to watch. Once you determine your focus, the trick is in finding the information to support your efforts.
  - Contact: www.cdc.gov 1600 clifton road, Atlanta, GA 30333
- **Trauma Managers and Coordinators – Don't Forget US!**
  - We are here to help!
  - Contact: See Section 4 of this Orientation Manual

Contacts and Resources

STRAC maintains a contact list of trauma managers, coordinators, and registrars in Trauma Service Area - P. To be included in this database or to receive a Trauma Coordinator meeting packet, please send your request to info@strac.org.

Many resources developed by trauma program managers, coordinators, and registrars, may be found on the Trauma, Education and Injury Prevention pages of www.strac.org

Southwest Texas Regional Advisory Council
7500 West US Hwy 90,
AT&T Building, Suite 200,
San Antonio, Texas 78227
Main: 210-233-5850
info@strac.org
http://www.strac.org

STRAC 24 Hour Technical Support:
Helpdesk: 210-233-5888
trauma.support@strac.org
or
support@strac.org

Texas Department of State Health Services (DSHS)
512-834-6700
https://www.dshs.state.tx.us/emstraumasystems/

DSHS rules (as of May 2016)
http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=25&pt=1&ch=157&rl=125

Texas EMS Trauma and Acute Care Foundation (TETAF)
http://www.tetaf.org/

Texas Trauma Coordinators Forum (TTCF)
http://www.ttcf.org

American College of Surgeons (ACS)
https://www.facs.org/quality%20programs/trauma

National Trauma Data Bank (NTDB) Data Dictionary
http://www.ntdsdictionary.org/dataElements/datasetDictionary.html

Society of Trauma Nurses (STN)
http://www.traumanurses.org/

American Trauma Society (ATS)
http://www.amtrauma.org/

Trauma Center Association of America (TCAA)
http://www.traumacenters.org/

Pediatric Trauma Society
http://pediatrictraumasociety.org/

Local Child Fatality Review Team
Contact info@strac.org for resources

Medical Examiner and Justice of the Peace
http://home.bexar.org/medicalexaminer/
Contact info@strac.org for additional assistance

Emergency Management

Criteria-The Trauma Nurse Coordinator (TNC) / Trauma Program Manager (TPM) / Trauma Medical Director (TMD) shall participate in a leadership role in the hospital, community, and regional emergency management (disaster) response committee(s).

Effective January 1, 2014, The Joint Commission approved new and revised requirements addressing leadership accountability for hospital-wide emergency management in hospitals and critical access hospitals. Research indicates that hospitals plan and respond more effectively when accountability for hospital-wide emergency management is assigned to leadership at a high level of the organization. While the "Emergency Management" (EM) chapter in the accreditation manuals already outlines a comprehensive approach to planning, preparedness, testing, and other essential emergency management activities, The Joint Commission determined that a clearer description of leadership-level oversight of emergency management was necessary.

The new and revised elements of performance, which were effective January 1, 2014, accomplish the following:

- Require the organization to identify a leader to oversee emergency management
- Require the organization to consider input from staff at different levels when evaluating exercises and responses to events
- Require senior hospital leadership to review the organization's emergency management planning activities, performance in exercises, and responses to actual events to facilitate improved communication of problem areas and implementation of hospital-wide solutions

For more information regarding hospital requirements, please reference The Joint Commission Requirements online at https://www.jointcommission.org/assets/1/18/JCP0713_Emergency_Mgmt_Oversight.pdf, visit https://www.jointcommission.org/emergency_management.aspx or contact Lynne Bergero, MHSA, project director, Department of Standards and Survey Methods, at lbergero@ jointcommission.org.

Joint Commission standards of care for Disaster Preparedness and Response has evolved from studies of significant disasters over the last five years. The Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) guidance centers on managing consequences to; provide safe and effective patient care during an emergency, clearly defining staff roles, training those roles and responsibilities; and sustaining staff competencies over time. There are six focus areas for hospitals to demonstrate they have proper plans and response mechanisms to a disaster. During planned exercises, the [organization] monitors, at a minimum, the following six critical areas:

- Communications – both internal and external to community care partners, state/federal agencies
- Supplies – Adequate levels and appropriateness to hazard vulnerabilities
- Security – Enabling normal hospital operations and protection of staff and property
- Staff – Roles and Responsibilities within a standard Hospital Incident Command Structure
- Utilities – Enabling self-sufficiency for as long as possible with a goal of 96 hours
- Clinical Activity – Maintaining care, supporting vulnerable populations, alternate standards of care

Recent disaster studies since 2005 have exposed difficult challenges. Maintaining the medically frail is difficult requiring major focus. Keeping hospital beds open and available is vital in participating in and meeting community responsibilities. Scare resources against high demand of oxygen, vents, dialysis, pharmacy and home health care necessitate a broader scope of approach to planning, mitigation, response and recovery efforts.

Response Systems' team of medical experts can help your organization define policy, procedures and planning tools based on the scenarios your facility and community is most likely to encounter.

SOURCE: HTTPS://WWW.JOINTCOMMISSION.ORG/

HOSPITAL EMERGENCY MANAGEMENT COMMITTEE

A Hospital Emergency Management Committee is responsible for oversight and preparedness at the facility level. This committee implements operational aspects of the Emergency Operations Plan (e.g. drill planning, planning and response documentation, developing and maintaining inventory of facilities assets, etc.), and ensure the Joint Commission Standards are followed. The TMD/TNC/TPM should play an active role in helping ensure that all trauma patients are taken care of to the best of the facilities' capabilities and tie into the regional coordination process.

COORDINATION:

Generally, preparedness activities are coordinated and accomplished at the facility, and the regional level. Each Hospital should have a Facility Emergency Management Committee that meets and is responsible for oversight and preparedness at the facility level. In addition, community planning and participation is accomplished by high level participation by TMD / TC / TPM / EM coordinator at the EMS and Hospital Disaster Group (EHDG), and its subcommittees. Participation and / or involvement with the hospital and STRAC subcommittee will insure that the TMD / TC / TPM meet the leadership role criteria.

EMS / HOSPITAL DISASTER GROUP

EHDG is a multi-disciplinary committee, which serves as the disaster committee for the Southwest Texas Regional Advisory Council (STRAC). This group is responsible for the coordination of emergency management preparedness, activities, and response for its 22 county region, the oversight of the Regional Medical Operations Center (RMOC), and the development of the HRSA/OASPR Bioterrorism Funds Distribution Plan. In addition, subcommittees have been created to address specific concerns that are regionally consistent and ensure that our region is more prepared, has coordinated / pre-planned response, and is interoperable across the region. EHDG has created a regional Memorandum of Understanding (MOU) that calls for standardization of items such as equipment, software, and communication to create a seamless system across the 22 county region.

RMOC

The RMOC Subcommittee is responsible for the coordination of hospital, prehospital (EMS), public health and other appropriate personnel prior to, during and following health and medical emergencies requiring a multidiscipline, multiagency response. Once activated, pre-identified liaisons report to the RMOC located within the City of San Antonio / Bexar County Emergency Operations Center (EOC).

STRAC provides an avenue for emergency management coordination throughout Trauma Service Area P (TSA-P). Upon activation, the RMOC assesses needs and coordinates activities of participants throughout the region while communicating with different levels of responding governmental authorities.

Trauma Education

There are numerous educational courses available for all members of your trauma team. Listed below are some, but not all, of the courses available to you and your trauma team:

CLASSES/COURSES/CERTIFICATIONS

ATLS – The Advanced Trauma Life Support® (ATLS®) program can teach you a systematic, concise approach to the care of a trauma patient. ATLS was developed by the American College of Surgeons (ACS) Committee on Trauma (COT) and was first introduced in the US and abroad in 1980. Its courses provide you with a safe and reliable method for immediate management of injured patients. The course teaches you how to assess a patient's condition, resuscitate and stabilize him or her, and determine if his or her needs exceed a facility's capacity. It also covers how to arrange for a patient's inter-hospital transfer and assure that optimum care is provided throughout the process. If you don't treat trauma patients frequently, an ATLS course provides an easy method to remember for evaluation and treatment of a trauma victim.
SOURCE: HTTPS://WWW.FACS.ORG/QUALITY-PROGRAMS/TRAUMA/ATLS

RTTDC – Developed by the Rural Trauma Committee of the American College of Surgeons Committee on Trauma, Rural Trauma Team Development Course is based on the concept that in most situations, rural facilities can form a trauma team consisting of at least three core members. During this course, participants will learn how to organize a rural trauma team with defined roles and responsibilities for the members, prepare a rural facility for the appropriate care of the injured patient, identify local resources and limitations, assess and resuscitate a trauma patient, initiate the transfer process early, establish a performance improvement process, encourage effective communication, define the relationship between the rural trauma facility and the regional trauma system. SOURCE: HTTPS://WWW.FACS.ORG/QUALITY-PROGRAMS/TRAUMA/EDUCATION/RTTDC

TCAR – Unlike standardized trauma programs targeted at prehospital and emergency care providers, the Trauma Care After Resuscitation (TCAR) course was specifically created to meet the learning needs of INPATIENT trauma nurses. This live, 2-day educational offerings give hospital staff members the foundational, evidence-based information and critical thinking skills necessary to meet regulatory requirements and provide excellent care to this challenging patient population. SOURCE: HTTP://TCARPROGRAMS.ORG/TCAR-PROGRAM-DESCRIPTION/

PCAR – PCAR is the pediatric-specific version of the adult focused TCAR course, ideal for nurses who primarily or exclusively care for children. The PCAR course offers acute care, critical care, perioperative, and rehabilitation nurses the foundational, evidence-based information and critical thinking skills necessary to address the needs of the hospitalized, injured child. PCAR covers a wide range of pathophysiologic and nursing concepts and is designed to be a broad, core-level program, rather than an advanced or specialty-specific course. Although registered nurses are PCAR's target audience, the information contained in this program has proven useful to physical therapists, paramedics, social workers, dieticians, respiratory therapists, speech and occupational therapists, LVNs/LPNs, and others who interact with pediatric trauma inpatients.
SOURCE: HTTP://TCARPROGRAMS.ORG/PCAR-PROGRAM-DESCRIPTION/

TNCC – ENA developed The Trauma Nursing Core Course to establish a standardized body of trauma nursing knowledge and to improve the care of all trauma patients. TNCC, widely recognized as the premier course for hospitals and trauma centers worldwide, empowers nurses with the knowledge, critical thinking skills, and hands-on training to provide expert care for trauma patients.
SOURCE: HTTPS://WWW.ENA.ORG/EDUCATION/ENPC-TNCC/TNCC/PAGES/ABOUTCOURSE.ASPX

ATCN – Advanced Trauma Care for Nurses (ATCN) is an advanced course designed for the registered nurse interested in increasing his/her knowledge in management of the trauma patient with multiple injuries. The ATCN course is taught concurrently with ATLS and provides skill stations in initial assessment and management, airway and ventilatory management, pediatric trauma, hemorrhagic shock, musculoskeletal & spinal trauma, and head trauma. SOURCE: HTTP://WWW.ATCNNURSES.ORG/

TOPIC – The Society of Trauma Nurses Trauma Outcomes & Performance Improvement Course (TOPIC) is taught to all members of the trauma system team who participate in the ongoing assessment, evaluation and

improvement of trauma care. This course was developed in response to the need for education and better understanding of the Performance Improvement process in trauma care. TOPIC focuses on the ongoing assessment of the continuum of trauma care with a structured review of process and discussions of strategies to monitor trauma patient outcomes (TOPIC Courses, 2014). SOURCE: HTTP://WWW.TRAUMANURSES.ORG/TOPIC

ATPM – The ATS Trauma Program Manager Course, designed by expert Trauma Program Managers throughout the country, is a two-day, interactive course providing Trauma Program Managers, members of the trauma program, and those interested in joining the field with the core concepts of building a comprehensive trauma program. SOURCE: HTTP://WWW.AMTRAUMA.ORG/?PAGE=TPMCOURSE

AAAM – The course is designed for trauma nurses/ coordinators, registrars, physicians, hospital records personnel and researchers or engineers who are responsible for injury databases. Topics covered include: a brief history of injury scaling methods, the Abbreviated Injury Scale, uses, coding rules and conventions, and methods for assessing the multiply injury patient (AIS Coder Training, 2011)

ENPC – ENA developed the Emergency Nursing Pediatric Course to establish a standardized body of pediatric emergency nursing knowledge and to improve the care of all pediatric patients. Accurate assessment of a child with an acute illness or injury requires special knowledge and skills. ENPC gives nurses the tools to provide expert care for patients from birth to adolescence.
SOURCE: HTTPS://WWW.ENA.ORG/EDUCATION/ENPC-TNCC/ENPC/PAGES/ABOUTCOURSE.ASPX

PALS – Pediatric Advanced Life Support (PALS) is a classroom, video-based, Instructor-led course that uses a series of simulated pediatric emergencies to reinforce the important concepts of a systematic approach to pediatric assessment, basic life support, PALS treatment algorithms, effective resuscitation and team dynamics. The goal of the PALS Course is to improve the quality of care provided to seriously ill or injured children, resulting in improved outcomes.
SOURCE: HTTP://CPR.HEART.ORG/AHAECC/CPRANDECC/TRAINING/HEALTHCAREPROFESSIONAL/PEDIATRIC/UCM_476258_PALS.JSP

ACLS – The Advanced Cardiovascular Life Support course highlights the importance of high-performance team dynamics and communication, systems of care, recognition and intervention of cardiopulmonary arrest, immediate post-cardiac arrest, acute dysrhythmia, stroke, and acute coronary syndromes (ACS).
SOURCE:
HTTP://CPR.HEART.ORG/AHAECC/CPRANDECC/TRAINING/HEALTHCAREPROFESSIONAL/ADVANCEDCARDIOVASCULARLIFESUPPORTACLS/UCM_473186_ADVANCED-CARDIOVASCULAR-LIFE-SUPPORT-ACLS.JSP

TETAF Trauma Division, Data Management Course – This course is designed to improve the skill sets of the data entry specialist specific to data input, data abstraction, and statistical reporting, which are used to improve the state's emergency care system. SOURCE: HTTP://TETAF.ORG/EDUCATION/

CONFERENCES

STRAC Emergency Healthcare Systems Conference – The first STRAC Emergency Healthcare Systems Conference was put on in May 2014 at the Alamo dome in San Antonio, TX. This conference hosted several keynote speakers in four different realms of the emergency healthcare system: stroke, cardiac, disaster management, and trauma. Also provided were CE credits for medical providers, tours of the emergency operations center & regional medical operations center, and vendors on site (Emergency Healthcare Systems Conference Schedule, 2014).

Digital Innovations Users Conference – The annual Digital Innovations (DI) Users Conference provides information presentations and extension training opportunities for their users. In the trauma forum, the DI Collector program is used throughout most of the region to serve as the registry tool for our trauma patients. Topics covered at this conference include: ICD-10 coding, data validation, statistical reports, outcome data, and benchmark reports (DI Users Conference, n.d.).

Austin Trauma and Critical Care Conference – The conference offers basic and cutting edge guidelines and technology for evaluation, diagnosis and management of trauma patients. The curriculum is designed to enhance the knowledge and skills of physicians, nurses, allied health, and prehospital personnel caring for critically ill and injured patients in rural, urban and suburban hospitals (Austin Trauma and Critical Care Conference, n.d.).

Society of Trauma Nurses Annual Conference – This conference, put on by the Society of Trauma Nurses annually, helps to educate nurses and providers involved in the care of trauma patients and the management of trauma programs and trauma systems (17th Annual Conference, n.d.)

Trauma-Critical Care – This annual conference, put on by the Trauma & Critical Care Foundation, takes a leadership role in providing a continuing education venue for the complex operative and critical care surgical challenges, with major trauma continuing to be the epitome of such challenges. This program offers comprehensive continuing education in the treatment of critically ill and injured patients, stressing current basic and cutting edge guidelines and technology for evaluation, diagnosis and management. The course is designed to enhance the knowledge and skills of those caring for ill and injured patients in rural, urban and suburban hospitals (Trauma & Critical Care Conference, n.d.).

The American Association for the Surgery of Trauma – The annual meeting includes presentations of the latest studies from work dedicated to the advancement of clinical and scientific knowledge related to the care of the trauma patient (Program Information, n.d.).

Texas EMS Conference – The annual Texas EMS Conference, held in Fort Worth, provides comprehensive education from leaders in EMS, features state-of-the-art exhibits, and allows for great networking opportunities (Texas EMS, 2014)

Preparing for Trauma Designation Site Visit

OVERVIEW

The trauma designation process is a quality program aimed at assuring seriously injured patients receive the best care possible based on the resources available at a given hospital. This process requires the commitment and support of hospital administration, physicians, and allied health partners. For initial designations, at least one year should be allowed to prepare for a site visit, as designation requirements include a reporting period of at least six months.

The site reviewers will compare the components of your trauma program with those required for your chosen level of trauma designation. Refer to DSHS essential criteria for minimum standards. This section will focus on those hospitals undergoing site review by the DSHS.Trauma Program Managers/Coordinators from facilities seeking review by the American College of Surgeons are encouraged to contact the Trauma Program Managers from Level 1 facilities in your region.

Listed below are the steps involved in preparing for your hospital's site visit.

One year prior to the visit

1. Decide the level of designation for which your hospital will apply
    a. The level of designation is determined by the resources at your hospital. It has no bearing on the quality of care given. (See Level Definitions in this manual)
    b. Level 1 and Level 2 trauma centers are designated by the American College of Surgeons http://www.facs.org/trauma/verificationhosp.html
    c. Level III trauma centers can be designated by either the American College of Surgeons or the Texas Department of State Health Services. Most Level III centers in Texas are designated by the state. REFERENCE: TEXAS ADMINISTRATIVE CODE , TITLE 25, PART 1, CHAPTER 157, RULE §157.25.
    d. Level IV trauma centers are designated by the Texas Department of State Health Services.

Consider contacting the State Hospital Designation Coordinator early on to discuss your site visit and the level your hospital should consider for designation.

Consider contacting an experienced Trauma Program Manager/Coordinator at a hospital in your region or affiliated with your hospital system as a mentor through this process.

2. Complete the DSHS trauma application appropriate to your level that will be submitted by your facility to familiarize yourself with the materials needed to submit with the application
3. Assure all members of the trauma team have the required trauma education (refer to essential criteria)
4. Begin entering patients in the trauma registry. Patients are to be entered within 60 days of discharge from your hospital.
    a. Consider delegating trauma registry duties to someone else. Possibilities include medical records, QI department, ED or ICU staff nurse, etc. Assure proper training.
5. Look at injury prevention activities. The number of these will depend on the size of your facility and the number of resources you have. (See Injury Prevention Section of this manual).
6. Join your regional trauma advisory committee. Begin attending meetings.

Six months prior to the visit

7. Continue performance improvement activities
    a. Daily review of cases
    b. PI reviews at committee
    c. Getting to "Loop Closure" on identified issues
    d. Entering registry cases
8. Continue completing education requirements
    a. Common reason hospitals do not pass initial designation is failure to have all trauma team members current in educational requirements
9. Complete and submit the trauma application. You will designate your "reporting year" on this application. Have this timeframe end no sooner than 3 months prior to your visit so you have time to prepare all of your materials for the site reviewers

Three months prior to the visit

10. Work with state designation coordinator to correct any issues/gaps found in the application
11. Schedule your site visit (this will be done by the state hospital designation coordinator).
12. Reserve a room large enough to accommodate your hospital administrator, trauma medical director, three site reviewers, nursing administrator, and any others who may attend the meeting.
13. Block calendars on the above people. At a minimum your trauma medical director and hospital administrator need to be available for the site reviewers. The medical director should be available the entire day. The administrator during the exit interview at a minimum
14. Assure a room large enough to accommodate chart review for two site reviewers. Assure two people highly experienced in navigating the EMR are available (one for each reviewer).

One month prior to visit

15. Request letter of RAC participation from STRAC. Contact info@strac.org.
16. Pull charts for the site reviewers. Cases should be identified through the trauma registry and placed in the following categories:
    a. Deaths
    b. Trauma Team Activation Patients
    c. Transfers out
    d. Trauma admissions
    e. Trauma patients admitted by non-surgeon (Level III centers)

    A record should not be in more than one category. For example, if you have a patient death that was admitted by a non-surgeon it would go in the death pile only.
17. For each case – print the following:
    a. ED record (trauma flow sheet if used)
    b. Ambulance record
    c. ED provider note
    d. Surgeon note (Level III only)
    e. All PI minutes, forms, etc. showing reviews for each record
18. Create a report to give the site reviewers about your trauma program. Power Point works well. Include the following information:
    a. Trauma volumes, deaths, transfers out, ED volumes.
    b. General information about your hospital (specialty services, catchment area, medical staff, etc.)
    c. Ambulance services
    d. Information on your Multidisciplinary Committee and Peer Review (who is on each, how often each committee meets, attendance requirements, etc.)
    e. PI process – how issues are identified, how they are reviewed, how loop closure is achieved
    f. Re-designation visit – How opportunities identified at last visit have been addressed.

One week prior to the visit

19. Assure all charts have been pulled and in order.
    a. Review each case. You will want to be familiar with them.
20. Assure one person who is experienced in navigating the EMR is available for each site reviewer the day of the review.
21. Assure no last minute meetings have been put on the trauma medical director's or administrators calendars.
22. Schedule something special just for you.
23. Schedule an after site visit "debriefing" for your trauma team. (Restaurant, party, etc.)

Day of visit

24. Greet site reviewers and state hospital designation coordinator at a mutually agreed upon location.
25. SHOW OFF YOUR PROGRAM!
    a. You have just spent a year preparing for this day. Show off what you have done!
26. The site reviewers will offer advice based on their experience as trauma providers. Listen to them. They are really there to help.
27. The tour of the hospital will follow the path of the patient. The reviewers will look at the ambulance bay, ED trauma bay, lab, radiology, OR, ICU, helipad. On the Minnesota Trauma System website look under site reviewers resources, then Tour checklist. Here you will see everything the reviewers need to find during the hospital tour. Much of this is equipment in the ED. (Look at Equipment section in this manual).
28. Expect at least two hours for chart review. You will be asked questions about the patients and/or PI. Having the PI sheets with the records will make everyone's job easier.
29. The hospital designation coordinator will go over your PI process. Be prepared to speak to how you review cases and bring things to loop closure.
30. The site reviewers will take about 30 minutes after chart reviews to summarize their findings. You will be given a time for the exit interview.
31. During the exit interview expect to hear strengths of your program and opportunities for improvement. Having administration present to hear about these opportunities directly from the site reviewers is powerful. Get them there!

After visit

32. Attend your "debriefing" session.
33. Take time off! Re-acquaint yourself with your family!
34. Pat yourself on the back for a job well done.
35. Update STRAC on your designation.

Time Management

PRIORITIES

- Performance Improvement program is near real time or concurrent
- Critical discussion of the care provided by the facility and the documentation of such review is descriptive and thorough
- Staying on top of trauma staff education expiration dates
- TPM/TC must establish a working relationship with TMD and all engage regularly for patient case review TMD needs to be the champion for your trauma program

MULTIPLE ROLES

Time dedicated to the trauma program may be divided between employees. Staffing should be adequate for hospitals trauma patient volume. The program's responsibility lies with the TPM / TC, however tasks may be assigned to other team members. Oversight should remain with the program manager. If multiple roles are performed, you will need to be able to demonstrate how time is divided.

Trauma Medical Directors

WORKING RELATIONSHIPS

The Trauma Program Manager (TPM) and the Trauma Medical Director (TMD) share the responsibility for the success of their trauma team. Like all partnerships, the TPM / TMD must support each other, share a common vision, establish a pool of common values and mutually respect each other and the members of their team.

They must be transparent in their pursuit of excellence. resilient in their discovery of failures and human behaviors, and fearless in their speaking of the truth. Even if reporting to a different hierarchy, both share the responsibility of pursuing optimal outcomes for the trauma patient.

The clear delineation of roles and responsibilities is crucial from the onset. Boundaries, timelines and working relationships need to be defined and discussed candidly. The logistics of accomplishing the work need to be honestly assessed and assigned. An important aspect of your relationship include establishing the best means of communication (phone, email, in person-meetings). Regardless of how you choose to communicate, transparency and confidentiality are key. Your TMD should be an ally, not the enemy. Never surprise them or ambush them in a meeting. Have difficult conversations in private. “The TMD has the difficult responsibility in holding the medical staff accountable for their performance as well as setting the tone for the trauma center.

EXECUTIVE SUMMARY

Administrative

- Participate in the research, development and implementation of trauma policies, protocols and practice guidelines.
- Organize, direct and integrate the trauma program with all other departments and services within the hospital.
- Promote a cooperative and collaborative working environment among the clinical disciplines involved in trauma care.
- Maintain an effective working relationship with the medical staff, trauma service staff, administration and other departments.
- Provide advice and direction in recommending privileges for the trauma service.
- Participate in trauma program marketing activities.
- Promote a process that fosters cost-effective, high quality patient care.
- Assesses need for equipment and supplies while maintaining budgetary restraints.
- Assist the Trauma Program Coordinator in developing and meeting the trauma program budgetary goals.

Program Responsibilities

- Lead efforts to develop and maintain a trauma center.
- Establish program goals and objectives consistent with those of the hospital Develop and provide input on the development and maintenance of practice guidelines, policies and methodologies for medical/surgical trauma care.
- Organize, direct and implement departmental practices to assure continued compliance with applicable laws including the guidelines established by the Statewide Trauma System and the Joint Commission.
- Demonstrate positive interpersonal relationship with colleagues, referral MDs, hospital personnel, and patients/families in order to achieve maximum operational effectiveness and customer satisfaction.
- Make appropriate referrals for specialty services and communicate regularly with referring physician as appropriate.
- Ensure that adequate attending physician availability is provided to render care to trauma patients.
- Ensure establishment of physician/surgeon call schedules for all trauma care, excluding those who do not meet educational and credentialing requirements.
- Provide trauma care leadership and consultation for emergency, surgery and intensive care unit departments.
- Participate in regional and statewide activities affecting the trauma program.

- Attend local and national meetings and conferences to remain current regarding issues relevant to the performance of duties.
- Demonstrate consistent, efficient, cost effective and quality trauma care at all times.
  - Participate in trauma patient/family satisfaction projects as developed by hospital.
  - TMD oversees the clinical practice of medical staff through performance improvement and credentialing

Performance Improvement

- Determine and implement PI activities appropriate to the trauma program.
- Oversee the trauma PI program and participate in other quality initiatives that deal with the care of injured patients.
- Review and investigate all trauma PI inquiries in collaboration with the Trauma Program Coordinator and refer to the appropriate committees.
- Monitor compliance with trauma treatment guidelines, policies and protocols.
- Assure that the quality and appropriateness of patient care are monitored and evaluated and that appropriate actions based on findings are taken on a consistent basis.
- Report quality of care issues promptly to appropriate individuals, including Trauma Program Coordinator and hospital administration.
- Identify and correct deficiencies in trauma care policies, guidelines and protocols.
- Consult with appropriate medical staff and administration regarding quality care issues and adverse outcomes; identify areas to improve patient care.
- Assure that continuum of care is maintained.
- Identify representatives from various disciplines appropriate to participate in PI activities.
- Coordinate, schedule and facilitate the PI peer review process.
- Chair the Morbidity and Mortality Committee meeting and the Multidisciplinary Trauma Conference.
- Review all trauma-related peer review and initiate action as necessary.
- Assist the Trauma Program Coordinator in evaluating the effectiveness of corrective actions resulting from PI processes.
- Assume responsibility for the accuracy and validity of trauma statistics.

Clinical Education

- Support the requirements for trauma CME by participating and assisting in the education and training of hospital personnel physicians and specialists.
- Provide education for hospital staff regarding trauma program policies and appropriate medical practices.

Community Outreach

- Maintain relations with community organization and legislative bodies whose activities relate to trauma care and injury prevention.
- Participate in hospital outreach activities.
- Develop and participate in trauma community education and injury prevention activities.
- Function as a liaison to other hospitals within the region.

Program Initiative

- Lead the hospital in program development.
- Improve outcomes through implementation of evidence based practice guidelines

Knowledge and Skill

- Communicate effectively with a wide variety of intra- and inter-facility staff and administration using both oral and written communication.
- Possess critical thinking, analytical, teaching/coaching and research skills
- Oversee, participate in and develop projects that ensure the cost-effectiveness of care provided by physicians and hospital."

Networking

- American College of Surgeons
- Local Level I Trauma Medical Director
- STRAC Acute Care Division Director
- Regional Trauma Program Managers
- Regional Trauma Coordinators
- Regional Trauma Medical Directors
- DSHS Regional Preparedness Representatives
- Texas EMS Trauma and Acute Care Foundation
- Governor's EMS and Trauma Advisory Council
- Texas Trauma Coordinators Forum

Equipment

HAVING THE PROPER EQUIPMENT IS A MUST

The essential equipment list is located appendix K) LVL III & IV Equipment Checklists and appendix L) Pediatric Injuries and Equipment Checklists. Even the essential checklist may not be all inclusive of the items needed. Keeping a copy of the equipment list should be kept in the Emergency Department to ensure all needed resources are available.

It is important to have the required equipment to treat trauma patients, but also make sure all staff is educated on when and how to use the equipment. This can be done by utilizing a nurse educator or by contacting the supplier of the equipment themselves. Many manufactures will come to your site and instruct staff of proper use of their equipment.

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