



MISSISSIPPI STATE DEPARTMENT OF HEALTH

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**FY 2018**

**Mississippi  
TRAUMA  
System of Care Plan**

**Developed by the:**  
Bureau of Acute Care Systems

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# Introduction

# Introduction

## Legal Authority and Purpose

Section § 41-3-15 of the Mississippi Code 1972 Annotated, as amended, provides the general powers, duties and authority of the State Board of Health and certain powers of the Mississippi State Department of Health. Included in this is the State Board of Health's powers and duties to formulate the policy of the State Department of Health regarding public health matters within the jurisdiction of the department; to adopt, modify, repeal and promulgate, after due notice and hearing, and enforce rules and regulations implementing or effectuating the powers and duties of the department under any and all statutes within the department's jurisdiction, and as the board may deem necessary; to apply for, receive, accept and expend any federal or state funds or contributions, gifts, trusts, devises, bequests, grants, endowments or funds from any other source or transfers of property of any kind; and to enter into, and to authorize the executive officer to execute contracts, grants and cooperative agreements with any federal or state agency or subdivision thereof, or any public or private institution located inside or outside the State of Mississippi, or any person, corporation or association in connection with carrying out the provisions of this chapter, if it finds those actions to be in the public interest and the contracts or agreements do not have a financial cost that exceeds the amounts appropriated for those purposes by the Legislature. The State Board of Health shall have the authority, in its discretion, to establish programs to promote the public health, to be administered by the State Department of Health. Specifically, those programs may include, but shall not be limited to, programs in the areas of chronic disease and other such public health programs and services as may be assigned to the State Board of Health by the Legislature or by executive order.

The system of care approach to public health provides a functional framework for making use of resources to optimize the care of patients. The intent is to address conditions that have a significant impact on mortality and morbidity. This functional framework generally includes: hospitals designated based on resources for the care of particular types of patients, destination guidelines for the transport of patients to the appropriate hospital via EMS, criteria for activation and utilization of hospital resources, data collection and data use for improving system performance. In terms of patient care the system of care framework promotes best practices for caring for patients.

Section 41-59-5 (5), Mississippi Code of 1972, as amended, establishes the Mississippi State Department of Health (MSDH) as the lead agency to develop a uniform, non-fragmented, inclusive state-wide Trauma Care system. The intent is to reduce mortality and improve morbidity associated with Trauma. To this end, the primary goal of the Mississippi Trauma Care System is to deliver the *right* patient to the *right* hospital the *first* time. Research shows that this approach decreases mortality. The Trauma Rules and Regulations adopted by the Board of Health provide standards in support of this primary goal of the Trauma System.

## System Introduction

Trauma is a national public health concern. It is the fourth leading cause of death in the United States. However, it is the leading cause of death for Americans between the ages of 1 – 44. There were 136,053 deaths from unintentional Trauma in 2014. The two leading causes of unintentional

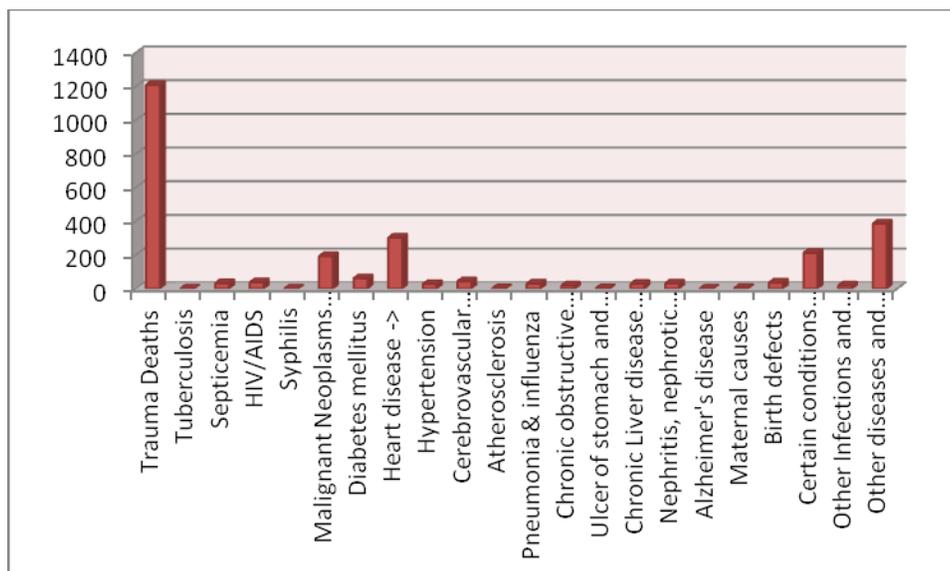
deaths were motor vehicle traffic deaths and fall deaths. While the majority of those who died as a result of motor vehicle traffic were between the ages of 1 – 44, the majority of those who died from falls were aged 65 and greater. The concern associated with Trauma is substantial and accounts for significant numbers of deaths each year in the population aged 1 – 44, as well as 65 and older. Elderly persons are less likely to be injured, but they are more likely to die from Traumatic injuries. Trauma is also the leading cause of disability across all age groups. Moreover, the costs associated with Trauma are substantial. Costs include money spent in trauma care, as well potential economic losses, i.e. lost work days or quality of life changes that altogether alter the patient’s ability to work. The average cost of caring for a single Trauma patient has been estimated at \$ 334,000. The total national economic impact of traumatic brain injuries alone has been estimated at \$76.5 billion dollars.

The public health community often refers to Trauma as a *surgical disease*. Indeed, patients who sustain Traumatic injury require specialized care, including resuscitation and surgery. The probability for a successful outcome associated with significant trauma is increased when the trauma patient receives initial resuscitation and surgery in a timely manner. Based on national standards, this is facilitated by the designation of appropriate of trauma centers, the use of EMS field destination guidelines and the use of hospital activation criteria. Trauma center designation ensures that hospitals have the resources to provide definitive care for specific types of traumatic injuries. EMS field destination guidelines provide a mechanism for triaging patients for transport to the most appropriate trauma center. Trauma activation criteria categorize patients according to neurological and hemodynamic status, anatomical injury and mechanism of injury and guide the decision making process for activating the hospital trauma team based on injury severity.

### Mississippi Facts

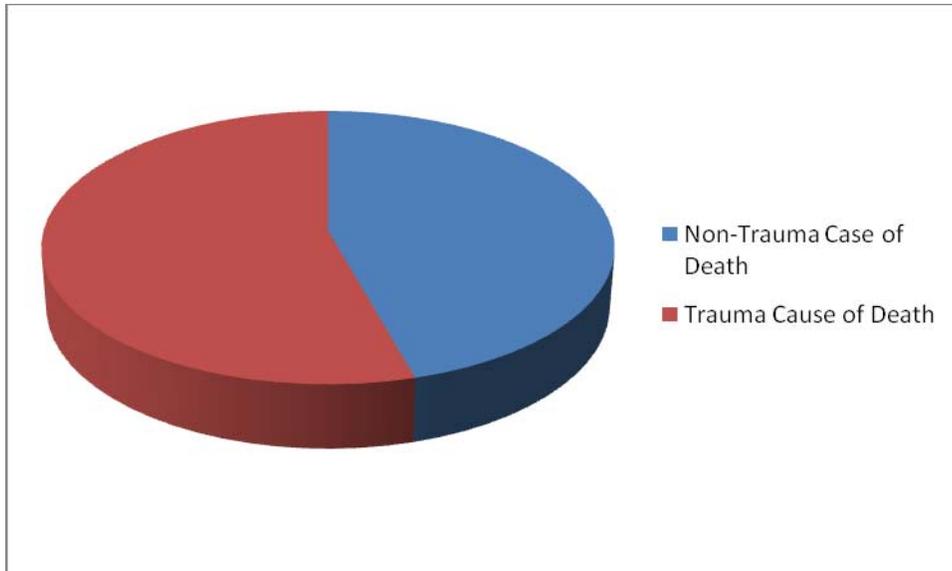
Trauma remains the leading cause of death for Mississippians age 1 to 44. Trauma accounted for the cause of 45% of all deaths in patients 1 to 44 in Calendar Year 2015.

**Figure 1: Mississippi Deaths by Category, Ages 1 -44, 2015**



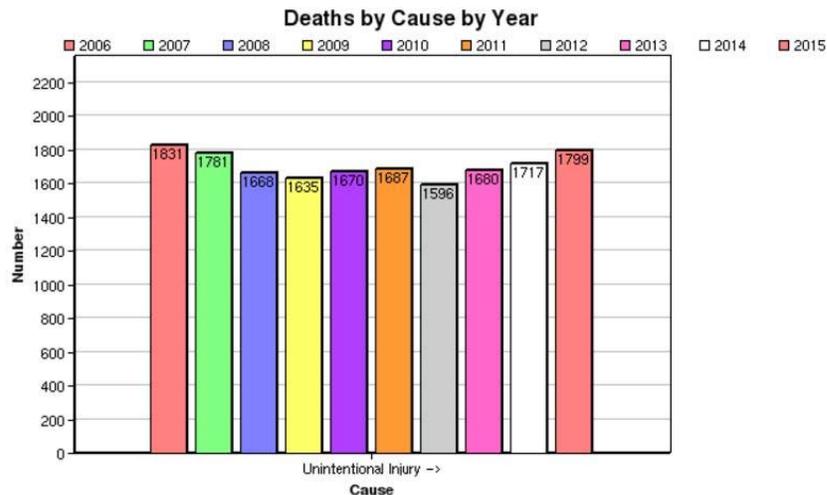
Mississippi's children are particularly vulnerable to the effects of traumatic injury. Trauma accounted for 54% of deaths in the pediatric population ages 5 – 14 in CY 2015.

**Figure 2: Mississippi Pediatric Deaths, Ages 5 – 14, CY 2015**



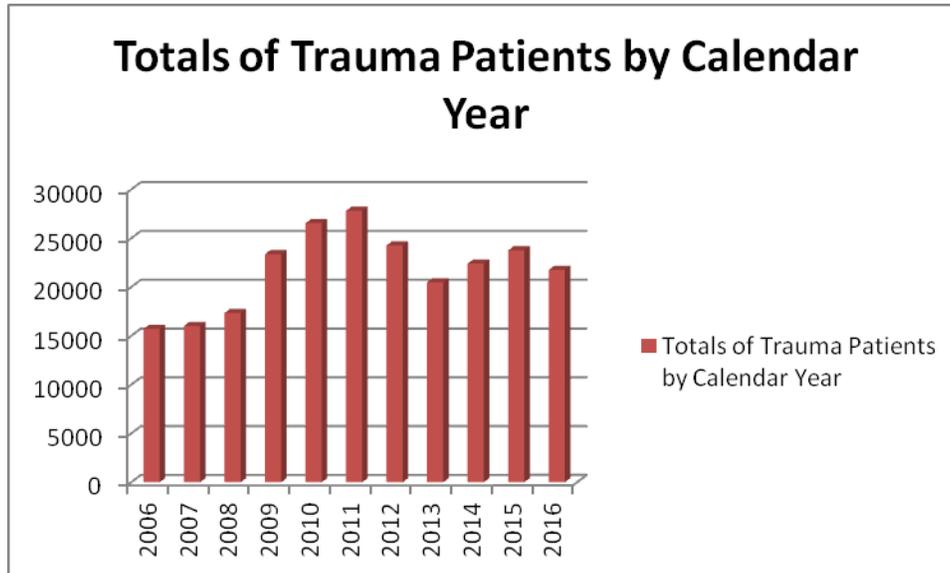
Mississippi ranks 4<sup>th</sup> in the nation for unintentional injury deaths. However, this number has declined with the continued development of the Trauma system since 2006.

**Figure 3: Mississippi Deaths from Unintentional Injury, 2006 – 2015**



The following chart represents total patients who sustained injuries sufficient to enter them in the trauma registry between 2006 and 2016. From 2006 to 2016 there was a total 239,395 trauma patients entered into the statewide trauma registry.

**Figure 4: Totals of Trauma Patients by Calendar Year, 2006 – 2016**



2006	15706
2007	16012
2008	17330
2009	23367
2010	26539
2011	27810
2012	24262
2013	20468
2014	22396
2015	23755
2016	21750
TOTAL	239395

### **Chronology of TRAUMA Care in Mississippi**

The State of Mississippi began development of a state-wide Trauma system in 1991. The Mississippi Legislature charged the Mississippi State Department of Health with the responsibility for oversight of Trauma system development. Since that time, the State Board of Health has adopted a Trauma system-of-care plan, established seven Trauma care regions, designated qualifying hospitals as Trauma centers, maintained a state-wide Trauma registry, and distributed funding to Trauma regions, Trauma centers, physicians, and EMS providers.

The Trauma Care Trust Fund was initiated by the Legislature in 1998. The intent was to fund Trauma care by placing fees and fines on high risk activities and behaviors. Thus, the legislature authorized the collection of fees associated with the purchase of ATVs and a portion of the fines associated with moving violations to fund the Trauma Care Trust Fund. The following year the Legislature added \$ 6,000,000 to the trust fund. In 2005 the Legislature authorized a \$5 increase per moving violation for the trust fund.

The Mississippi Legislature passed House Bill 1405 during the 2007 Regular Session. The intent was to revitalize and increase funding to the Mississippi Trauma System of Care. To this end, the bill moved the Trauma system from a voluntary system with indigent care reimbursement to a mandatory system with block grant funding based on participation, the first Trauma system of its type in the United States.

The Mississippi Legislature passed Senate Bill 2362 in 2016. This bill redirected part of the funding to be collected for the Trauma Care Trust Fund in fiscal year 2017 to the State General Fund. The bill specifically redirected fines associated with moving violations to State General Fund. However, fees collected from the purchase of ATVs continued to go directly into the Trauma Care Trust Fund in fiscal year 2017.

The Mississippi Legislature passed House Bill 1511 in the 2017 Regular Session. This bill restored up to \$7,023,197 of fees collected from moving violations to the Trauma system, but it reduced the amount the Legislature authorized the Mississippi State Department of Health to spend on Trauma from \$ 40,000,000 to \$ 20,000,000. Based on previous years' collections, this equated to an actual cut of more than \$ 2,000,000 for the Trauma system for FY 2018.

Despite recent cuts Mississippi remains one of only eight states in the country that provides significant financial support to their respective state Trauma systems.

# **Mississippi TRAUMA System of Care Plan**

## **Mississippi Trauma System of Care Plan**

This Plan outlines the statewide system for the care of trauma victims in Mississippi. The Plan provides for a mandatory system of care that is inclusive, matching appropriate resources and responses to the needs of patients. The Plan provides a mechanism for enhancing community health through organized systems of injury prevention, acute care, and rehabilitation that is fully integrated with the statewide public health system. Using this plan the system will possess the ability to identify risk factors and related interventions, to prevent injuries in a community, and maximize the delivery of appropriate resources for patients who need acute trauma care. The trauma care system will address the daily demands of trauma and form the basis for disaster preparedness. The resources required for each component of the trauma care system will be clearly identified, deployed, and assessed to ensure that all patients have access to the appropriate level of care in a coordinated and cost-effective manner.

### **Vision**

The Mississippi Trauma System of Care Plan when fully implemented throughout Mississippi will result in decreased mortality and morbidity from trauma events.

### **Plan Goals**

- To develop and promote awareness of the Mississippi Trauma System of Care
- To designate all Mississippi-licensed acute care hospitals as trauma centers at the appropriate level based on resources
- To ensure traumatically injured patients are transported to the most appropriate trauma center
- To ensure that trauma centers make appropriate use of activation criteria for the timely delivery of trauma care services
- To coordinate with other systems of care and inter-agency emergency preparedness programs as it relates to trauma care services

### **Trauma System Design**

The Trauma System of Care is comprised of a number of separate components which are organized and work together. The individual components and elements are described below:

- Pre-Hospital Component – EMS is a critical part of the trauma system. All EMTs and Paramedics should have a basic knowledge and awareness of system elements and function. Specifically, this knowledge refers to injury criteria, triage and destination guidelines, and communication procedures. On-line and off-line medical control physicians will also need to be aware of system elements and function.

- Hospital Component:
  - Participation in the Mississippi Trauma Care System is required by statute and regulation. Hospitals must participate at their assessed capability (conducted annually) or must pay a non-participation fee. This process is known by the phrase: “Play or Pay.”
  - The decision to participate in the trauma system must be made jointly by the hospital administration and medical staff. A written commitment in the form of a resolution passed by the appropriate quorum of the governing authority of the hospital, and co-signed by the director of the medical staff, signifies the facility’s desire to participate in the system.
  - The Mississippi State Department of Health, through the Bureau of Acute Care Systems, designates participating hospitals at one of four levels.
    - Level I Trauma Centers are comprehensive facilities, capable of treating the entire range of traumatic injuries.
    - Level II Trauma Centers have generally the same clinical services as a Level I facility, but lack the surgical residency and research capability.
    - Level III Trauma Centers can resuscitate and treat the majority of trauma injuries, but lack dedicated neurosurgical services.
    - Level IV Trauma Centers are stabilization and transfer facilities.
    - Refer to Appendix A for a detailed listing of clinical requirements.
    - Every hospital designated as an adult Trauma Center is concurrently designated as a Primary Pediatric Trauma Center. Level II or III Trauma Centers may apply for designation as Secondary Pediatric Trauma Center. Level I Trauma Centers and dedicated pediatric hospitals may apply to be a Tertiary Pediatric Trauma Center.
- Regional Component:
  - The concept of an inclusive trauma care system supports the regionalization of trauma care, each region having unique demographics and resources. The state is divided into seven (7) Trauma Care Regions.
  - Refer to Appendix B for a map of the regions.
  - Each region establishes a Board of Directors that acts as the administrative body of that region. Region administration is accomplished by the development of a regional trauma care plan. Once approved and included in the state Trauma System of Care Plan, the regional trauma plans are binding on all EMS providers and designated Trauma Centers within the respective region.
  - The Department executes a yearly contract with each Trauma Care Region. Through this contract, the regions execute the administration of

the region, including: disbursement of Trauma Care Trust Fund distributions to Trauma Centers and EMS providers; assisting Trauma Centers with initial and renewal applications; and regional Performance Improvement processes.

- Communication Component – Communications are critical to the function of the Trauma Care System. Communications provide:
  - essential knowledge of the overall status of pre-hospital activities and hospital resource availability on a continual basis
  - access to system organization and function protocols whenever such information is requested by pre-hospital or hospital-based personnel
  - collection of uniform system-wide data for PI activities and development of a state-wide trauma registry
- Performance Improvement (PI) Component – This component is essential to the Trauma Care System to document continuing function and allows the implementation of improvements in a system where patients may not have the ability to make their own personal care choices, and depend on the system for appropriateness of care. The efficacy of the initial care in trauma patients plays a pivotal role in determining outcomes. Therefore, there is a requirement to evaluate the system on a continual basis to determine the effectiveness of trauma care and system performance.
  - This component uses the state Trauma Registry in order to review trauma care from initial medical contact through rehabilitation services (Refer to Appendix E). By reviewing all levels of care and outcomes, the registry provides information for use in determining and developing treatment protocols, education programs, and provides information for potential research studies.
  - The Performance Improvement (PI) process involves specific steps at each level of care within the system. System-wide evaluation will be the responsibility of the Trauma Sub-committee of the State PI Committee. In hospitals, a multi-disciplinary peer review process must occur and must include both medical care and Trauma Center function. Pre-hospital evaluation will normally be conducted by the EMS provider and the Trauma Region. Refer to Appendix C for additional information on the PI Program.
- Mississippi Trauma Advisory Committee (MTAC) – MTAC is a designated committee of the Emergency Medical Services Advisory Council (EMSAC), which is established by statute; each member is a gubernatorial appointee. MTAC will advise the Bureau of Acute Care Systems on the continued development of the Trauma System. Refer to Appendix D for additional information on MTAC.

## **Trauma System Function**

General function of the system will follow the scenario of:

- Trauma event occurs; 9-1-1 is called.
- Field triage is conducted by EMS personnel, who determine if the patient meets system activation criteria based on established activation criteria and destination guidelines (refer to Appendix F). When a patient meets activation criteria, EMS priorities are early notification and transport to the most appropriate Trauma Center based on the patient's condition.
- In an ideal situation, if assistance with patient designation is needed, EMS will contact Medical Control who will use a Trauma Center resource tracking tool (State Medical Asset Resource Tracking Tool [SMARTT] or similar program) along with patient location to determine the appropriate destination for the patient based on an established criteria.
- EMS will establish contact with the destination Trauma Center to give advanced notification.
- Patient is transported to the Trauma Center, which initiates their response protocol based on activation criteria.
- If the patient is transported by private vehicle to a Trauma Center, the patient will be rapidly triaged by the Emergency Room staff and initiated into the trauma activation response protocol.
- If a higher level of care is needed, the patient is transferred to a Level I or II Trauma Center, or other specialty facility, based on the patient's injury and capability of the receiving facility to definitively treat the condition.

## **Trauma System Operations**

System operations refer to the activities that occur after it is determined that a patient meets system entry criteria and communications have been established within the system.

- Pre-hospital Activities
  - Pre-hospital care will be carried out in compliance with the Mississippi Model Protocols and the EMS provider's Medical Control Plan.
  - Trauma patients are best served by rapid transport to the most appropriate facility. Field time should be kept to a minimum; however, pre-hospital care should not be sacrificed for less time on scene.
- Hospital Operations
  - Trauma care requires adequate resources (equipment and facilities) and personnel with training and commitment to carry out rapid initial assessment, stabilization, and initial care.

- Hospitals will be classified into one of four levels of care based on resources available as outlined in Appendix A.
- Initial hospital destination will be determined by the closest available hospital appropriate to the patient's level of care (refer to Appendix F). Hospital status may be determined by using the SMARTT resource tracking tool. For simplicity, hospitals may be assigned status based on pre-determined levels of care.
- In the event a patient or family member requests transport to a specific facility that does not meet system destination guidelines, EMS and/or Medical Control will make a reasonable effort to convince the patient/family member of the proper destination.
- If the patient is unstable (inadequate spontaneous ventilations without a secured airway or in cardiac arrest), the patient should be transported to the nearest hospital, regardless of trauma center level (a secured airway includes any airway device that allows adequate ventilation and oxygenation).
- Inter-facility transfers – In the event a trauma patient is received by a hospital without current capacity or appropriate resources for the patient, the patient should be transferred to a Level I or II Trauma Center. Any hospital designated as a Level I or II Trauma Center agrees to accept inter-facility transfers upon request by a transferring hospital regardless of the patient's race, sex, creed, or ability to pay.

## **Trauma System Finance**

The Mississippi State Legislature passed HB 966 in 1998. The bill established the Trauma Care Trust Fund (TCTF). Initially, funded with \$ 6,000,000 from the tobacco expendable fund and an assessment placed on fines collected from moving violations, the TCTF has historically funded statewide system administration and development, regional administration and hospital/physician uncompensated trauma care services. In 2008, the Legislature increased assessments placed on fines collected from moving violations and added point-of-sales fees for ATVs and motorcycles as funding sources for the TCTF. This same year the distribution formula for the TCTF was changed from the uncompensated trauma services model to a model based on trauma center designation and performance. The first distribution using the new model was made in November 2009.

The Legislature passed Senate Bill 2362 in 2016. This bill redirected part of the funding to be collected for the TCTF in fiscal year 2017 to the State General Fund. The bill specifically redirected fines associated with moving violations to State General Fund. However, fees collected from the purchase of ATVs and motorcycles continued to go directly into the TCTF in fiscal year 2017.

The Legislature passed House Bill 1511 in the 2017 Regular Session. This bill restored up to \$7,023,197 of fees collected from moving violations to the Trauma system, but it reduced the amount the Legislature authorized the Mississippi State Department of Health to spend on Trauma

from \$ 40,000,000 to \$ 20,000,000. Based on previous years' collections, this equated to an actual cut of more than \$ 2,000,000 for the Trauma system.

## Appendix A: Trauma Center Standards

### Level I - Tertiary acute care facility

- The following services must be available 24/7:
  - Fully equipped Emergency Department with emergency physician in-house. Physician and/or mid-level provider must be in the trauma resuscitation area upon patient arrival.
  - Trauma/General Surgery in-house.
  - Orthopedic Surgery on call. Must respond within 60 minutes of time notified to respond.
  - Neurosurgery on call. Must respond within 30 minutes of time notified to respond.
  - Anesthesia in-house.
  - Surgical suites staffed and available.
  - Intensive Care Unit with critical care physician in-house.
  - Respiratory therapy service in-house.
  - Radiologic and diagnostic imaging in-house.
  - Clinical laboratory services in-house.
- Additional requirements:
  - Complete rehabilitation services.
  - Surgical residency program in at least one of the following: Emergency Medicine, General Surgery, Orthopedic Surgery, or Neurosurgery.
  - Trauma research program.

### Level II - Acute care facility with resources to provide sophisticated trauma care

- The following services must be available 24/7:
  - Fully equipped Emergency Department with emergency physician in-house. Physician and/or mid-level provider must be in the trauma resuscitation area upon patient arrival.
  - Trauma/General Surgery on call. Must respond within 30 minutes of patient arrival or EMS notification, whichever is shorter.
  - Orthopedic Surgery on call. Must respond within 60 minutes of time notified to respond.
  - Neurosurgery on call. Must respond within 30 minutes of time notified to respond.
  - Anesthesia in-house.
  - Surgical suites available. Staff on call must respond within 30 minutes of time notified to respond.
  - Intensive Care Unit with critical care physician available.
  - Respiratory therapy service in-house.
  - Radiologic and diagnostic imaging in-house.
  - Clinical laboratory services in-house.
- Additional requirements:
  - Complete rehabilitation services.
  - Injury prevention and community outreach programs.

### Level III - Acute care facility with resources to provide initial resuscitation of the trauma patient

- The following services must be available 24/7:
  - Fully equipped Emergency Department with emergency physician in-house. Physician and/or mid-level provider must be in the trauma resuscitation area upon patient arrival.
  - Trauma/General Surgery on call. Must respond within 30 minutes of patient arrival or EMS notification, whichever is shorter.
  - Orthopedic Surgery on call. Must respond within 60 minutes of time notified to respond.
  - Anesthesia on call. Must respond within 30 minutes of time notified to respond.
  - Surgical suites available. Staff on call must respond within 30 minutes of time notified to respond.
  - Intensive Care Unit with physician in-house.
  - Respiratory therapy service in-house.
  - Radiologic and diagnostic imaging in-house.
  - Clinical laboratory services in-house.
- Additional requirements:
  - Rehabilitation services available.
  - Injury prevention and community outreach programs.

### Level IV - Acute care facility with limited resources to stabilize and transfer the trauma patient.

- Emergency Department with emergency physician or mid-level provider in-house 24/7. Physician and/or mid-level provider must be in the trauma resuscitation area upon patient arrival.
- Transfer guidelines to ensure the most expedient, safe transfer of the patient.
- May be bypassed in accordance with this plan or Destination Guidelines (Appendix E).



## Appendix C: Performance Improvement (PI)

Performance Improvement is a vital part of the Trauma Care System. It is used to document continuing proper function of the system and evaluation of that function to implement improvements in system operation and patient management. In a trauma system, patients have virtually no time or ability to make specific choices regarding medical care. Therefore, the system has a moral obligation to perform evaluation functions to assure that the highest level of care is being provided, and that improvements are implemented whenever possible in a timely manner.

The PI program will be system-wide. Each region, participating hospital, and EMS provider is required to participate in the PI process. The appropriateness, quality, and quantity of all activities of the Trauma System of Care must be continuously evaluated.

- The Trauma Performance Improvement Sub-committee of the State PI Committee will be responsible for the PI oversight of the Trauma Care System.
  - The PI Sub-committee will be chaired by the state Trauma System of Care Medical Director.
  - Additional members shall include, but may not be limited to, representatives from the following areas:
    - Emergency Medicine
    - State EMS PI Committee
    - Trauma Registry Committee
    - One representative from each Trauma Care Region
    - Nursing representative from each Trauma Center level
    - Tertiary Pediatric Trauma Center
    - Trauma Medical Directors from each Level I Trauma Center
  - Specific system-wide performance measures will be established by the Sub-committee.
- Each Trauma Care Region will appoint a multi-disciplinary committee for the implementation of performance improvement activities in the region. The regional PI committee may wish to establish various sub-committees by specialty, i.e., EMS, clinical, or may choose to take on the task of system monitoring and evaluation at the committee level. Regardless of the configuration, the regional PI committee should include representation from each trauma center (physician and trauma program manager), EMS including 9-1-1 dispatch, non-trauma hospitals, county medical examiner/coroner, and air medical service (as appropriate). Membership should be established with specified terms of appointment and the chairman (a physician actively involved in the Trauma program), should be appointed.
  - The regional trauma PI committee is responsible for analyzing region-specific trauma data to assess the effectiveness of the regional trauma system in reducing unnecessary death, disability, and cost.
  - In addition, the committee is responsible for addressing regional system issues or concerns and monitoring the availability and use of resources (hospital bypass or service diverts, air ambulance, inter-hospital transfers and transport).
  - Another key aspect of regional PI is the review of mortality cases to determine preventability rates, practice variation, and see improvement opportunities.
- Trauma centers at all levels are expected to develop a clearly defined PI program. The structure for trauma performance improvement can be organized in a number of ways depending on the hospital's level of designation, size of medical staff, availability of staff resources, and service volume. In most Level I-III trauma centers, PI review is performed by a multi-disciplinary trauma committee representing all phases of care provided to the injured patient, including pre-hospital and air medical. In a Level IV trauma facility, the PI committee may be comprised of emergency medicine or primary care physicians who staff the emergency department (ED), as well as the trauma nurse coordinator/manager, floor nurses, and EMS personnel.
- Pre-hospital trauma performance improvement may occur under any number of venues and is inclusive of first response agencies, ground EMS, and aero-medical EMS. The first level of PI is at the local Licensed Ambulance Service, whose PI committee should be comprised of providers, management, and other pertinent personnel, as directed by the service's Off-Line Medical Director. The primary focus of this level of PI is to identify variations in clinical treatment and occurs primarily through the service's normal PI processes (e.g., retrospective chart audits).

In general, the following processes should be performed by each organization, at either the regional or local level. The results of these reviews will be reported to the PI Sub-committee.

- Each organization assigns a PI person to oversee the process,
- Determine audit filters,
- Collect data,
- Evaluate data,
- Determine system-of-care issues present,
- Develop corrective action plan (CAP),
- Re-evaluate to document results/effectiveness of CAP.

Specific items for evaluation:

- Pre-hospital:

- Quality measures regarding response times (time to dispatch, EMS response, on-scene time, and total transport time)
- Accuracy of patient assessment
- Transport protocol adherence
- Procedures initiated/completed
- Medical control interaction
- Transport mode (air/ground)
- Record/documentation
- Inter-facility care/transport safety
- Hospital:
  - Protocol adherence
  - Outcome review
    - Complications
    - Deaths
  - Achievement of time sensitive goals
- Regional system:
  - Communications/notifications
  - Triage
  - Protocol adherence

#### **Appendix D: Mississippi Trauma Advisory Committee (MTAC)**

The Mississippi Trauma Advisory Committee (MTAC) acts as the advisory body for the Trauma System of Care and provides technical support to the Department in areas of system design, standards, data collection, system funding, and evaluation of the trauma care system.

MTAC is a committee of the Emergency Medical Services Advisory Council (EMSAC), whose members are appointed by the Governor for a term of four years:

- A physician nominated by the Mississippi Trauma Committee of the American College of Surgeons;
- An emergency physician nominated by the Mississippi State Medical Association;
- An emergency nurse nominated by the Mississippi Nurses Association;
- Two hospital administrators nominated by the Mississippi Hospital Association;
- Two operators of ambulance services;
- Three officials of county or municipal government;
- A physician nominated by the Mississippi Chapter of the American College of Emergency Physicians;
- A representative from each designated Trauma Care Region;
- A nurse nominated by the Mississippi Emergency Nurses Association;
- An Emergency Medical Technician-Paramedic;
- A representative of the Mississippi Department of Rehabilitation Services;
- A person who has been a recipient of trauma care in Mississippi, or who has an immediate family member who has been a recipient of trauma care in Mississippi;
- A neurosurgeon nominated by the Mississippi State Medical Association;
- A physician with trauma certification/experience nominated by the Mississippi Medical and Surgical Association;
- A representative from the Mississippi Firefighters Memorial Burn Association; and
- A representative from the Mississippians for Emergency Medical Services nominated by the association's governing body.

Mississippi Trauma Advisory Committee members are appointed by the Emergency Medical Services Advisory Council. The MTAC will meet quarterly or as required. Meetings of the MTAC may be independent or may be combined with other advisory committees, such as EMSAC.

## Appendix E – State Trauma Registry

As a condition of hospital licensure, all acute care hospitals with an organized emergency service or department must submit trauma patient information to the State Trauma Registry.

There are four objectives of the Trauma Registry:

- Performance Improvement,
- Enhanced hospital operations,
- Injury prevention, and
- Supporting medical research.

If the registry is utilized appropriately, performance improvement can be done in a much more efficient manner than if done manually. Secondly, the registry can help in managing resource allocation and utilization through daily logs and summaries. Hospitals can use data from the registry to identify areas with the highest incidence of trauma and target those areas for injury prevention programs. Injury control issues can be identified at the local, regional, and state levels, thereby providing the basis for developing and implementing injury prevention programs statewide. Finally, standardization of the data allows quality data to be disseminated and used in clinical research and decision making.

The state registry system is designed primarily to collect data on only those patients with serious injuries. It is also designed to identify system issues, such as over and under triage, at the regional and state levels. In order to track these patients effectively, the Department has identified criteria for a patient to be included in the registry. Facilities must include, as a minimum, all patients that meet these criteria:

### **All state designated patients must have a primary**

#### **Trauma**

ICD-10 Code:

- S00-S99 with 7th character modifiers of A, B, or C only (Injuries to specific body parts-initial encounter)
- T07 (unspecified multiple injuries)
- T14 (injury of unspecified body region)
- T79.A1-T79A9 with 7th character modifier of A only (traumatic compartment syndrome-initial encounter)

#### **Burn Patients**

ICD-10 Code:

- T20-T28 with 7th character modifier of A only (Burns by specific body parts-initial encounter)
- T30-T32 (burn by TBSA percentages)

Including:

Any inhalation injury  
2nd or 3rd degree burns > 5% TBSA

Any 2nd or 3rd degree burn of 1% or greater to: Hands, Feet, Joints, Face, or Perineum

**Plus any of the following: (except burn patients)**

- Transferred between acute care facilities by EMS Ground or Air
- Admission to the Hospital for any LOS
  - Excludes ED>OR>Home (from PACU)
- Died
- Triaged to a Trauma Hospital by EMS
- Trauma Team Activation
- Any Trauma Patient received via Air Ambulance

**The following should be excluded:**

- Late Effects (>= 30 days PTA)
- Foreign Bodies
- Extremities and/or hip fractures from same height fall in patients over age of 70.

Appendix F: Consolidated Trauma Activation Criteria and Destination Guidelines

