Title 15 - Mississippi Department of Health

Part III – Office of Health Protection

Subpart 32 – EMS-Trauma

Chapter 01 THE MISSISSIPPI TRAUMA CARE SYSTEM

100. GENERAL INFORMATION

100.01 Purpose

In 1998, the Mississippi Legislature amended the Emergency Medical Services Act of 1974 to create a statewide inclusive trauma care system. Miss. Code Ann. 41-59-1, et seq. These statutes authorize and direct the Mississippi State Board of Health to develop, create regulations for, and administer a uniform statewide trauma care system through the Mississippi State Department of Health, Emergency Medical Services, acting as the lead agency.

The Mississippi Legislature, in its 2008 Regular Session, amended the Emergency Medical Services Act of 1974, requiring the Department to develop regulations specifying methods of participating making the system no longer voluntary but a requirement of licensed acute care hospitals. Miss. Code Ann. §63-13-11(as amended) mandates that the department shall promulgate regulations specifying the methods and procedures by which Mississippi-licensed acute care facilities shall participate in the statewide trauma system.

Accordingly, the Board adopts these regulations, to be known as "The Mississippi Trauma Care System Regulations" to address each component necessary for this development. These Regulations have been developed through a consensus process with the advice of nationally recognized trauma system consultants, the Mississippi Trauma Advisory Committee and staff of the Mississippi State Department of Health.

100.02 §41-59-7. Advisory council.

There is hereby created an emergency medical services advisory council to consist of the following eleven (11) members who shall be appointed by the Governor:

a. One (1) licensed physician to be appointed from a list of nominees presented by the Mississippi Trauma Committee, American College of Surgeons;

b. One (1) licensed physician to be appointed from a list of nominees who are actively engaged in rendering emergency medical services presented by the Mississippi State Medical Association;

c. One (1) registered nurse whose employer renders emergency medical services, to be appointed from a list of nominees presented by the Mississippi Nurses Association;

d. Two (2) hospital administrators who are employees of hospitals which provide emergency medical services, to be appointed from a list of nominees presented by the Mississippi Hospital Association;

e. Two (2) operators of ambulance services; and

f. Three (3) officials of county or municipal government;

g. One (1) licensed physician to be appointed from a list of nominees presented by the Mississippi Chapter of the American College of Emergency Physicians;

h. One (1) representative from each designated trauma care region, to be appointed from a list of nominees submitted by each region;

i. One (1) registered nurse to be appointed from a list of nominees presented buy the Mississippi Emergency Nurses Association;

j. One (1) EMT-Paramedic whose employers renders emergency medical services in a designated trauma care region;

k. One (1) representative from the Mississippi Department of Rehabilitative Services;

l. One (1) member who shall be a person who has been a recipient of trauma care in Mississippi or who has an immediate family member who had been a recipient of trauma care in Mississippi; and

m. One (1) licensed neurosurgeon to be appointed from a list of nominees presented by the Mississippi State Medical Association**,** and

n. One (1) licensed physician with certification or experience in trauma care to be appointed from a list of nominees presented by the Mississippi Medical and Surgical Association.

The terms of the advisory council members shall begin on July 1, 1974. Four (4) members shall be appointed for a term of two (2) years, three (3) members shall be appointed for a term of three (3) years, and three (3) members shall be appointed for a term of four (4) years. Thereafter, members shall be appointed for a term of four (4) years. The executive officer or his designated representative shall serve as ex officio chairman of the advisory council.

The advisory council shall meet at the call of the chairman at least annually. For attendance at such meetings, the members of the advisory council shall be reimbursed for their actual and necessary expenses including food, lodging and mileage as authorized by law, and they shall be paid per diem compensation authorized under Section 25-3-69.

The advisory council shall advise and make recommendations to the board regarding rules and regulations promulgated pursuant to this chapter.

There is created a committee of the Emergency Medical Services Advisory Council to be named the Mississippi Trauma Advisory Committee (hereinafter "MTAC"). This committee shall act as the advisory body for trauma care system development and provide technical support to the department in all areas of trauma care system design, trauma standards, data collection and evaluation, continuous quality improvement, trauma care system funding, and evaluation of the trauma care system and trauma care programs. The membership of the Mississippi Trauma Advisory Committee shall be comprised of Emergency Medical services Advisory Council members appointed by the chairman. Advisory council members may hold over and shall continue to serve until a replacement is named by the Governor.

SOURCES: Laws, 1974, ch. 507, § 4, 1983, ch. 522, § 37; 1986, ch. 363; Laws, 1998, ch. 429, § 3, eff from and after July 1, 1998.

Cross references -

Traveling expenses of state officers and employees, see § 25-3-41.

Advisory council's duties as to the administration of funds appropriated to the state board of health from the emergency medical services operating fund, see § 41-59-61.

Policy for Administration:

The Mississippi Trauma Advisory Council (MTAC) shall meet at least quarterly and report to the State Board of Health at its regularly scheduled quarterly meetings on the performance of trauma in the state.

100.03 Definitions

The following terms shall have the meanings set forth below, unless the context otherwise requires:

a. **Abbreviated Injury Scale (or "AIS") -** an anatomic severity scoring system.

b. **ACEP -** American College of Emergency Physicians.

c. **ACLS -** Association in Advanced Cardiac Life Support techniques.

d. **ACSCOT -** American College of Surgeons Committee on Trauma.

e. **ALS -** Advanced life support, including techniques of resuscitation, such as, intravenous access, and cardiac monitoring.

f. **Advanced Pediatric Life Support (APLS) -** a course jointly developed and sponsored by the American College of Emergency Physicians and the American Academy of Pediatrics which covers the knowledge and skills necessary for the initial management of pediatric emergencies, including trauma.

g. **Advanced Trauma Life Support (ATLS)** - a course developed and sponsored by the American College of Surgeons Committee on Trauma for physicians who cover trauma knowledge and skills.

h. **BLS** - Basic life support techniques of resuscitation, including simple airway maneuvers, administration of oxygen, and intravenous access.

i. **Board Certified** - Physicians and oral and maxillofacial surgeons certified by appropriate specialty boards recognized by the American Board of Medical Specialties and the Advisory Board of Osteopathic Specialties and the American Dental Association. See definition of Qualified Specialists.

j. **Basic Trauma Life Support (BTLS)** - a course for prehospital care providers sponsored by the American College of Emergency Physicians.

k. **Bypass (diversion)** - A medical protocol or medical order for the transport of an EMS patient past a normally used EMS receiving facility to a designated medical facility for the purpose for accessing more readily available or appropriate medical care.

l. **CCRN** - Critical Care Registered Nurse certification from the American Association of Critical Care Nurses.

m. **CEN** - Certified Emergency Nurse certification from the Board Certification of Emergency Nursing.

n. **Communications System** - A collection of individual communication networks, a transmission system, relay stations, and control and base stations capable of interconnection and interoperation that are designed to form an integral whole. The individual components must serve a common purpose, be technically compatible, employ common procedures, respond to control, and operate in unison.

o. **Co-morbidity** - Significant cardiac, respiratory, or metabolic diseases that stimulate the triage of injured patients to Trauma Centers.

p. **Catchment Area** - That geographic area served by a designated Trauma Care Region for the purpose of regional trauma care system planning, development and operations.

q. **Citizen Access** - the act of requesting emergency assistance for a specific event.

r. **Consolidated Omnibus Budget Reconciliation Act (COBRA)** - the federal A portion of this law commonly referred to as COBRA or OBRA details the requirements Medicare hospitals must meet in providing screening examinations for individuals presenting at the emergency department, and the requirements that must be met prior to transferring a patient in an unstable medical condition or who is pregnant and having contractions.

s. **Department** - the Mississippi State Department of Health, Division of Emergency Medical Services.

t. **Designation** - formal recognition of hospitals by the department as providers of specialized services to meet the needs of the severely injured patient; usually involves a contractual relationship and is based on adherence to standards.

u. **Disaster** - any occurrence that causes damage, ecological destruction, loss of human lives, or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community area.

v. **Dispatch** - coordination of emergency resources in response to a specific event.

w. **Diversion** - see "Bypass."

x. **Emergency Department (or "emergency room")** - the area of a licensed general acute care hospital that customarily receives patients in need of emergency medical evaluation and/or care.

y. **EMS - Emergency Medical Services**- the arrangement of personnel, facilities, and equipment for the effective and coordinated delivery of emergency care required to prevent and manage incidents that occur from a medical emergency or from an accident, natural disaster, or similar situation.

z. **Emergency Medical Services for Children (EMS-C)** - an arrangement of personnel, facilities and equipment for the effective and coordinated delivery of emergency health services to infants and children that is fully integrated within the emergency medical system of which it is a part.

aa. **EMT-P** - Emergency medical technician- paramedic, an individual who is trained to provide emergency medical services and is certified as such by the local authorities in accordance with the current national standard.

bb. **ENA** - Emergency Nurses Association.

cc. **Field Categorization (classification)** - a medical emergency classification procedure for patients that is applicable under conditions encountered at the site of a medical emergency.

dd. **Field Triage** - Classification of patients according to medical need at the scene of an injury or onset of an illness.

ee. **GCS - Glasgow Coma Scale** - a scoring system that defines eye, motor, and verbal responses in the patient with injury to the brain.

ff. **Hospital Criteria** - Essential or desirable characteristics that help categorize Level I, II or III Trauma Centers of a Level IV trauma facility.

gg. **Immediately (or "immediately available")** - (a) unencumbered by conflicting duties or responsibilities; (b) responding without delay when notified; and (c)

being within the specified resuscitation area of the Trauma Center when the patient is delivered in accordance with the policies and procedures of a designated Trauma Care Region.

hh. **Implementation (or "implemented") -** the development and activation of a Regional Trauma Plan by a designated Trauma Care Region including the triage, transport and treatment of trauma patients in accordance with the plan.

ii. **Inclusive Trauma Care System -** a trauma care system that incorporates every health care facility in a community in a system in order to provide a continuum of services for all injured persons who require care in an acute care facility; in such a system, the injured patient's needs are matched to the appropriate hospital resources.

jj. **Indigent Trauma Patient -** a victim of traumatic injury which meets the criteria for admittance into the Mississippi Trauma Registry and has no financial ability to pay for trauma services received.

kk. **Injury Control -** the scientific approach to injury that includes, analysis, data acquisition identification of problem injuries in high risk groups, option analysis and implementing and evaluating countermeasures.

ll. **Injury -** the result of an act that damages, harms, or hurts; unintentional or intentional damage to the body resulting from acute exposure to thermal, mechanical, electrical or chemical energy or from the absence of such essential as heat or oxygen.

mm. **Injury Rate -** a statistical measure describing the number of injuries expected to occur in a defined number of people (usually 100,000) within a period (usually 1 year). Used as an expression of a relative risk of different injuries or groups.

nn. **Injury Prevention -** efforts to forestall or prevent incidents that might result in injuries.

oo. **Injury Severity Score (or "ISS") -** the sum of the squares of the Abbreviated Injury Scale score of the three most severely injured body regions.

pp. **Lead Agency -** an organization that serves as the focal point for program development on the local, regional or State level.

qq. **Level I -** Hospitals that have met the requirements for Level I as stated in Chapter XI and are designated by the Department.

rr. **Level II -** Hospitals that have met the requirements for Level II as stated in Chapter XII and are designated by the Department.

ss. **Level III -** Hospitals that have met the requirements for Level III as stated in Chapter XII and are designated by the Department.

tt. **Level IV** - Hospitals that have met the requirements for Level IV as stated in Chapter XIV and are designated by the Department.

uu. **Major Trauma** - that subset of injuries that encompasses the patient with or at risk for the most severe or critical types of injury and therefore requires a system approach in order to save life and limb.

vv. **Major Trauma Patient (or "major trauma" or " critically injured patient")** - a person who has sustained acute injury and by means of a standardized field triage criteria (anatomic, physiology, and mechanism of injury) is judged to be at significant risk of mortality or major morbidity.

ww. **Mechanism of Injury** - the source of forces that produce mechanical deformations and physiological responses that cause an anatomic lesion of functional change in humans.

xx. **Medical Control** - physician direction over prehospital activities to ensure efficient and proficient trauma triage, transportation, and care, as well as ongoing quality management.

yy. **Mississippi Trauma Advisory Committee (MTAC)** - (See Appendix A) advisory body created by legislature for the purpose of providing assistance in all areas of trauma care system development and technical support to the Department of Health; members are comprised of EMS Advisory Council members appointed by the chairman.

zz. **Mississippi Trauma Care System Plan** - a formally organized plan developed by the Department of Health, pursuant to legislative directive, which sets out a comprehensive system of prevention and management of major traumatic injuries.

aaa. **Morbidity** - the relative incidence of disease.

bbb. **Mortality** - the proportion of deaths to population.

ccc. **Multi-disciplinary Trauma Review Committee** - committee composed of the trauma service Director, other physician members and other members appointed by the trauma director that reviews trauma deaths in a system or hospital.

ddd. **Non-Designated Hospital** - a licensed hospital that has not been designated by the Department as a Trauma Center.

eee. **Off-Line Medical Direction** - the establishment and monitoring of all medical components of an EMS system, including protocols, standing orders, education programs, and the quality and delivery of on-line control.

fff. **On-Call** - available to respond to the Trauma Center in order to provide a defined service.

ggg. **On-Line Medical Direction -** immediate medical direction to prehospital personnel in remote locations (also know as direct medical control) provided by a physician or an authorized communications resource person under the direction of a physician.

hhh. **Overtriage -** directing patients to Trauma Centers when they do not need such specialized care. Overtriage occurs because of incorrect identification of patients as having severe injuries when retrospective analysis indicates minor injuries.

iii. **Pediatric Trauma Center -** Either (a) a licensed acute care hospital which typically treats persons fourteen (14) years of age or less, which meets all relevant criteria contained in these Regulations and which has been designated as a pediatric Trauma Center; or (b) the pediatric component of a Trauma Center with pediatric specialist and a pediatric intensive care unit.

jjj. **Pediatric Advanced Life Support (PALS) -** a course developed and sponsored by the American Heart Association and the American Academy of Pediatrics, for healthcare workers covering the application of advanced life support therapies to pediatric patients.

kkk. **Prehospital Emergency Medical Care Personnel -** prehospital emergency medical care personnel are individuals certified or otherwise credentialed to perform prehospital emergency medical care by the Department.

lll. **Prehospital Trauma Life Support (PHTLS) -** a verification course for prehospital care providers that teaches concepts of basic and advanced trauma life support. It is developed and sponsored by the National Association of Emergency Medical Technicians in cooperation with the American College of Surgeons Committee on Trauma.

mmm. **Promptly Available (or "promptly") -** within the trauma receiving resuscitation area, emergency department, operating room, or other specified area of the Trauma Center within a period of time that is medically prudent and proportionate to the patient's clinical condition and such that the interval between the delivery of the patient at the Trauma Center and the arrival of the respondent should not have a measurably harmful effect on the course of patient management or outcome in accordance with the policies and procedures of a designated Trauma Care Region.

nnn. **Protocols -** standards for EMS practice in a variety of situations within the EMS system.

ooo. **Qualified Specialist (or "qualified surgical specialist" or "qualified non-surgical specialist") -** either (a) a physician or oral and maxillofacial surgeon licensed in Mississippi who has taken special postgraduate medical training, or has met other specified requirements and has become board certified within three (3) years of qualification for board certification in the corresponding specialty, for those specialties that have board certification and are recognized by the American Board of Medical Specialties, the Advisory Board of Osteopathic Specialties, the American Dental Association, or within three (3) years of joining

a trauma team if more than three (3) years have elapsed since qualifying to take the board certification examination is board certified in a specialty by the American Board of Medical specialties, the Advisory Board of Osteopathic Specialties, the American Dental Association, a Canadian board or other appropriate foreign specialty board as determined by the American Board of Medical specialties for that specialty; or, (b) a non-board certified physician who is designated by the Hospital as a Qualified Specialist, after having met one or more of the following conditions:

a. Demonstration that he/she has met requirements which are equivalent to those of the Accreditation Council for Graduate Medical Education, American Board of Medical Specialties, the Advisory Board of Osteopathic Specialties, the American Dental Association, (ACGME) or the Royal College of Physicians and Surgeons of Canada;

b. Demonstration that he/she has substantial education, training and experience in treating and managing major trauma patients; or

c. Successful completion of a residency program.

ppp. **Performance Improvement (or "quality improvement") -** a method of evaluating and improving processes of patient care which emphasizes a multi-disciplinary approach to problem solving, and focuses not on individuals, but systems of patient care which might cause variations in patient outcome.

qqq. **Quality Management (or "performance management") -** a broad term which encompasses both quality assurance and quality improvement, describing a program of evaluating the quality of care using a variety of methodologies and techniques.

rrr. **Regional Trauma Plan -** a document developed by the various Trauma Care Regions, and approved by the Department of Health, which describes the policies, procedures and protocols for a comprehensive system of prevention and management of major traumatic injuries in that Trauma Care Region

sss. **Regionalization -** the identification of available resources within a given geographic area, and coordination of services to meet the need of a specific group of patients.

ttt. **Rehabilitation -** services that seek to return a trauma patient to the fullest physical, psychological, social, vocational, and educational level of functioning of which he or she is capable, consistent with physiological or anatomical impairments and environmental limitations.

uuu. **Research -** clinical or laboratory studies designed to produce new knowledge applicable to the care of injured patients.

vvv. **Residency Program -** a residency program of the Trauma Center or a residency program formally affiliated with the Trauma Center where senior residents can participate in educational rotations.

www. **RTS** - Revised Trauma Score, a prehospital/emergency center scoring system in which numerical values are assigned to differing levels of Glasgow Coma Scale, systolic blood pressure, and respiratory rate.

xxx. **Response Time** - the time lapse between when an emergency response unit is dispatched and arrives at the scene of the emergency.

yyy. **Risk factor** - a characteristic that has been statistically demonstrated to be associated with (although not necessarily the direct cause of) a particular injury. Risk factors can be used for targeting preventative efforts at groups who may be particularly in danger of injury.

zzz. **Rural** - those areas not designated as metropolitan statistical areas (MSAs).

aaaa. **Senior Resident (or "senior level resident")** - a physician licensed in the State of Mississippi who has completed at least two years of the residency under consideration and has the capability of initiating treatment, when the clinical situation demands, and who is in training as a member of the residency program, as defined in regulation, at a designated Trauma Center. Residents in general surgery shall have completed three clinical years of general surgery residency in order to be considered a senior resident.

bbbb. **Service Area (or "catchment area")** - that geographic area defined by the local EMS agency in its Regional Trauma Plan as the area served by a designated Trauma Center.

cccc. **Specialty Care Facility** - an acute care facility that provides specialized services and specially trained personnel to care for a specific portion of the injured population, such as pediatric, burn injury, or spinal cord injury patients.

dddd. **Surveillance** - the ongoing and systematic collection, analysis, and interpretation of health data in the process of describing and monitoring a health event.

eeee. **Trauma** - a term derived from the Greek for "wound"; it refers to any bodily injury (see "Injury").

ffff. **Trauma Care Facility (or "trauma center")** - a hospital that has been designated by the department to perform specified trauma care services within a Trauma Care Region pursuant to standards adopted by the department.

gggg. **Trauma Care Region** - Trauma Care Region is a geographic area of the state formally organized, in accordance with standards promulgated by the department and has received designation from the department, for purposes of developing and inclusive care system.

hhhh. **Trauma Care System Planning and Development Act of 1990** - The federal law that amended the Public Health Service Act to add Title XII - Trauma Programs. The purpose of the legislation being to assist State governments in developing, implementing and improving regional systems of trauma care, and to fund research and demonstration projects to improve rural EMS and trauma.

iiii. **Trauma Care System -** an organized approach to treating patients with acute injuries; it provides dedicated (available 24 hours a day) personnel, facilities, and equipment for effective and coordinated trauma care in an appropriate geographical region, known as a Trauma Care Region.

jjjj. **Trauma Center Designation -** the process by which the Department identifies facilities within a Trauma Care Region.

kkkk. **Trauma Program Manager -** a designated individual with responsibility for coordination of all activities on the trauma service and works in collaboration with the trauma service director.

llll. **Trauma Nursing Core Course (TNCC) -** a verification course providing core-level trauma knowledge and psychomotor skills associated with the delivery of professional nursing care to trauma patient. Developed and sponsored by the Emergency Nurses Association.

mmmm. **Trauma Patient -** an injured patient.

nnnn. **Trauma Prevention Program -** internal institutional and external outreach educational programs designed to increase awareness of methods for prevention and/or avoidance of trauma-related injuries.

oooo. **Trauma Program -** an administrative unit that includes the trauma service and coordinates other trauma-related activities, including, but not limited to, injury prevention, public education, and CMS activities.

pppp. **Trauma Receiving Resuscitation Area -** a designated area within a licensed hospital or designated Trauma Center that routinely receives and manages the care of trauma patients where trauma patients are evaluated upon arrival.

qqqq. **Trauma Registry -** a database software package that hospitals use to track victims of major trauma that are transported to and/or from their facilities.

rrrr. **Trauma Team -** A group of health care professionals organized to provide care to the trauma patient in a coordinated and timely fashion. The composition of a trauma team is delineated by hospital policy.

ssss. **Trauma Service Director -** a physician designated by the institution and medical staff to coordinate trauma care.

tttt. **Triage -** the process of sorting injured patients on the basis of the actual or perceived degree of injury and assigning them to the most effective and efficient regional care resources, in order to insure optimal care and the best chance of survival.

uuuu. **Triage Criteria -** a measure or method of assessing the severity of a person's injuries that is used for patient evaluation, especially in the prehospital setting, and that utilizes anatomic or physiologic considerations or mechanism of injury.

vvvv. **Uncompensated Care -** care for which the provider has been unable to collect payment because of the patient's inability to pay. A claim is considered to be uncompensated if, after the provider's due diligence to collect monies due, total payment from all sources (including third-party payors) of five percent (5%) or less has been made on the total trauma-related gross charges. Any payment received from Medicaid shall preclude reimbursement from the Trauma Care Trust Fund (TCTF), whether the five percent (5%) payment threshold has been met or not.

wwww. **Undertriage** - directing fewer patients to Trauma Centers than is warranted because of incorrect identification of patients as having minor injuries when retrospective analysis indicate severe injuries.

Chapter 02 TRAUMA CARE REGIONS

200 TRAUMA CARE REGIONS

200.01 Policy Statement

The Mississippi Trauma Care Plan documents the need for a regional approach toward the development of a statewide trauma care system. This regional development will be coordinated and supported by the legislatively designated "lead trauma agency," the Mississippi State Department of Health, Bureau of Emergency Medical Services (hereinafter "Department").

The Mississippi Trauma Care Plan recognizes the uniqueness within differing parts of the state with regard to personnel, resources, environmental issues, distance to tertiary care and population. Accordingly, the Mississippi Trauma Care Plan provides for a system that allows for flexibility at the regional level, incorporates the use of regional leadership to establish regional/local guidelines, and is sensitive to regional needs and resources. As a result the Mississippi Trauma Care Plan ensures a statewide trauma system design that is based on the resources available within each region, while ensuring optimal care to the trauma victim through transfer agreements when resources may not be available within a certain geographical area.

200.02 Proposed Trauma Care Regions

The map set forth in Appendix B illustrates the initial configuration of the Trauma Care Regions, developed based upon the Department's experience with regional EMS programs. However, some areas contained within these initial boundaries may prove to more appropriately belong to other adjacent areas. Consequently, the state designation process of the Regions is designed to provide for such flexibility.

200.03 State Designation of Trauma Care Regions

To receive state designation as a Trauma Care Region, the hospitals and their respective medical staffs intending to establish the Trauma Care Region shall set forth such intention in a letter to the Department which includes:

1. a description of the area to be served,
2. the names of all trauma care hospitals participating, and
3. the form of regional administration for such Trauma Care Region.

200.04 State Designation of Existing EMS Districts as Trauma Care Regions

EMS Districts which are currently recognized by the Department may request designation by the Department as a Trauma Care Region provided that such EMS District meets the standards established for designated Trauma Care Regions as outlined in these Regulations, and submits annually to the Department documentation of compliance with those standards.

Chapter 03 REGIONAL TRAUMA PLAN DEVELOPMENT

300 REGIONAL TRAUMA PLAN

300.01 Procedure for Submission of Regional Trauma Plan

A Trauma Care Region intending to implement a trauma care system shall submit its Regional Trauma Plan to the Department and have it approved prior to implementation.

Within 30 days of receiving the plan, the Department shall provide written notification to the Trauma Care Region of the following:

a. that the plan has been received by the Department;

b. whether the Department approves or disapproves of its Regional Trauma Plan;

c. if disapproved, the reason for disapproval of the Regional Trauma Plan;

NOTE: Revisions in the approved Regional Trauma Plan must be submitted prior to implementation. At a minimum, Regional Trauma Plans shall be submitted to BEMS *every (3) years.*

300.02 Disapproval of a Regional Trauma Plan

If the Department disapproves a plan submitted to it, the Trauma Care Region shall have 30 days from the date of notification of the disapproval to appeal the decision in writing to the Mississippi Trauma Advisory Committee. The Committee shall make a determination within 3 months of receipt of the appeal. In any event, the Trauma Care Region may always submit a revised plan to the Department.

300.03 Failure to Properly Implement Plan

Should the Department determine that a Trauma Care Region has failed to implement its Regional Trauma Plan in accordance with the approved plan; the Department may revoke its approval of the plan and suspend and/or terminate any contract with the Region. The Trauma Care Region may appeal this decision in writing to the Mississippi Trauma Advisory Committee which shall make a determination within 3 months of receipt of the appeal.

300.04 Amendments to Regional Trauma Plan

After approval of a Regional Trauma Plan, the Trauma Care Region shall submit to the Department for approval any significant changes to that Regional Trauma Plan prior to the implementation of the changes. In those instances where a delay in approval would adversely impact the current level of trauma care; the Trauma Care Region may institute the changes and then submit the changes to the Department for approval within 30 days of their implementation.

300.05 Requirements for Approval of Regional Trauma Plan

The initial plan for a designated Trauma Care Region that is submitted to the Department shall be comprehensive and objectives shall be clearly outlined to the Department. The initial Regional Trauma Plan shall contain the following:

a. table of contents

b. summary of the plan

c. objectives

d. implementation schedule

e. administrative structure

f. medical organization and management

g. inclusive trauma system design which includes all facilities involved in the care of acutely injured patients, including coordination with neighboring Trauma Care Regions

h. documentation of all interfacility Trauma Center agreements

i. written documentation of participation (hospital/medical staff)

j. the system design shall address the operational implementation of the policies developed

k. description of the critical care capability within the Region including but not limited to burns, spinal cord injury, rehabilitation and pediatrics

l. performance improvement process

m. general policies of the Trauma Care Region board, which address those issues set out in Section 300.06 below

300.06 General Policies to be Addressed in Regional Trauma Plan

A designated Trauma Care Region planning to implement a trauma system shall develop policies which provide a clear understanding of the structure of the trauma system and the manner in which it utilizes the resources available to it. Those policies shall address the following:

a. system organization and management

b. trauma care coordination within the Region

c. trauma care coordination with neighboring Regions and/or jurisdictions, including designated Trauma Care Region agreements

d. data collection and management

e. coordination of designated Trauma Care Regions and trauma systems for transportation including inter-Trauma Center transfers, and transfers from a receiving hospital to a Trauma Center

f. the integration of pediatric hospitals, including pediatric triage criteria, if applicable

g. availability of Trauma Center equipment

h. the availability of trauma team personnel

i. criteria for activation of trauma team

j. mechanism for prompt availability of specialist

k. performance improvement and system evaluation to include

    a. responsibilities of the multidisciplinary trauma peer review committee.

l. training of prehospital designated Trauma Care Region personnel to include trauma triage

m. public information and education about the trauma system

n. lay and professional education about the trauma system

o. coordination with public and private agencies and Trauma Centers in injury prevention programs

300.07 <u>Additional Standards and Prohibitions</u>

In addition to those requirements set out in Sections 300.5 and 300.6 above, the following standards and prohibitions must be adhered to by all participating providers in the Regional Trauma Plan:

a. The Plan shall include all of the following:

    a. Prehospital trauma protocols with trauma triage/transport criteria.

NOTE: Revisions in the plan must be submitted prior to implementation.

    b. Policies and procedures correlative to the protocols.

    c. A plan for quality assurance/improvement including run audit criteria and schedule.

b. No health care facility shall advertise in any manner or otherwise hold itself out to be a Trauma Center unless so designated by the Department in accordance with these Regulations.

c. No provider of prehospital care shall advertise in any manner or otherwise hold itself out to be affiliated with the trauma system or a Trauma Center unless the provider of prehospital care has been so designated by the Department in accordance with these Regulations.

d. A Trauma Care Region shall hold funds from participating hospitals and licensed EMS providers for non compliance with Mississippi Trauma Care Rules and Regulations and regional plans and policies.

e. All participating hospitals and licensed EMS providers in each respective region shall abide by regional policies.

f. Documentation of Medical Control Plan review and compliance must be submitted to BEMS and the Trauma Care Region annually.

300.08 Optional Criteria

a. The Trauma Care Region may authorize the utilization of air transport within its jurisdiction to geographically expand the primary service area(s), as long as the expanded service area does not encroach upon another

Trauma Care Region, or another Trauma Center, unless written agreements have been executed between the involved Trauma Care Region and Trauma Centers.

b. A Trauma Care Region may require Trauma Centers to have helicopter landing sites.

300.09 Annual Certification to Department

The Trauma Care Region shall certify annually to the Department that its approved Regional Trauma Plan is functioning as described.

301. ADMINISTRATION AND MANAGEMENT OF TRAUMA CARE REGIONS

301.01 Establishment of a Trauma Care Region Board

All Trauma Care Regions established and designated pursuant to these Regulations shall establish a Trauma Care Region Board which shall be recognized as the lead administrative body of that Region. Board members may be representative(s) of participating and designated trauma care hospital(s), physicians, or any other person deemed appropriate by the Board. The Board shall have administrative authority over the operation of the Trauma Care Region and subsequent trauma system programs.

301.02 Operation of a Trauma Care Region

After formation of a Trauma Care Region board, the board shall appoint some person or entity which shall have authority over the operation of the Trauma Care Region and subsequent trauma care programs, all under the direction of the Trauma Care Region board. Such management may be carried out by an appointed executive manager, by contracting for management services, or by some other means, to be approved by the Department.

The functions of a Trauma Care Region include, but are not limited to, the following:

1. Track and assist in the reimbursement of hospitals and physicians for trauma care.
2. Maintain regional database including, but not limited to, hospitals in the region, designation status, and expiration date.
3. Monitor Pre hospital Categorization and Triage of the trauma patient.
4. Maintain and ensure compliance of the Regional Trauma Plan.
5. Provide training opportunities for physicians, nurses, and EMS and support personnel, maintain a schedule, and ensure notification to qualifying personnel.
6. Monitor the ongoing PI program of each trauma program in the respective region.
7. Other such activities as may be required by the Mississippi Department of Health through the annual contractual agreement.
8. Performance of each trauma region shall be evaluated annually with continued financial support contingent on adequate performance based on outcome measures.

301.03 <u>Regional Trauma Care Boards May Receive and Expend Funds</u>

Designated Trauma Care Region boards are authorized to receive funds and to expend funds as may be available for any necessary and proper trauma care program purposes in the manner provided for in these Regulations or in law. Non compliance will result in loss of funding to the region for each corresponding activity.

301.04 <u>Hospital/Medical Documentation</u>

Designated Trauma Care Regions must provide documentation of formal referral agreements among all participating regional hospitals and, if necessitated by a lack of in-region service, documentation of linkages to other appropriate out-of-region hospitals for referrals. Regions must also provide documentation of linkages to a Level I facility for training, education, and evaluation, which Level I facility must be recognized by the Department and committed to participation in the state trauma care system. Non compliance will result in loss of funding to the region for each corresponding activity.

Chapter 4 FINANCIAL SUPPORT FOR TRAUMA SYSTEM DEVELOPMENT

400 FINANCIAL SUPPORT FOR TRAUMA SYSTEM

400.01 The Trauma Care Trust Fund

The Trauma Care Trust Fund shall serve as the financial support mechanism for development of the Mississippi Inclusive Trauma Care System. The Department shall contract with designated Trauma Care Regions for trauma systems development. Contracts with each designated Trauma Care Region are limited to the financial support for:

1. Administration of designated Trauma Care Regions and

2. Funding of documented trauma care (hospitals, physicians, and licensed ambulance services) as defined by the Department.

400.02 Financial Support for Regional Administration

In accordance with the recommendations of the 1997 Mississippi Trauma Care Task Force, the Department shall contract for the administration of designated Trauma Care Regions for an amount to be determined yearly by the Department, as approved by the MTAC.

The use of these funds shall be determined by the designated Trauma Care Region and approved by the Department in writing. Examples of areas of financial support suggested by the Trauma Care Task Force include, but are not limited to, regional medical director, regional clerical support, telephone, regional trauma advisory committee, hospital trauma registry staff, and trauma registry computer hardware.

400.03 Financial Support for Trauma Care

Trauma Care reimbursement shall be provided for designated Level I, II, and III Trauma Centers, eligible physicians and eligible licensed ambulance service providers in contracts developed by the Department and initiated between the Department and the Trauma Care Regions. Trauma care reimbursement to trauma centers will be provided only to designated Level I, II, and III Trauma Centers. Designated Level IV Trauma Centers shall not receive reimbursement for trauma care, however, will receive $10,000 annually for administrative support for participation in the Mississippi Trauma Care System. The amount funded shall be paid at least annually to each Trauma Care Region for annual redistribution to Trauma Centers, participating eligible physicians and eligible emergency medical service providers. Distributions of amounts paid to eligible physicians shall be by the Trauma Center according to the formula(s) set out herein. The total reimbursement amount each year will be dependent upon the following:

a. authorization annually by the Mississippi State Legislature;

b. the amount available in the Trauma Care Trust Fund;

c. the number of active and designated Trauma Care Regions;

d. the number of designated hospitals, physicians, and licensed emergency medical service providers within each designated Trauma Care Region; and,

e. Appropriate annual documentation of trauma care rendered by designated hospitals, physicians, and licensed emergency medical service providers in accordance with the requirements of the Department.

400.04 Trauma Care Distribution Process

Funds are distributed from the Trauma Care Trust Fund (TCTF). This fund is created from multiple funding sources including the following:

1. assessment on all moving traffic violations as noted in §41-59-75, Mississippi Code of 1972, Annotated;
2. assessment on moving traffic violations as noted in §41-59-75, Mississippi Code of 1972, Annotated;
3. assessment on license tags (issuance and renewal) as noted in §27-19-43, Mississippi Code of 1972, Annotated;
4. assessment on speeding, reckless and careless driving violations as noted in §99-19-73, Mississippi Code of 1972, Annotated;
5. a point of sale fee on all terrain vehicles and motorcycles as noted in §99-19-73, Mississippi Code of 1972, Annotated; and
6. Funds appropriated by the state legislature from the state's Health Care Expendable Fund. These funds comprise the TCTF.

In accordance with Miss Code Ann. §41-59-5 (as amended), those Level I facilities located in a state contiguous to the State of Mississippi that participate~~s~~ in the Mississippi trauma care system and has been designated by the department to perform specified trauma care services within the trauma care system under standards adopted by the department shall be eligible to participate in the Trauma Care Trust Fund.

The Trauma Care Escrow Fund is created pursuant to Miss. Code Ann. §41-59-5, (as amended). The Mississippi Trauma Care Escrow Fund is created as a special fund in the State Treasury. Whenever the amount in the Mississippi Trauma Care Systems Fund exceeds Twenty-five Million Dollars ($25,000,000.00) in any fiscal year, the State Fiscal Officer shall transfer the amount above Twenty-five Million Dollars ($25,000,000.00) to the Trauma Care Escrow Fund. Monies in the Trauma Care Escrow Fund shall not lapse into the State General Fund at the end of the fiscal year, and all interest and other earnings on the monies in the Trauma Care Escrow Fund shall be deposited to the credit of the Trauma Care Escrow Fund.

Only patients that meet trauma registry inclusion criteria are eligible for reimbursement. The inclusion criteria are:

a. All state designated patients must have a primary diagnosis of ICD-9 diagnosis code 800-959.9;

b. Only burn patients with an ICD-9 Code of 940-949 qualify for inclusion into the trauma registry. Qualifying burn patients must also meet one of the following criteria.

Plus any one of the following:

a. Transferred between acute care facilities (in or out)

b. Any patient that has sustained an injury (ICD-9: 800.0 - 959.9) and is referred from a trauma center or transferred to a trauma center qualifies for inclusion into the trauma registry.

c. Admitted to critical care unit (no minimum days).

d. Any injury that a patient has sustained in which the patient is admitted to a critical care unit qualifies for inclusion into the trauma registry.

e. Hospitalization for three or more calendar days.

f. Any trauma patient hospitalized for three or more calendar days due to injuries sustained qualifies for inclusion into the trauma registry.

g. Died after receiving any evaluation or treatment.

h. All deaths due to an injury that receive an evaluation or treatment in the Emergency Department qualify for inclusion into the trauma registry.

i. Admitted directly from Emergency Department to Operating Room for major procedure, excluding plastics or orthopedics procedures on patients that do not meet the three day hospitalization criteria.

j. Any trauma patient that is admitted directly from the Emergency Department to the Operating Room for a major procedure qualifies for inclusion into the trauma registry. Plastics and/or orthopedic procedures that do not meet one of the other criteria for inclusion into trauma registry are EXCLUDED and do not quality for inclusion into the trauma registry.

k. Triaged (per regional trauma protocols) to a trauma hospital by pre-hospital care regardless of severity.

l. Any trauma patient that is triaged to a trauma center by pre-hospital care providers, per regional trauma protocols, qualifies for inclusion into the trauma registry. Documentation verifying that this criterion was used must be present in the patient's hospital chart to qualify for inclusion.

m. Treated in the Emergency Department by the trauma team regardless of severity of injury.

n. Any trauma patient that arrives at a trauma center and is treated by a trauma team as delineated by hospital policy qualifies for inclusion into the trauma registry. Documentation verifying a trauma team activation and response must be present in the patient's hospital chart to qualify for inclusion.

o. The following primary ICD-9 diagnosis codes are excluded and should NOT be included in the trauma registry:

p. ICD9Code 905-909 (Late effects of injuries)

q. Late Effects of Injuries, Poisonings, Toxic Effects, and Other External Causes.

r. ICD9Code 930-939 (Foreign bodies)

s. Effects of Foreign Body Entering Through an Orifice.

t. Extremities and/or hip fractures from same height fall in patients over the age of 65.

c. Eighty-five percent of the available funds from the TCTF are allocated to participating trauma centers which shall further allocate at least thirty percent (30%) of the funds received by Level I, II, and III trauma centers to eligible physicians.

d. Fifteen percent (15%) of available funds from the TCTF are allocated to eligible licensed ambulance services that provide pre-hospital care to trauma victims.

e. Funds that are allocated to participating hospitals, eligible physicians and eligible licensed ambulance services are disbursed through each of the designated Trauma Care Regions annually.

f. Funds for the administration and development of the state's trauma care system will be budgeted from available funds from the TCTF. Examples of administrative and development costs are, but are not limited to, salaries and fringe benefit costs for personnel (full-time and part-time equivalents) who expend a portion of their time in trauma care administration and/or development, travel and training costs for such personnel, use of trauma care physicians and/or other trauma professionals used in the development and/or maintenance of the trauma care system, development and/or maintenance of accounting and auditing of the use and distribution of the TCTF, administrative costs for designated trauma care regions, and the costs associated with the development and/or implementation of the state's trauma care system (i.e., telecommunication systems, data storage and/or retrieval systems, public relations costs, advertising, equipment, etc.)

g. Amounts to be disbursed from the Trauma Care Trust Fund shall be calculated in accordance with the following formula:

a. On or about 1 October of each calendar year, or at such other times as the State Health Officer may direct, the Bureau of Emergency Medical Services shall obtain a Treasury report showing the fund balance in the Trauma Care Trust Fund as of 1 October or as of the date the State Health Officer selects. The fund balance in the TCTF on that date will be the amount which in no case can be exceeded in calculating the amount be distributed according to the formula set out herein. To obtain the amount to be distributed, calculate the following sum:

i. Any amounts remaining from any previous fiscal year's balance remaining undistributed. In other words, any dollar amount received in a prior fiscal year not reserved for a specific purpose and not distributed shall be included in the current year's distribution, plus

ii. Any fines or assessments received in a previous fiscal year, plus

iii. Any refunds to the fund of amounts distributed in a previous fiscal year that were received in the current fiscal year, plus

iv. Any "play or pay" funds received in the current fiscal year or a previous fiscal year not reserved for a specific purpose and remaining undistributed.

b. An amount not to exceed Ten Thousand and No/100 Dollars ($10,000.00) shall be set aside to be paid by the Department of Health to the appropriate Trauma Region for disbursement to each Level IV Trauma Center which has completed at least one year of satisfactory, eligible participation in the Mississippi Trauma Care System as of the date of the calculation (para. 7(a), above).

c. An amount to be determined by the Department, and approved by the MTAC shall be paid for administrative expenses and purposes in support of the Mississippi Trauma Care System, to each participating Trauma Region having completed at least one year of satisfactory, eligible participation in the Mississippi Trauma Care System.

d. The amount remaining after the above administrative payments have been calculated, reserved and/or expended, shall be distributed according to the methodology set out in paragraphs "f" and "g" below.

e. Fifteen percent (15%) of the amount remaining after administrative expenses shall be distributed to the Trauma Regions for further distribution to eligible licensed ambulance services. Eligible licensed ambulance services shall be those basic or advanced life support ambulance services licensed by the Bureau of Emergency Medical Services who are active participants in their local trauma region. The fifteen percent (15%) distribution shall be calculated below. In the event there is more than one eligible licensed ambulance service active in one county, funding for that county shall be distributed to both services based on call volume or other appropriate criteria as approved by the department.

i. For purposes of determining amounts to be distributed to participating, eligible, licensed ambulance services pursuant to this section, the following definitions shall apply:

a). "Census" the most recent decennial United States Census

b). "Small Counties" those counties with a population of less than 15,000 as identified in the most recent "Census".

c). "Large Counties" those counties with a population = > 15,000 as identified in the most recent "Census".

d). "Total Fund Balance" that portion of the Trauma Care Trust Fund that is committed to licensed Ambulance Services.

e). "Disbursement" is the amount of the EMS Component of the Trauma Care Trust Fund awarded to a particular county.

f). "Small County Population Percentage" – is the sum of "Small Counties" population as a percent of the total state population as reflected by the most recent decennial United States Census.

g). "Per Capita Portion" is the portion of a Small County's "Disbursement" that is calculated by multiplying that county's "Small County Population Percentage" by the "Total Fund Balance"

h). "Dedicated Portion" is the portion of a Small County's "Disbursement" that is calculated by subtracting an amount from the Total Fund Balance and dividing among the Small Counties so that each Small County receives an equal Disbursement that is equal to or less than the Large County with the lowest population.

i). "Adjusted Population" is determined by adding the population from the Small Counties and subtracting that sum from the state's total population.

j). "Adjusted Fund Balance" was calculated by subtracting the amount dedicated for the smaller counties from the total fund balance.

ii. Methodology:

a). The amount to be disbursed for each Small County shall be equal for all Small Counties and is calculated in three steps - a Per Capita Portion, a Dedicated Portion, and a Total - as follows:

Per Capita Portion

Multiply the Small Counties Population Percentage by the Total Fund Balance.

Per Capita portion = (Small Counties Population Percentage X Total Fund Balance)

Dedicated Portion

The Dedicated Portion is calculated by subtracting an amount from the Total Fund Balance and adding it to the Per Capita Portion so that the sum of the Per Capita Portion plus the Dedicated Portion is divided by the number of Small Counties, AND the result is less than or equal to the Disbursement received by the Large County with the population closest to or equal to 15,000.

Dedicated Portion = [(Per Capita Disbursement + Dedicated Portion) / (Number of Small Counties)] < / = Disbursement of the Large County with lowest population

The Disbursement for small counties is calculated by adding the Per Capita and Dedicated Portions.

Disbursement (for Small Counties) = (Per Capita Portion) + (Dedicated Portion)

The amount to be disbursed for each Large County is calculated as follows:

Disbursement = (census population) / (Adjusted population) X (Adjusted Fund Balance)

f. Eighty-five percent (85%) of the amount remaining after administrative expenses shall be distributed to the Trauma Regions for further distribution to participating Trauma Centers. Thirty percent (30%) of the eighty-five percent (85%) distributed to Level I, II, and III trauma centers shall be allocated to eligible physicians. The eighty-five percent (85%) distribution shall be calculated as set out herein in paragraphs g(i) through g(ii)(k), below.

i. Thirty percent (30%) of the amount reserved for distribution to hospitals shall be distributed according to a “fixed funding” relative weight, which shall be calculated thusly:

a). With reference to the calculation of the fixed funding distribution, the following definitions shall apply.

i). Total Hospital Fixed Fund – Trauma Care Trust Fund – (BEMS Admin Expenses + Trauma Region Admin Expenses + Level IV Admin Expenses + EMS Distribution) X 0.30

ii). Number of Facilities – shall be the number of duly licensed health care facilities

licensed as a Level 1, Level 2 or Level 3 Trauma Center

iii). Relative Weights – Level 1 shall equal 100%; Level 2 shall equal 87.5%; Level 3 shall equal 62.5%

iv). Calculated Weight – Equals the number of facilities licensed at a particular level of trauma center multiplied by the relative weight.

v). Total Weight – equals the sum of calculated weights

vi). Disbursement by Hospital Type – equals Total Hospital Fixed Fund / Total Weight X Relative Weight

vii). Total Disbursement by Hospital Type – equals the sum of Disbursement by Hospital Type

b). Calculate thirty percent (30%) of the eighty-five percent (85%) referred to in paragraph (g), above.

c. The relative weight for Level I Trauma Centers shall be one hundred percent (100.00%). The relative weight for Level II Trauma Centers shall be eighty-seven and one-half percent (87.50%). The relative weight for Level III Trauma Centers shall be sixty-two and one-half percent (62.50%).

d. Multiply the number of facilities in each category (Level I, Level II and Level III) by the relative weights of each category. The product of this operation shall be the calculated weight of each type facility.

e. Sum the relative weights to obtain the "calculated weight."

f. Divide the total Fixed Hospital Reimbursement amount by the product of the sum of the relative weights ("calculated weight") obtained in (e), above and the relative weight assigned to that category.

g. The result is the amount to be distributed to each facility of that particular type (Level I, Level II or Level III).

ii. Fifty percent (50%) of the amount reserved for distribution to hospitals shall be distributed according to a "variable funding" formula which shall be calculated thusly:

a.) Assign all cases an ISS severity index and category of A, B,C or D according to the following table:

ISS Severity Score	ISS Severity Index	Severity Category
1-9	1.02	A
10-15	2.02	B
16-24	3.80	C
>24	6.57	D

b). Calculate the number of cases treated by each trauma center which fall within each ISS Severity Category.

c). Multiply the total number of ISS Severity Category A cases by the relative value assignment of 1.02 to arrive at the total number of Category A points.

d). Multiply the total number of ISS Severity Category B cases by the relative value assignment of 2.02 to arrive at the total number of Category B points.

e). Multiply the total number of ISS Severity Category C cases by the relative value assignment of 3.80 to arrive at the total number of Category C points.

f). Multiply the total number of ISS Severity Category D cases by the relative value assignment of 6.57 to arrive at the total number of Category D points.

g). Add the points from Categories A, B, C, and D to arrive at a total number of points for each trauma center.

h). Sum the number of points from all categories and all hospitals to arrive at a total number of points for all trauma centers.

i). Take the number of points for each hospital and multiply that number by the total dollar amount for the 50 percent of the TCTF available for distribution to participating, eligible trauma centers. Take the product of that calculation and divide the resulting number by the total number of points for all trauma centers.

j). The resulting quotient is the dollar amount of the Hospital Variable Fund to be distributed to that trauma center.

k). Sum all the amounts to be distributed pursuant to the Hospital Variable Fund Calculation. The sum of all distributions should not exceed fifty percent (50%) of the eighty-five percent (85%) of the TCTF available for distribution after administrative expenses, payments to Level IV trauma centers and administrative support payments to trauma regions.

iii. Five percent (5 %) of the amount reserved for distribution to hospitals shall be distributed to designated burn centers within the Trauma Care System. If more than one burn center is operating within the system, the 5% will be distributed based on a pro-rata share of patients as determined by Trauma Registry inputs. (Note: Trauma patients counted toward burn center distribution cannot be used to determine hospital variable distribution.) If no hospital has been designated as a burn center at the time of the distribution, the 5% shall be included in the hospital fixed distribution.

400.05 Play or Pay

1. Every Mississippi licensed acute care facility (hospital) having an organized emergency service or department shall participate in the Mississippi Statewide Trauma Care System.

2. Hospitals with the potential to serve as Level I, II, or III Trauma Centers must participate at the highest trauma designation level consistent with its capabilities as determined by the Department of Health.

3. Any hospital determined capable of participating as a Level IV Trauma Center may make application to be designated as a Level IV Trauma Center. A Level IV is required to submit data to the statewide trauma registry and is eligible for $10,000 for administrative costs as a participant in the Statewide Trauma System.

4. Every hospital having an organized emergency service or department shall submit data to the Trauma Registry.

5. Each year, all facilities shall complete a pre-application on forms as provided by the Department whereby the facility will attest to the presence or absence of services listed. Based on this paper assessment, the Department shall render a preliminary decision on the facility's maximum potential designation level.

   Paper Assessment Criteria:

   a. Any service offered at a facility during normal business hours for less than seven days a week, an application shall be sent at the appropriate level. Should the hospital choose not to participate in the Mississippi Trauma Care System an invoice will be calculated - and/or prorated as determined appropriate - by the Department.

   b. Level I trauma centers shall act as regional tertiary care facilities at the hub of the trauma care system. The facility must have the ability

to provide leadership and total care for every aspect of injury from prevention to rehabilitation. As a tertiary facility, the Level I trauma center must have adequate depth of resources and personnel.

Required components include:

i. General Surgery

ii. Neurological Surgery

iii. Orthopedic Surgery

iv. Emergency Medicine

v. Anesthesia

vi. Post Anesthesia Care Unit (PACU)

vii. Intensive Care Unit (ICU)

viii. Surgical Residency Program

c. Level II trauma center is an acute care facility with the commitment, resources and specialty training necessary to provide sophisticated trauma care. The Level II trauma center must have the following departments, divisions, or sections:

i. General Surgery

ii. Neurological Surgery

iii. Orthopedic Surgery

iv. Emergency Medicine

v. Anesthesia

vi. Post Anesthesia Care Unit (PACU)

vii. Intensive Care Unit (ICU)

d. Level III is expected to provide initial resuscitation of the trauma patient and immediate operative intervention to control hemorrhage and to assure maximal stabilization prior to referral to a higher level of care. All Level III trauma centers will work collaboratively with other trauma facilities to develop transfer protocols and a well-defined transfer sequence.

i. General Surgery

ii. Emergency Medicine

iii. Orthopedic Surgery

iv. Anesthesia

v. Post Anesthesia Care Unit (PACU)

vi. Intensive Care Unit (ICU)

6. The Department of Health shall utilize the criteria contained herein to determine the most appropriate level of participation. A paper assessment shall be preformed on all qualifying facilities to determine a preliminary level of participation. Information which may be utilized in making said determination may include, but is not limited to:

a. licensure information

b. data provided in trauma center applications

c. inspection team reports

d. designation criteria as provided in these rules and regulations

e. information obtained from other publicly available sources.

f. Evaluation shall be accomplished by the above criteria to determine one of the following:

i. hospitals that are qualified to participate in the trauma system but choose not to participate in the system, or

ii. hospitals that are qualified to participate in the system but participate at a level lower than that for which they are capable.

7. Any hospital that:

g. chooses not to participate in the Statewide Trauma System as a Level I, II, or III Trauma Center,

h. participates at a level lower than the level at which it is capable of participating, as determined by the Department of Health,

i. fails to maintain or becomes incapable of maintaining its designation as a Level I, II or III Trauma Center,

j. has its designation as a Level I, II, or III Trauma Center suspended or revoked by the Department of Health, or

k. becomes “non-designated” as a Level I, II, or III Trauma Center, shall be assessed and shall pay the fee set out below to the Department of Health. All fees are due and payable annually on or before January 1 of each year. Any event (a-d) above,

occurring during the calendar year shall result in the hospital owing a pro-rata portion of the fee. The fee assessed shall be pro-rated on a monthly basis by the Department of Health.

8. The fee shall be paid in full upon written notification from the Department of Health. A schedule of fees follows assesses facilities choosing not to participate in the statewide trauma care system, or participating at a level lower than the level at which they are capable.

    a. A facility shall receive a pre assessment survey during the first week of July of each year to be completed and returned to the appropriate Trauma Care Region by the first week of August.

    b. Each Trauma Care Region will review the survey of each facility within the region, and will forward comments on the Department approved form to the Department detailing the level that each facility is capable of participating in the Trauma Care System by the first week of September.

    c. On or about the third week in September an invoice and application will be sent by the Department to each facility in response to their respective survey.

    d. Payment in full or a completed designation application shall be submitted within deadlines determined by the Department.

9. The fee schedule shall be reassessed and adjusted as necessary each year by the Mississippi Trauma Advisory Council. The Council will recommend any revisions to the Board of Health for approval.

The current fee schedule is as follows:

Current Level	Projected Level	Fee for Non Compliance
Non Designated	Level II	$1,492,000.00
Non Designated	Level III	$ 758,000.00
Level III to	Level II	$ 423,500.00
Level IV to	Level II	$1,492,000.00
Level IV to	Level III	$ 758,000.00

400.06 Appeal Process.

Following the receipt of the assessment of any trauma fee assessed hereunder, any party assessed the fee may request a due process hearing on the assessment.

a. Any such request for hearing must be filed by the party assessed with the Director of Emergency Medical Services, Mississippi State Department of Health, within twenty days of the date of the assessment.

b. The date of the assessment is defined as the date which the assessment is placed in the United States Mail, postage pre-paid, addressed to the party assessed at the address furnished by the party assessed to the Bureau of Emergency Medical Services, or to the address published by the party as its usual and customary business address. The date of the postmark shall be prima facie evidence of the date of the assessment.

c. The Director of Emergency Medical Services, upon receipt of a valid, timely request for a hearing, shall set said hearing for a date certain no more than ten calendar days from the receipt of the request for hearing.

d. The hearing officer appointed to conduct the hearing shall be a person chosen or appointed by the Director of the Office of Health Protection.

e. A stenographic record of said hearing shall be made by a certified shorthand reporter. The record shall consist of all sworn testimony taken, written, documentary or other relevant evidence taken at said hearing.

f. The only issues for adjudication are:

    a. The timeliness of notice of the assessment and delivery of the same;

    b. The trauma classification of the party; and

    c. The calculation of the amount of the assessment.

g. Within 20 days of the receipt by the hearing officer of the certified record, he or she shall render findings of fact and conclusions of law contained in an order. The order so produced by the hearing officer shall be the final order of the Mississippi State Department of Health and shall be appealable to a court of competent jurisdiction.

h. If no appeal from the final order is taken within twenty (20) days of the date of the order, the party assessed shall pay on or before the twentieth (20th) day following the date of the order, the entire fee assessed.

400.07 <u>Delinquent Payments to the Trauma Care Trust Fund</u>

1. If a hospital fails to submit an application for designation as a Trauma Center and fails to pay the required fee for Non-compliance by January 1, a letter from the BEMS will be sent via certified mail to the administrator of the hospital and the Trauma Region administrator informing them that payment is due no later than

20 days from the delivery date of the letter, or that the a request for a due process hearing must be received at the BEMS no later than 20 days from the delivery date of the letter.

a) If the administrator fails to respond, or comply with the requirements, of the certified letter, a letter will be sent by BEMS to the Bureau of Health Facilities Licensure and Certification documenting an alleged violation of the Minimum Standards for the Operation of Mississippi Hospitals, section 105.04, specifically that the governing body of the hospital, through its administrator, failed to take all reasonable steps to comply with all applicable federal, state and local laws and regulations. A copy of the letter will be sent to the hospital administrator and the Trauma Region administrator via certified mail.

b) The Bureau of Health Facilities Licensure and Certification will conduct an investigation of the alleged violation(s). If a finding of Substantiated is returned, BEMS will recommend to Licensure and Certification that the hospital's license be revoked. A copy of this recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail. A copy of recommendation will also be sent to CMS.

c) Once the hospital has satisfied the requirements of Section 400.05, BEMS will send a letter to License and Certification recommending reinstatement of the hospital's license with/without restrictions, as appropriate. A copy of this recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail and to CMS.

2. If a hospital elects to participate at a level lower than the assessed capability and fails to pay the required fee for Non-compliance by January 1, a letter from the BEMS will be sent via certified mail to the administrator of the hospital and the Trauma Region administrator informing them that payment is due no later than 20 days from the delivery date of the letter, or that the a request for a due process hearing must be received at the BEMS no later than 20 days from the delivery date of the letter.

d) If the administrator fails to respond, or comply with the requirements of the certified letter, a letter will be sent by BEMS to the Bureau of Health Facilities Licensure and Certification documenting an alleged violation of the Minimum Standards for the Operation of Mississippi Hospitals, section 105.04, specifically that the governing body of the hospital, through its administrator, failed to take all reasonable steps to comply with all applicable federal, state and local laws and regulations. A copy of the letter will be sent to the hospital administrator and the Trauma Region administrator via certified mail.

e) The Bureau of Health Facilities Licensure and Certification will conduct an investigation of the alleged violation(s) and if a finding of Substantiated is returned, BEMS will recommend to Licensure and Certification that the hospital's license be revoked. A copy of this

recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail. A copy of recommendation will also be sent to CMS.

f) Once the hospital has satisfied the requirements of Section 400.05, BEMS will send a letter to License and Certification recommending reinstatement of the hospital's license with/without restrictions as appropriate. A copy of this recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail and to CMS.

3. If a hospital fails to maintain designation as a Trauma Center:

g) The hospital must immediately notify the BEMS and the Trauma Region administrator when the loss of capability is experienced, and must present, within 20 days of the event, supporting documentation of the loss of capability and the proposed corrective action.

h) BEMS will review the documentation and corrective action plan, and will determine the effective date of pro-ration of the fee for Non-compliance.

i) BEMS will send a letter via certified mail to the hospital administrator and the Trauma Region administrator informing them that payment is due no later than 20 days from the delivery date of the letter, or that the a request for a due process hearing must be received at the BEMS no later than 20 days from the delivery date of the letter.

j) If the administrator fails to respond, or comply with the requirements of the certified letter, a letter will be sent by BEMS to the Bureau of Health Facilities Licensure and Certification documenting an alleged violation of the Minimum Standards for the Operation of Mississippi Hospitals, section 105.04, specifically that the governing body of the hospital, through its administrator, failed to take all reasonable steps to comply with all applicable federal, state and local laws and regulations. A copy of the letter will be sent to the hospital administrator and the Trauma Region administrator via certified mail.

k) The Bureau of Health Facilities Licensure and Certification will conduct an investigation of the alleged violation(s) and if a finding of Substantiated is returned, BEMS will recommend to Licensure and Certification that the hospital's license be revoked. A copy of this recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail. A copy of recommendation will also be sent to CMS.

Once the hospital has satisfied the requirements of Section 400.05, BEMS will send a letter to License and Certification recommending reinstatement of the hospital's license with/without restrictions as appropriate. A copy of this recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail and to CMS.

401 DATA COLLECTION

401.01 Trauma Care Regions to Implement Trauma Data Collection

Trauma Care Regions shall implement the Department's standardized trauma data collection instrument in all licensed hospitals which have organized emergency services or departments, or other trauma data collection instruments compatible with the Department's Trauma Registry as determined by the Department. All trauma data collection instruments shall include the collection of both prehospital and hospital patient care data, and shall be integrated into both the Region's and the Department's data management systems.

All licensed hospitals which have organized emergency services or departments shall participate in the Trauma Care Region data collection effort in accordance with that Region's policies and procedures.

Trauma Registry Data must be submitted by all participating hospitals to the Bureau of EMS and the appropriate Region at least monthly.

401. 02 Reports by Trauma Care Regions

The Trauma Care Regions shall provide periodic reports to all Trauma Centers in the Region and shall provide reports to the Department at intervals specified by the Department.

Chapter 05 TRAUMA SYSTEM EVALUATION

500 EVALUATION PROCESS

500.01 Development of Evaluation Process

Each Trauma Care Region shall be responsible for ongoing evaluation of its trauma care system. Accordingly, each Region shall develop a procedure for receiving information from EMS providers, Trauma Centers and the local medical community on the implementation of various components of that Region's trauma system, including but not limited to:

1. components of the Regional Trauma Plan,
2. triage criteria, and effectiveness,
3. activation of trauma team,
4. notification of specialists,
5. trauma center diversion, and
6. any other such information as requested by the Department.

500.02 Results to be Reported Annually

Based upon information received by the Region in the evaluation process, the Region shall annually (or as often as is necessary to insure system performance) prepare a report containing results of the evaluation and a performance improvement plan. Such report shall be made available to all EMS providers, Trauma Centers and the local medical community.

The Region shall ensure that all Trauma Centers participate in this annual evaluation process, and encourage all other hospitals that treat trauma patients to do likewise.

Specific information related to an individual patient or practitioner shall not be released. Aggregate system performance information and evaluation will be available for review.

Chapter 06 PERFORMANCE IMPROVEMENT

600 PERFORMANCE IMPROVEMENT PROCESS

600.01 Performance Improvement process for Trauma Centers

All Trauma Centers shall develop and have in place a performance improvement process focusing on structure, process, and outcome evaluations which focus on improvement efforts to identify root causes of problems, intervene to reduce or eliminate these causes, and take steps to correct the process as set forth in the trauma center level specific requirements. In addition, the process shall include:

a. a detailed audit of all trauma-related deaths, major complications and transfers;

b. a multidisciplinary trauma peer review committee that includes all members of the trauma team;

c. participation in the trauma system data management system; and

d. the ability to follow up on corrective actions to ensure performance improvement activities.

This system shall provide for input and feedback from these patients and guardians to hospital staff regarding the care provided.

600.02 Performance Improvement process for Trauma Care Regions

Each trauma care region shall be required to develop and implement a region-wide trauma performance improvement program. This program shall, at a minimum, include processes for the review of all region-wide policies, procedures, and protocols.

Chapter 07 INTERFACILITY TRANSFERS OF TRAUMA PATIENTS

700 INTERFACILITY TRANSFERS

700.01 When Transfers Permitted

Patients may be transferred between and from Trauma Centers provided that any such transfer be:

a. medically prudent, as determined by the transferring trauma center physician of record;

b. in accordance with the designated Trauma Care Region inter-facility transfer policies.

700.02 Interfacility Transfer Policies

Trauma Center hospitals shall develop written criteria for consultation and transfer of patients needing a higher level of care.

Trauma Center hospitals that repatriate trauma patients shall provide data required by the system trauma registry, as specified by designated Trauma Care Region policies, to the receiving trauma center for inclusion in the system trauma registry.

Trauma Centers receiving transferred trauma patients shall participate in the Regional performance improvement process outlined in Chapter IX.

700.03 Burn Unit Referral Criteria

A burn unit may treat adults or children or both.

Burn injuries that should be considered for referral to a burn unit include the following:

a. Partial thickness burns greater than 10% total body surface area (TBSA);

b. Burns that involve the face, hands, feet, genitalia, perineum, or major joints;

c. Third-degree burns in any age group;

d. Electric burns, including lightning injury;

e. Chemical burns;

f. Inhalation injury;

g. Burn injury in patients with preexisting medical disorders that could prolong recovery, or affect mortality;

h. Any patients with burns and concomitant trauma (such as fractures) in which the burn injury poses the greatest risk of morbidity or mortality. In such cases, if the

trauma poses the greater immediate risk, the patient may be initially stabilized in the trauma center before being transferred to a burn unit. Physician judgment will be necessary in such situations and should be in concert with the regional medical control plan and triage protocols;

i. Burned children in hospitals without qualified personnel or equipment for the care of children; and

j. Burn injury in patients who will require special social, emotional, or long-tern rehabilitative intervention.

Chapter 08 TRAUMA CENTER LEVELS

In accordance with Miss. Code Ann. §63-13-11 (as amended), the department shall promulgate regulations specifying the methods and procedures by which Mississippi-licensed acute care facilities shall participate in the statewide trauma system.

The following sections represent the mechanism for determining the appropriate level of participation for each facility or class of facilities. Non compliance with this section shall result in a fee payable by the institution to the Trauma Care Trust Fund as set forth in the "Pay or Play" section of these regulations.

800 LEVEL I TRAUMA CENTER

Level I trauma centers shall act as regional tertiary care facilities at the hub of the trauma care system. The facility must have the ability to provide leadership and total care for every aspect of injury from prevention to rehabilitation. As a tertiary facility, the Level I trauma center must have adequate depth of resources and personnel.

The Level I trauma centers in the State of Mississippi have the responsibility of providing leadership in education, trauma prevention, research and system planning.

HOSPITAL ORGANIZATION

800.01 Trauma Program

There must be a written commitment on behalf of the entire facility to the organization of trauma care. The written commitment shall be in the form of a resolution passed by an appropriate quorum of the members of the governing authority. Should the business organization be other than a corporation, a letter explaining such together with a written commitment of the hospital's chief executive officer to the establishment of a trauma care program may be sufficient. The trauma program must be established and recognized by the medical staff and hospital administration. The trauma program must come under the direction of a board-certified surgeon with special interest in trauma care. An identified hospital administrative leader must work closely with the trauma medical director to establish and maintain the components of the trauma program including appropriate financial support. The trauma program location in the organizational structure of the hospital must be such that it may interact effectively with at least equal authority with other departments providing patient care. The administrative structure should minimally include an administrator, medical director, trauma program manager (TPM), trauma registrar and the appropriate support staff. Administrative support includes human resources, education activities, community outreach activities, and research. The trauma program must be multidisciplinary in nature and the performance improvement evaluation of this care should be extended to all the involved departments.

Compliance with the above will be evidenced by but not confined to

1. Governing authority and medical staff letter of commitment in the form of a resolution

2. Written policies and procedures and guidelines for care of the trauma patient

3. Defined trauma team and written roles and responsibilities

4. Appointed Trauma Medical Director with a written job description

5. Appointed Trauma Program Manager with a written job description

6. A written Trauma Performance Improvement plan

7. Documentation of trauma center representative attendance at the regional trauma advisory committee meetings

800.02 Trauma Service

The trauma service must be established and recognized by the medical staff and be responsible for the overall coordination and management of the system of care rendered to the injured patient. The trauma service will vary in each organization depending on the needs of the patient and the resources available. The trauma service must come under the organization and direction of a surgeon who is board certified with special interest in trauma care. All patients with multiple system trauma or major injury must be evaluated by the trauma service. The surgeon responsible for the overall care of the patient must be identified.

800.03 Trauma Team

The team approach is optimal in the care of the multiple injured patient. There must be identified members of the trauma team. Policies should be in place describing the respective role of all personnel on the trauma team. The composition of the trauma team in any hospital will depend on the characteristics of the hospital and it's staff. In some instances a tiered response may be appropriate. If a tiered response is employed written policy must be in place and the system monitored by the PI process. All physicians on the trauma team responsible for directing the initial resuscitation of the trauma patients must be currently certified in The American College of Surgeons Advanced Trauma Life Support (ATLS). Suggested composition of the trauma team for a severely injured patient may include:

a. Anesthesiologist

b. Pediatricians

c. Emergency Physicians

d. Physician Specialist

e. Laboratory Technicians as dictated by clinical needs

f. Mental Health/Social Services/Radiology Technicians

g. Pastoral Care

h. Respiratory Therapist

i. Nurses: ED, OR, ICU, etc.

j. General/Trauma Surgeon

k. Security officers

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

800.04 Medical Director

Level I Trauma Centers must have a physician director of the trauma program. The medical director plays an important administrative role. The medical director must be a board-certified surgeon with special interest in trauma care. The medical director will be responsible for developing a performance improvement process and will have overall accountability and administrative authority for the trauma program. The medical director must be given administrative support to implement the requirements specified by the State trauma plan. The director is responsible for working with the credentialing process of the hospital, and in consultation with the appropriate service chiefs, for recommending appointment and removal of physicians from the trauma team. He should cooperate with nursing administration to support the nursing needs of the trauma patient and develop treatment protocols for the trauma patients. The director in collaboration with the Trauma Program Manager/TPM should coordinate the budgetary process for the trauma program. The director must be currently certified in Advanced Trauma Life Support (ATLS), maintain personal involvement in care of the injured, maintain education in trauma care, and maintain involvement in professional organizations. The trauma director must be actively involved with the trauma system development at the community, regional and state level.

800.05 Multidisciplinary Trauma Committee

The purpose of the committee is to provide oversight and leadership to the entire trauma program. The exact format will be hospital specific and may be accomplished by collaboration with another designated trauma center in the region. Each trauma center may choose to have one or more committees as needed to accomplish the task. One committee should be multidisciplinary and focus on program oversight and leadership. The major focus will be on PI activities, policy development, communication among all team members, and establishment of standards of care, and education and outreach programs for injury prevention. The committee has administrative and systematic control and oversees implementation of all program related services, meets regularly, takes attendance, maintains minutes and works to correct overall program deficiencies to optimize patient care. Suggested membership for the committee includes representatives from:

a. Administration

b. Operating Room

c. Anesthesia

d. Orthopedics

e. Emergency Medicine

f. Pediatrics

g. General Surgery

h. Prehospital Care Providers

i. Intensive Care

j. Radiology

k. Laboratory

l. Rehabilitation

m. Neurosurgery

n. Respiratory Therapy

o. Nursing

p. Trauma Program Manager/TPM

q. The clinical managers (or designees) of the departments involved with trauma care should play an active role with the committee.

The trauma center may wish to accomplish performance improvement activities in this committee or develop a separate peer review committee. This committee should handle peer review independent from department based review. The committee must meet regularly and maintain attendance and minutes. This committee must report findings to the overall hospital performance improvement program.

800.06 <u>Trauma Program Manager/TPM</u>

Level I Trauma Centers must have a registered nurse working full time in the role of Trauma Program Manager/TPM. Working in conjunction with the medical director, the Trauma Program Manager/TPM is responsible for organization of the program and all systems necessary for the multidisciplinary approach throughout the continuum of trauma care. The Trauma Program Manager/TPM is responsible for working with the trauma team to assure optimal patient care. There are many requirements for data coordination and performance improvement, education and prevention activities incumbent upon this position.

The Trauma Program Manager/TPM or his/hers designee should offer or coordinate services for trauma education. The Trauma Program Manager/TPM should liaison with

local EMS personnel, the Department, Regional Trauma Advisory Committee and other trauma centers.

800.07 Hospital Departments/Divisions/Sections

The Level I trauma center must have the following departments, divisions, or sections:

1. General Surgery, (identified liaison)
2. Neurological Surgery, (identified liaison)
3. Orthopedic Surgery, (identified liaison)
4. Emergency Medicine, (identified liaison)
5. Anesthesia, (identified liaison)
6. PACU,
7. Intensive Care Unit,
8. Respiratory Therapy

801. CLINICAL COMPONENTS

801.01 Required Components

Level I trauma centers must maintain published call schedules and have the following medical specialist immediately available 24 hours/day:

a. Emergency Medicine (In-house 24 hours/day)

b. Trauma/General Surgery (In-house 24/hours)

Note: The trauma surgeon on-call must be unencumbered and immediately available to respond to the trauma patient. The 24 hour-in-house availability of the attending surgeon is the most direct method for providing this involvement. A PGY 4 or 5 resident may be approved to begin the resuscitation while awaiting the arrival of the attending surgeon but cannot be considered a replacement for the attending surgeon in the ED. This may allow the attending surgeon to take call from outside the hospital. The general surgeon is expected to be in the emergency department upon arrival of the seriously injured patient. Hospital policy must be established to define conditions requiring the trauma surgeon's presence with the clear requirement on the part of the hospital and surgeon that the surgeon will participate in the early care of the patient. The trauma surgeon's participation in major therapeutic decisions, presence in the emergency department for major resuscitation and presence at operative procedures is mandatory. There must be a back-up surgeon schedule published. The surgeon on-call must be dedicated to the trauma center and not on-call to any other hospital while on trauma call. A system must be developed to assure early notification of the on-call to any other hospital while on trauma call. A system must be developed to assure notification of the on-call surgeon and compliance with these criteria and their appropriateness must be documented and monitored by the PI process.

c. Anesthesia (In-house 24 hours/day)

Note: Anesthesia must be promptly available with a mechanism established to ensure early notification of the on-call anesthesiologist. Anesthesia must be in-house and available 24 hours/day. Anesthesia chief residents or Certified Nurse Anesthetist (CRNAs) may fill this requirement. When residents or CRNAs are utilized, the staff anesthesiologist on-call will be advised, promptly available, and present for all operations. Hospital policy must be established to determine when the anesthesiologist must be immediately available for airway control and assisting with resuscitation. The availability of the anesthesiologist and the absence of delays in airway control or operative anesthesia must be documented and monitored by the PI process.

The following specialists must be on-call and promptly available 24 hours/day:

i. Cardiac Surgery

ii. Cardiology

iii. Critical Care Medicine

iv. Hand Surgery

v. Infectious Disease

vi. Microvascular Surgery

vii. Nephrology

viii. Neurologic Surgery

Note: The neurosurgeons on the trauma team must be board certified The neurosurgery liaison must maintain 48 hours of trauma CME over 3 years and it is desirable maintain current ATLS certification, a mechanism may be established to "grandfather" non-board certified neurosurgeons as determined by hospital policy. The neurosurgeon liaison to the trauma service must attend 50% of the peer review committees annually and participate in the Multidisciplinary Trauma Committee. It is desirable to have the neurosurgeon dedicated to the trauma center solely while on-call or a back up schedule should be available.

ix. Nutritional Support

x. Obstetrics/Gynecologic Surgery

xi. Ophthalmic Surgery

xii. Oral/Maxillofacial

xiii. Orthopedic Surgery

Note: The orthopedics liaison on the trauma team must be board certified, maintain 48 hours of trauma related CME over 3 years and it is desirable to maintain current ATLS certification. In Mississippi, a mechanism may be established to "grandfather" non-board certified orthopedists as determined by hospital policy. Achieving the standard for ATLS may take three to five years due to availability to ATLS course in the state. The

orthopedic liaison to the Trauma Service must attend 50% of the peer review committees annually and participate with the Multidisciplinary Trauma Committee. It is desirable to have the orthopedists dedicated to the trauma center solely while on-call or a back up schedule should be available.

xiv. Pediatrics

xv. Plastic Surgery

xvi. Pulmonary Medicine

xvii. Radiology

xviii. Thoracic Surgery

Recognizing that early rehabilitation is imperative for the trauma patient, a physical medicine and rehabilitation specialist must be available for the trauma program.

A trauma surgeon is presumed to be qualified and have privileges to provide emergency thoracic surgical care to patients with thoracic injuries. If this is not the case, the facility should have a board-certified thoracic surgeon immediately available.

Polices and procedures should exist to notify the patient's primary physician of the patient's condition.

801.02 <u>Qualifications of Physicians on the Trauma Team</u>

Basic to qualification for trauma care for any surgeon is Board Certification in a surgical specialty recognized by the American Board of Medical Specialties, the Advisory Board for Osteopathic Specialties, the Royal College of Physicians, the American Dental Association and Surgeons of Canada, or other appropriate foreign board. Many boards require a practice period. Such an individual may be included when recognition by major professional organizations has been received in their specialty. The board certification criteria apply to the general surgeons, orthopedic surgeons, and neurosurgeons.

a. Alternate criteria in lieu of board certification are as follows:

b. A non-board certified general surgeon must have completed a surgical residency program.

c. He/she must be licensed to practice medicine.

d. Approved by the hospital's credentialing committee for surgical privileges.

e. The surgeon must meet all criteria established by the trauma director to serve on the trauma team.

f. The surgeons' experience in caring for the trauma patient must be tracked by the PI program.

b. The trauma director must attest to the surgeons' experience and quality as part of the recurring granting of trauma team privileges.

c. The trauma director using the trauma PI program is responsible for determining each general surgeon's ability to participate on the trauma team.

The surgeon is expected to serve as the captain of the resuscitating team and is expected to be in the emergency department upon arrival of the seriously injured patient to make key decisions about the management of the trauma patient's care. The surgeon will coordinate all aspects of treatment, including resuscitation, operation, critical care, recuperation and rehabilitation (as appropriate in a Level I facility) and determine if the patient needs transport to a higher lever of care. If transport is required he/she is accountable for coordination of the process with the receiving physician at the receiving facility. If the patient is to be admitted to the Level I trauma center, the surgeon is the admitting physician and will coordinate the patient care while hospitalized. Guidelines should be written at the local level to determine which types of patients should be admitted to the Level I trauma center or which patients should be considered for transfer to a higher level of care.

The general surgery liaison and emergency physician liaison must participate in a multidisciplinary trauma committee and the PI process. Peer review committee attendance must be greater than fifty percent over a year's period of time. General Surgery and Emergency physicians must be currently certified in ATLS, and it is desirable that they be involved in at least forty eight (48) hours of trauma related continuing education (CME) every 3 years.

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements are waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

For those physicians providing emergency medicine coverage, board certification in Emergency Medicine is desirable. However, career emergency medicine physicians who are board certified in a specialty recognized by the American Board of Medical Specialties, a Canadian Board or other equivalent foreign board meets the requirements.

Alternative criteria for the non-boarded physician working in the Emergency Department are as follows:

a. He/she must be licensed to practice medicine

b. Approved by the hospital's credentialing committee for emergency medicine privileges.

c. The physician must meet all criteria established by the trauma and emergency medical director to serve on the trauma team.

d. The physician's experience in caring for the trauma patient must be tracked by the PI program.

e. The trauma and emergency medical director must attest to the physician's experience and quality as part of the recurring granting of trauma team privileges.

f. Residency in Emergency Medicine is desirable.

802. FACILITY STANDARDS

802.01 Emergency Department

The facility must have an emergency department, division, service, or section staffed so trauma patients are assured immediate and appropriate initial care. The emergency physician must be in-house 24 hours/day and immediately available at all times. The emergency department medical director must meet the recommended requirements related to commitment, experience, continuing education, ongoing credentialing, and board certification in emergency medicine.

The director of the emergency department, along with the trauma director, will establish trauma-specific credentials that should exceed those that are required for general hospital privileges. Examples of credentialing requirements would include skill proficiency, training requirements, conference attendance, education requirements, ATLS verification and specialty board certification.

The emergency physician liaison must maintain 48 hours of trauma related CME over 3 years. Over a three-year period, at least one-half (24 hours) should be obtained outside the physician's own institution.

Emergency physicians must maintain ATLS verification

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

The emergency medicine physician will be responsible for activating the trauma team based on predetermined response protocols. He will provide team leadership and care for the trauma patient until the arrival of the surgeon in the resuscitation area. The emergency department must have established standards and procedures to ensure immediate and appropriate care for the adult and pediatric trauma patient. The emergency department medical director, or his/her designee, must act as a liaison and participate with the Multidisciplinary Trauma Committee and the trauma PI process.

Basic to qualification for trauma care for any physician is board certification in a specialty recognized by the American Board of Medical Specialties, the Advisory Board of Osteopathic Specialties, the Royal College of Physicians and Surgeons of Canada, or other appropriate foreign board.

Alternate criteria in lieu of board certification are as follows:

1. A non-board certified physician must have completed an approved residency program.

2. He/she must be licensed to practice medicine.

3. Approved for emergency medicine by the hospital's credentialing committee.

4. The physician must meet all criteria established by the trauma director and emergency medical director to serve on the trauma team.

5. The physician's experience in caring for the trauma patient must be tracked by the PI Program.

6. The trauma director and emergency medicine director must attest to the physicians' experience and quality as part of the recurring granting of trauma team privileges.

7. Must have at least 12 months experience caring for the trauma patient tracked by the PI program.

There should be an adequate number of RN's staffing the trauma resuscitation area in-house 24 hours/day. Emergency nurses staffing the trauma resuscitation area must be a current provider of Trauma Nurse Core Curriculum (TNCC) and participate in the ongoing PI process of the trauma program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

NOTE: ER nurses must obtain TNCC within 18 months.

There is a complete list of required equipment necessary for the ED can be found in Section 804.01.

802.02 Surgical Suites/Anesthesia

The operating room (OR) must be staffed and available in-house 24 hours/day.

The OR nurses should participate in the care of the trauma patient and be competent in the surgical stabilization of the major trauma patient.

The Surgical nurses are an integral member of the trauma team, and must participate in the ongoing PI process of the trauma program and be represented on the Multidisciplinary Trauma Committee.

The OR supervisor must be able to demonstrate a prioritization scheme to assure the availability of an operating room for the emergent trauma during a busy operative schedule. There must be an on-call system for additional personnel for multiple patient admissions.

There is a complete list of required equipment necessary for Surgery can be found in Section 804.01.

The anesthesia department in a Level I trauma center should be ideally organized and run by an anesthesiologist who is highly experienced and devoted to the care of the injured patient. If this is not the director, an anesthesiology liaison with the same qualifications should be identified. Anesthesiologist on the trauma team must have

successfully completed an anesthesia residency program approved by the Accreditation Council for Graduate Medical Education, the American Board of Osteopathic Specialties and have board certification in anesthesia. One anesthesiologist should maintain commitment to education in trauma related anesthesia.

Anesthesia must be available in-house 24 hours/day with a mechanism established to ensure early notification of the on-call anesthesiologist. Anesthesia requirements may be fulfilled by anesthesia chief residents or Certified Registered Nurse Anesthetist (CRNAs) who are capable of assessing emergent situations in trauma patients and of providing indicated treatment, including initiation of surgical anesthesia. When the CRNA or chief resident is used to meet this requirement, the staff Anesthesiologist will be advised and promptly available at all times and present for operations. Trauma centers must document conditions when the anesthesiologist must be immediately available for airway emergencies and operative management of the trauma patient. The availability of the anesthesiologist and the absence of delays in operative anesthesia must be documented and monitored by the PI process. The anesthesiologist participating on the trauma team must participate in the Multidisciplinary Trauma Committee and the trauma PI process.

802.03 Post Anesthesia Care Unit (PACU)

Level I trauma centers must have a PACU staffed 24 hours/day and available to the postoperative trauma patient. Frequently it is advantageous to bypass the PACU and directly admit to the ICU. In this instance, the ICU may meet these requirements.

PACU nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

PACU staffing should be in sufficient numbers to meet the critical needs of the trauma patient. A complete list of required equipment necessary for the PACU can be found in Section 804.01.

802.04 Intensive Care Unit

Level I trauma centers must have an Intensive Care Unit (ICU) that meets the needs of the adult trauma patient.

a. **Surgical Director**

The surgical director for the ICU – which houses trauma patients - must have obtained critical care training during residency or fellowship and must have expertise in the preoperative and post injury care of the injured patient. This is best demonstrated by a certificate of added qualification in surgical critical care from the American Board of Surgery and may also be fulfilled by documentation of active participation during the preceding 12 months in trauma patients' ICU care and ICU administration and critical care-related continuing medical education. The director is responsible for the quality of care and administration of the ICU and will set policy and establish standards of care to meet the unique needs of the trauma patient.

b. **Physician Coverage**

The trauma service assumes and maintains responsibility for the care of the multiple injured patient. A surgically directed ICU physician team is essential. The team will provide in-house physician coverage for all ICU trauma patients at all times. This service can be staffed by appropriately trained physicians from different specialties, but must be led by a qualified surgeon as determined by critical care credentials consistent with the medical staff privileging process of the institution.

There must be in-house physician coverage for the ICU at all times. A physician credentialed by the facility for critical care should be promptly available to the trauma patient in the ICU 24 hours/day. This coverage is for emergencies only and is not intended to replace the primary surgeon but rather is intended to ensure that the patient's immediate needs are met while the surgeon is contacted.

The trauma service should maintain the responsibility for the care of the patient as long as the patient remains critically ill. The trauma service must remain in charge of the patient and coordinate all therapeutic decisions. The responsible trauma surgeon or designee should write all orders. The trauma surgeon should maintain control over all aspects of care, including but not limited to respiratory care and management of mechanical ventilation; placement and use of pulmonary catheters; management of fluid and electrolytes, antimicrobials, and enteral and parenteral nutrition.

c. **Nursing Personnel**

Level I trauma centers must provide staffing in sufficient numbers to meet the critical needs of the trauma patient. Critical care nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing trauma specific education. ICU nurses are integral part of the trauma team and as such, should be represented on the Multidisciplinary Trauma Committee and participate in the PI process of the trauma program.

There is a complete list of necessary equipment for the ICU in Section 804.01.

803. CLINICAL SUPPORT SERVICES

803.01 Respiratory Therapy Service

The service must be staffed with qualified personnel in-house 24 hours/day to provide the necessary treatment for the injured patient.

803.02 Radiological Service

A radiological service must have a certified radiological technician in-house 24 hours/day and immediately available at all times for general radiological procedures. Sonography, angiography, and MRI must be available to the trauma team. A technician must be in-house and immediately available for computerized tomography (CT) for both head and body. Specialty procedures such as angiography, MRI, and sonography

may be covered with a technician on-call. If the technician is not in-house 24 hours/day for special procedures the performance improvement process must document and monitor that the procedure is promptly available.

A board-certified radiologist should administer the department and participate actively in the trauma education and PI process. A staff radiologist must be promptly available, when requested, for the interpretation of radiographs, performance of complex imaging studies or interventional procedures. The radiologist must insure the preliminary interpretations are promptly reported to the trauma team and the PI program must monitor all changes in interpretation.

Written policy should exist delineating the prioritization/availability of the CT scanner for trauma patients. The PI process must ensure that trauma patients are accompanied by appropriately trained licensed providers and that the appropriate resuscitation and monitoring are provided during transportation to and while in the radiology department.

The radiologist must ensure the preliminary interpretations are promptly reported to the trauma team and the PI Program must monitor all changes in interpretation.

803.03 Clinical Laboratory Service

Clinical laboratory service must have the following services available in-house 24 hours/day:

a. Access to a blood bank and adequate storage facilities. Sufficient quantities of blood and blood products must be maintained at all times. Blood typing and cross-match capabilities must be readily available.

b. Standard analysis of blood, urine and other body fluids including micro-sampling when appropriate.

c. Blood gas and PH determinations (this function may be performed by services other than the clinical laboratory service, when applicable.)

d. Alcohol screening is required and drug screening is highly recommended.

e. Coagulation studies.

f. Microbiology

Sufficient numbers of clinical laboratory technologists shall be in-house 24 hours/day and promptly available at all times. It is anticipated that facilities may cross-train personnel for other roles. This is acceptable as long as there is no response delay.

803.04 Acute Hemodialysis

Level I Trauma Centers must have Acute Hemodialysis services. There must be a written transfer agreement with a facility that provides this service if this service if it is not available at the Level I trauma center.

803.05 Burn Care

There must be a written transfer agreement to a Burn Center if this service is unavailable at the Level I trauma center. Policies and procedures should be in place to assure the appropriate care is rendered during the initial resuscitation and transfer of the patient.

803.06 Rehabilitation/Social Services

The rehabilitation of the trauma patient and the continued support of the family members are an important part of the trauma system. Each facility will be required to address a plan for integration of rehabilitation into the acute and primary care of the trauma patient, at the earliest stage possible after admission to the trauma center. Hospitals will be required to identify a mechanism to initiate rehabilitation services and/or consultation in a timely manner as well as policies regarding coordination of the Multidisciplinary Rehabilitation Team. Policies must be in place to address the coordination of transfers between acute care facilities and approved rehabilitation facilities. There must be a written transfer agreement with a facility that provides this service if this service is not available at the Level I Trauma Center. Transfer agreements should include a feedback mechanism for the acute care facilities to update the health care team on the patient's progress and outcome for inclusion in the trauma registry. The rehabilitation services should minimally include; Occupational Therapy, Physical Therapy, and Speech Pathology.

The nature of traumatic injury requires that the psychological needs of the patient and family are considered and addressed in the acute stages of injury and throughout the continuum of recovery. Adequate number of trained personnel must be readily available to the trauma patients and family. Programs must be available to meet the unique need of the trauma patient.

803.07 Prevention/Public Outreach

Level I trauma centers will be responsible for taking a lead role in coordination of appropriate agencies, professional groups and hospitals in their region to develop a strategic plan for public awareness. This plan must take into consideration public awareness of the trauma system, access to the system, public support for the system, as well as specific prevention strategies. Prevention programs must be specific to the needs of the region. The trauma registry data must be utilized to identify injury trends and focus prevention needs.

Outreach is the act of providing resources to individuals and institutions that do not have the opportunities to maintain current knowledge and skills. Staff members at a Level I trauma center must provide consultation to staff members of other level facilities. For example: Advanced Trauma Life Support (ATLS), Pre Hospital Trauma Life Support (PHTLS), Trauma Nurse Curriculum Course (TNCC), and Flight Nurse Advanced Trauma Course (FNATC) courses can be coordinated by the trauma center. Trauma physicians must provide a formal follow up to referring physicians/designee about specific patients to educate the practitioner for the benefit of further injured patients.

803.08 Transfer Protocol

Level I trauma centers should work in collaboration with the referral trauma facilities in their region and develop interfacility transfer guidelines. These guidelines must address criteria to identify high-risk trauma patients that could benefit from a higher level of trauma care. All designated facilities will agree to provide services to the trauma victim regardless of his/her ability to pay.

When a patient in need of trauma services is transferred to a receiving facility capable of providing the needed care, from a transferring facility which cannot provide an adequate level of care, the following shall apply: When a determination is made by appropriate medical personnel of the receiving facility that a patient transferred from the transferring facility has been stabilized, no longer has an emergency medical condition or no longer requires the specialty services provided at the receiving facility, but the patient still requires further acute care, the transferring facility, with the consent of the patient and the patient's physician, agrees to readmit the transferred patient for appropriate acute care within 24 to 48 hours of such a determination. The patient's physician, the chief of the medical staff or other authorized representative of the transferring facility shall facilitate the identification of the patient's physician or his/her designee to accept the patient and transfer the patient back to the transferring facility.

Transfer protocols must be written for specialty referral centers such as pediatrics, burns or spinal cord injury when these services are not available to the trauma center. The transfer protocols must include a feedback loop so that the primary provider has a good understanding of the patient outcome. Every effort should be made to repatriate the trauma patient to his/her local community hospital or provider hospital if appropriate.

803.09 Performance Improvement/Evaluation

A key element in trauma system planning is evaluation. All licensed hospitals which have organized emergency services or departments will be required to participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since these data relate to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential as provided in Miss. Code Ann.§41-59-77. Level I trauma facilities may be responsible for direct assistance to all other levels of referring facilities in providing data for inclusion in the registry.

Each trauma center must develop an internal trauma specific Performance Improvement (PI) plan that minimally addresses the following key components and is fully integrated into the hospital wide program:

a. An organizational structure that facilitates performance improvement (Multidisciplinary Trauma Committee).

b. Clearly defined authority and accountability for the program.

c. Clearly stated goals and objectives one of which should be reduction of inappropriate variations in care.

d. Development of expectations (criteria) from evidenced based guidelines, pathways and protocols. These should be appropriate, objectively defined standards to determine quality of care.

e. Explicit definitions of outcomes derived from institutional standards.

f. Documentation system to monitor performance, corrective action and the result of the actions taken.

g. A process to delineate credentialing of all trauma service physicians.

h. An informed peer review process utilizing a multidisciplinary method.

i. A method for comparing patient outcomes with computed survival probability.

j. Autopsy information on all deaths when available.

k. Review of prehospital care.

l. Review of times and reasons for trauma bypass.

m. Review of times and reasons for trauma transfers.

n. Audit of trauma deaths.

o. Morbidity and Mortality review.

Representatives from the Level I trauma center shall participate in the Regional Trauma Advisory Committees and the statewide performance improvement process.

803.10 Trauma Registry

All licensed hospitals which have organized emergency services or departments must participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since this data relates to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential and will be governed by the Miss. Code Ann.§41-59-77.

Compliance with the above will be evidenced by:

a. Documentation of utilization of the Trauma Registry data in the trauma performance improvement process

b. Timely submission of Trauma Registry Data to the Bureau of EMS and the appropriate Region at least monthly.

803.11 Education

Level I trauma centers must have medical education programs including educational training in trauma for physicians, nurses and prehospital providers. The Level I trauma

centers must take a leadership role in providing educational activities. Education can be accomplished via many mechanisms (i.e. classic CME, preceptorships, fellowships, clinical rotations, telecommunications or providing locum tenens etc).

The Level I trauma center is expected to support a surgical residency program. Additionally there should be a senior resident rotation in at least one of the following disciplines: emergency medicine, general surgery, orthopedic surgery, neurosurgery or support a trauma fellowship consistent with the educational requirements of the American Association for the Surgery of Trauma (AAST). The Level I should provide ATLS courses for the region.

803.12 Research

A trauma research program must be designed to produce new knowledge applicable to the care of the injured patient. The research may be conducted in a number of ways including traditional laboratory and clinical research, reviews of clinical series, and epidemiological or other studies. Publication of articles in peer-review journals as well as presentations of results at local, regional and national meetings and ongoing studies approved by human and animal research review boards are expected from productive programs. The program should have an organized structure that fosters and monitors ongoing productivity.

The research program must be balanced to reflect a number of different interests. There must be a research committee, and identifiable Institutional Review Board process, active research protocols, surgeons involved in extramural educational presentations and adequate number of peer reviewed scientific publications. Publications should appear in peer-reviewed journals. In a three-year cycle, the suggested minimum activity is ten publications (per review cycle) from the physicians representing any of the four following specialties: emergency medicine, general surgery, orthopedic surgery, and neurosurgery.

804.01 Essential and Desirable Chart for Level 1 Trauma Center

		Level I
1	Institutional Organization	
2	Trauma Program	E
3	Trauma Service	E
4	Trauma Team	E
5	Trauma Program Medical Director	E
6	Trauma Multidisciplinary Committee	E
7	Trauma Program Manager	E
8	Hospital Departments/Divisions/Sections	
9	Surgery	E
10	Neurological Surgery	E
11	Neurosurgical Trauma Liaison	E
12	Orthopaedic Surgery	E
13	Orthopaedic Trauma Liaison	E
14	Emergency Medicine	E
15	Anesthesia	E

16	Clinical Capabilities	
17	(Specialty Immediately Available 24 hours/day)	
18	Published on-call schedule	E
19	General Surgery	E
20	Published back-up schedule	E
21	Dedicated to single hospital when on-call *11	E
22	Anesthesia	E
23	Emergency Medicine	E
24	On-call and promptly available 24 hours/day	
25	Cardiac Surgery	E
26	Hand Surgery	E
27	Microvascular/replant Surgery	E
28	Neurological Surgery	E
29	Dedicated to one hospital or back-up call	E
30	Obstetrics/Gynecologic Surgery	E
31	Ophthalmic Surgery	E
32	Oral/Maxillofacial Surgery	E
33	Orthopaedic Surgery	E
34	Plastic Surgery	E
35	Critical Care Medicine	E
36	Radiology	E
37	Thoracic Surgery	E
38	Clinical Qualifications	
39	General/Trauma Surgeon:	
40	Current Board Certification	E *(1)
41	16 Hours CME/Year (7)	E
42	ATLS Completion *(2) (10)	E
43	Peer Review Committeeliaison Attendance ≥ 50%	E
44	Multidisciplinary Committee liaison Attendance	E
45	Emergency Medicine:	
46	Board Certification	E *(6)
47	16 Hours CME/Year (7)	E
48	ATLS Completion *(2) (10)	E
49	Peer Review Committee liaison Attendance ≥ 50%	E
50	Multidisciplinary Committee liaison Attendance	E
51	Neurosurgery:	
52	Current Board Certification	E
53	16 Hours CME/Year (7)	E
54	ATLS Completion *(2) (10)	D

55	Peer Review Committee liaison Attendance ≥ 50%	E
56	Multidisciplinary Committee liaison Attendance	E
57	Orthopaedic Surgery:	
58	Current Board Certification	E
59	16 Hours CME In Trauma/Year (7)	E
60	ATLS Completion *(2) (10)	D
61	Peer Review Committee liaison Attendance ≥ 50%	E
62	Multidisciplinary Committee liaison Attendance	E
63	Facilities/Resources/Capabilities	
64	Volume Performance	
65	Trauma Admissions: 1,200/year	--
66	Patients with ISS > 15 (240 total or 35 patients/surgeon)	--
67	Presence of Surgeon at resuscitation	E
68	Presence of Surgeon at Operative Procedures	E
69	Emergency Department	
70	Personnel	
71	Designated physician director	E
72	RN in-house and available	E *(4)
73	Equipment for Resuscitation for Patients of all ages	
74	Airway control and ventilation equipment	E
75	Pulse Oximetry	E
76	Suction Devices	E
77	Electrocardiograph-Oscilloscope-Defibrillator	E
78	Internal Paddles	E
79	CVP Monitoring Equipment	E
80	Standard IV Fluids and Administration Sets	E
81	Large bore intravenous catheters	E
82	Sterile Surgical Sets for:	
83	Airway control/cricothyrotomy	E
84	Thoracostomy	E
85	Venous cut-down	E
86	Central line insertion	E
87	Thoracotomy	E
88	Peritoneal lavage	E
89	Arterial catheters	E
90	Ultrasound	E
91	Drugs necessary for emergency care *(5)	E

92	X Ray availability 24 hours/day	E
93	Cervical spine stabilization devices	E
94	Broselow tape	E
95	Thermal control equipment:	
96	For Patient	E
97	For fluids and blood	E
98	Rapid Infuser system *(8)	E
99	Qualitative end-tidal CO2 determination	E
100	Communication with EMS vehicles	E
101	Operating Room	
102	Immediately available 24 hours/day	E
103	Personnel	
104	In-house 24 hours/day	E
105	Available 24 hours/day	--
106	Age-specific equipment	
107	Cardiopulmonary bypass	E
108	Operating microscope	E
109	Thermal control equipment	
110	For patient	E
111	For blood/fluids	E
112	X Ray capability, including c-arm image intensifier	E
113	Endoscopes, bronchoscope	E
114	Craniotomy instruments	E
115	Equipment for long bone and pelvic fixation	E
116	Rapid infuser system * (9)	E
117	Pulse oximetry	E
118	Qualitative end-tidal CO2 determination	E
119	Postanesthetic Recovery Room (SICU acceptable)	
120	Registered nurses available 24 hours/day	E
121	Equipment for monitoring and resuscitation	E
122	Intercranial pressure monitoring equipment	E
123	Pulse oximetry	E
124	Thermal control	E
125	Intensive or Critical Care Unit for Injured Patients	
126	Registered nurses with trauma education* (9)	E
127	Designated surgical director or surgical co-director	E
128	Surgical ICU service physician in-house 24 hours/day	E
129	Surgically directed and staffed ICU service	E
130	Equipment for monitoring and resuscitation	E
131	Intracranial monitoring equipment	E
132	Pulmonary artery monitoring equipment	E

133	Respiratory Therapy Services	
134	Available in-house 24 hours/day	E
135	On call 24 hours/day	--
136	Radiological Services (Available 24 hours/day)	
137	In-house radiology technologist	E
138	Angiography	E
139	Sonography	E
140	Computed Tomography	E
141	In-house CT technician	E
142	Magnetic resonance imaging	E
143	Clinical Laboratory Services (Available 24 hours/day)	
144	Standard analysis of blood, urine and other body fluids, including microsampling when appropriate	E
145	Blood typing and cross-matching	E
146	Coagulation studies	E
147	Comprehensive blood bank or access to a community central blood bank and adequate storage facilities	E
148	Blood gases and pH determinations	E
149	Microbiology	E
150	Acute Hemodialysis	
151	In-house	E
152	Transfer agreement	--
153	Burn Care - Organized	
154	In-house or transfer agreement with Burn Center	E
155	Rehabilitation Services	
156	Transfer agreement to an approved rehab facility	E
157	Physical Therapy	E
158	Occupational Therapy	E
159	Speech Therapy	E
160	Social Services	E
161	Performance Improvement	
162	Performance improvement programs	E
163	Trauma Registry	
164	In-house	E
165	Participation in state, local, or regional registry	E
166	Orthopaedic database	D

167	Audit of all trauma deaths	E
168	Morbidity and mortality review	E
169	Multidisciplinary trauma committee	E
170		
171	Review of prehospital trauma care	E
172	Review of times/reasons for trauma-related bypass	E
173	Review of times/reasons for transfer of injured patients	E
174		~~E~~
175	Participate in regional review of prehospital trauma care, times/reasons for trauma-related bypass, times/treasons for transfer of injured patient	E
176	PI process established to monitor response times for all on-call personnel	E
194	Trauma registry PI activities	E
177	Continuing Education/Outreach	
177	General surgery residency program	D
178	ATLS provide/participate	E
179	Programs provided by hospital for:	
180	Staff/Community physicians (CME)	E
181	Nurses	E
182	Allied health personnel	E
183	Prehospital personnel provision/participation	E
184	Prevention	
185	Injury control studies	E
186	Collaboration with other institutions	E
187	Monitor progress/effect of prevention programs	E
188	Designated prevention coordinator/spokesperson	E
189	Outreach activities	E
190	Information resources for public	E
191	Collaboration with existing programs	E
192	Coordination and/or participation in community prevention activities	E
193	Research	
195	Research committee	E
196	Identifiable IRB process	E
197	Extramural education presentations	E
199	Number of scientific publications	E

200	* (1) Mississippi standards will require at least one general surgeon to be board certified. Alternated criteria may be substituted for other staff.
201	* (2) Mississippi standards will require a current ATLS completion card. Physicians have up to one (1) year after hiring to obtain ATLS certification.
202	* (3) Some mechanisms for “grandfathering” in non-board certified neurosurgeons and orthopedic surgeons will be developed by hospital policy.
203	* (4) The RN in-house and available in the ED must b a current provider of TNCC.
204	* (5) Drugs necessary for emergency care will be defined by the prehospital drug list set forth by the Bureau of Emergency Medical Services.
205	* (6) Board certified or alternative criteria as established by hospital policy.
206	* (7) Can be accompanied with 48 hours of trauma education over three (3) years.
207	* (8) Simple pressure bag.
208	* (9) Ongoing critical care education bi-annually.
209	*(10) ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.
210	*(11) If neurosurgery is not dedicated to one hospital while on-call a published back-up call schedule must be available.

Chapter 09 LEVEL II TRAUMA CENTERS

A Level II trauma center is an acute care facility with the commitment, resources and specialty training necessary to provide sophisticated trauma care.

900 HOSPITAL ORGANIZATION

900.01 Trauma Program

There must be a written commitment on behalf of the entire facility to the organization of trauma care. The written commitment shall be in the form of a resolution passed by an appropriate quorum of the members of the governing authority. Should the business organization be other than a corporation, a letter explaining such together with a written commitment of the hospital's chief executive officer to the establishment of a trauma care program may be sufficient. The trauma program must be established and recognized by the medical staff and hospital administration. The trauma program must come under the direction of a board-certified surgeon with special interest in trauma care. An identified hospital administrative leader must work closely with the trauma medical director to establish and maintain the components of the trauma program including appropriate financial support. The trauma program location in the organizational structure of the hospital must be placed so that it may interact effectively with at least equal authority with other departments providing patient care. An administrative structure should minimally include an administrator, medical director, trauma program manager (TPM), trauma registrar and the appropriate support staff. Administrative support includes human resources, educational activities, community outreach activities, and research. The trauma program must be multidisciplinary in nature and the performance improvement evaluation of this care should extend to all the involved departments.

Compliance with the above will be evidenced by but not limited to:

1. Governing authority and medical staff letter of commitment in the form of a resolution
2. Written policies and procedures and guidelines for care of the trauma patient
3. Defined trauma team and written roles and responsibilities
4. Appointed Trauma Medical Director with a written job description
5. Appointed Trauma Program Manager with a written job description
6. A written Trauma Performance Improvement plan
7. Documentation of trauma center representative attendance at the regional trauma advisory committee meetings

900.02 Trauma Service

The trauma service must established and recognized by the medical staff and be responsible for the overall coordination and management of the system of care rendered to the injured patient. The trauma service will vary in each organization depending on the needs of the patient and the resources available. The trauma service must come under the organization and direction of a surgeon who is board certified with special interest in trauma care. All patients with multiple system trauma or major injury must be evaluated by the trauma service. The surgeon responsible for the overall care of the patient must be identified.

900.03 Trauma Team

The team approach is optimal in the care of the multiple injured patient. There must be identified members of the trauma team. Policies should be in place describing the respective role of all personnel on the trauma team. The composition of the trauma team in any hospital will depend on the characteristics of that hospital and it's staff. In some instances a tiered response may be appropriate. If a tiered response is employed written policy must be in place and the system monitored by the PI process. The team leader must be a qualified general surgeon. All physicians on the trauma team responsible for directing the initial resuscitation of the trauma patients must be currently certified in The American College of Surgeons Advanced Trauma Life Support (ATLS). Suggested composition of the trauma team for a severely injured patient may include:

a. Anesthesiologist

b. Pediatricians

c. Emergency Physicians

d. Physician Specialist

e. Laboratory Technicians as dictated by clinical needs

f. Mental Health/Social Services/ Radiology Technicians

g. Pastoral Care

h. Respiratory Therapists

i. Nurses: ED, OR, ICU, etc.

j. General/Trauma Surgeon

11. Security Officers

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

900.04 Medical Director

Level II Trauma Centers must have a physician director of the trauma program. The trauma program medical director plays an important administrative role. The medical director must be a board-certified surgeon with special interest in trauma care. The medical director will be responsible for developing a performance improvement process and will have overall accountability and administrative authority for the trauma program. The medical director must be given administrative support to implement the requirements specified by the State trauma plan. The director is responsible for working with the credentialing process of the hospital, and, in consultation with the appropriate service chiefs, recommending appointment and removal of physicians from the trauma team. He should cooperate with nursing administration to support the nursing needs of the trauma patient and develop treatment protocols for the trauma patients. The director in collaboration with the trauma program manager/TPM should coordinate the budgetary process for the trauma program. The director must be currently certified in Advanced Trauma Life Support (ATLS), maintain personal involvement in care of the injured, maintain education in trauma care, and maintain involvement in professional organizations. The trauma director must be actively involved with the trauma system development at the community, regional and state level.

900.05 Multidisciplinary Trauma Committee

The purpose of the committee is to provide oversight and leadership to the entire trauma program. The exact format will be hospital specific and may be accomplished by collaboration with another designated trauma center in the region. Each trauma center may choose to have one or more committee to accomplish the tasks necessary. One committee should be multidisciplinary and focus on program oversight and leadership. The major focus will be on PI activities, policy development, communication among all team members, establishment of standards of care, education and outreach programs, and injury prevention. The committee has administrative and systematic control and oversees implementation of all program related services, meets regularly, takes attendance, maintains minutes and works to correct overall program deficiencies to optimize patient care. Suggested membership for the committee includes representatives from:

a. Administration

b. Operating Room

c. Anesthesia

d. Orthopedics

e. Emergency Department

f. Pediatrics

g. General Surgery

h. Prehospital Care Providers

i. Intensive Care

j. Radiology

k. Laboratory

l. Rehabilitation

m. Neurosurgery

n. Respiratory Therapy

o. Nursing

p. Trauma Program Manager/TPM

q. The clinical managers (or designees) of the departments involved with trauma care should play an active role with the committee.

The trauma center may wish to accomplish performance improvement activities at this same committee or develop a separate peer review committee. This committee should handle peer review independent from department based review. This committee must be multidisciplinary, meet regularly, and maintain attendance and minutes. This committee must report findings to the overall hospital performance improvement program.

900.06 Trauma Program Manager/TPM

Level II trauma centers must have a registered nurse working full time in the role of Trauma Program Manager/TPM. Working in conjunction with the medical director, the Trauma Program Manager/TPM is responsible for organization of the program and all systems necessary for the multidisciplinary approach throughout the continuum of trauma care. The Trauma Program Manager/TPM is responsible for working with the trauma team to assure optimal patient care. There are many requirements for data coordination and performance improvement, education and prevention activities incumbent upon this position.

The Trauma Program Manager/TPM or his/hers designee should offer or coordinate services for trauma education. The Trauma Program Manager/TPM should liaison with local EMS personnel, the Department, Regional Trauma Advisory Committee and other trauma centers.

900.07 Hospital Departments/Divisions/Sections

The Level II trauma center must have the following departments, divisions, or sections:

a. General Surgery

b. Neurological Surgery

c. Orthopedic Surgery

d. Emergency Medicine

e. Anesthesia

901. CLINICAL COMPONENTS

Level II trauma centers must maintain published call schedules and have the following specialists immediately available 24 hours/day:

a. Emergency Medicine (In-house 24 hours/day)

b. Trauma/General Surgery

Note: The trauma surgeon on-call must be unencumbered and immediately available to respond to the trauma patient. The general surgeon is expected to be in the emergency department upon arrival of the seriously injured patient. Hospital policy must be established to define conditions requiring the trauma surgeon's presence with the clear requirement on the part of the hospital and surgeon that the surgeon will participate in the early care of the patient. The trauma surgeon's participation in major therapeutic decisions, presence in the emergency department for major resuscitation and presence at operative procedures is mandatory. There must be a back-up surgeon schedule published. It is desirable that the surgeon on-call be dedicated to the trauma center and not on-call to any other hospital while on trauma call. A system must be developed to assure early notification of the on-call to any other hospital while on trauma call. A system must be developed to assure notification of the on-call surgeon and compliance with these criteria and their appropriateness must be documented and monitored by the PI process.

c. Orthopedic Surgery

Note: A mechanism may be established to "grandfather" non-board certified orthopedists as determined by hospital policy. Orthopedic Surgeons must demonstrate evidence of participation in the internal trauma education plan. The orthopedic liaison to the Trauma Service must attend 50% of the peer review committees annually and participate with the Multidisciplinary Trauma Committee. It is desirable to have the orthopedists dedicated to the trauma center solely while on-call or a back up schedule should be available.

d. Neurologic Surgery

Note: A mechanism may be established to "grandfather" non-board certified neurosurgeons as determined by hospital policy. Neurosurgeons must demonstrate evidence of participation in the internal trauma education plan. The neurosurgeon liaison to the trauma service must attend 50% of the peer review committees annually and participate in the Multidisciplinary Trauma Committee. It is desirable to have the neurosurgeon dedicated to the trauma center solely while on-call or a back up schedule should be available.

e. Anesthesia

Note: Anesthesia must be promptly available with a mechanism established to ensure early notification of the on-call anesthesiologist. Anesthesia must be available 24 hours/day. Anesthesia chief residents or Certified Nurse Anesthetist (CRNAs) may fill this requirement. When residents or CRNAs are utilized, the staff anesthesiologist on-call will be advised, promptly available, and present for all operations. Hospital policy must be established to determine when the anesthesiologist must be immediately available for airway control and assisting with resuscitation. The availability of the anesthesiologist and the absence of delays in airway control or operative anesthesia must be documented and monitored by the PI process.

The following specialists should be on-call and promptly available 24 hours/day:

a. Critical Care Medicine

b. Hand Surgery

c. Microvascular Surgery

d. Obstetrics/Gynecologic Surgery

e. Ophthalmic Surgery

f. Oral/Maxillofacial

g. Plastic Surgery

h. Radiology

i. Thoracic Surgery

Recognizing that early rehabilitation is imperative for trauma patients, a physical medicine and rehabilitation specialist should be available for the trauma program.

A trauma surgeon is presumed to be qualified and have privileges to provide emergency thoracic surgical care to patients with thoracic injuries. If this is not the case, the facility should have a board certified thoracic surgeon immediately available.

Policies and procedures should exist to notify the patient's primary physician of the patient's condition.

901.02 Qualifications of Physicians on the Trauma Team

Basic to qualification for trauma care for any surgeon is Board Certification in a surgical specialty recognized by the American Board of Medical Specialties, the Advisory Board for Osteopathic Specialties, the American Dental Association, the Royal College of Physicians and Surgeons of Canada or other appropriate foreign board. Many boards require a practice period. Such an individual may be included when recognition by major professional organizations has been received in their specialty. The board certification criteria apply to the general surgeons, orthopedic surgeons, and neurosurgeons.

a. Alternate criteria in lieu of board certification are as follows:

a. A Non-board certified general surgeon must have completed a surgical residency program.

b. He/she must be licensed to practice medicine.

c. Approved by the hospital's credentialing committee for surgical privileges.

d. The surgeon must meet all criteria established by the trauma director to serve on the trauma team.

e. The surgeon's experience in caring for the trauma patient must be tracked by the PI program.

b. The trauma director must attest to the surgeon's experience and quality as part of the recurring granting of trauma team privileges.

c. The trauma director using the trauma PI program is responsible for determining each general surgeon's ability to participate on the trauma team.

The surgeon is expected to serve as the captain of the resuscitating team and is expected to be in the emergency department upon arrival of the seriously injured patient to make key decisions about the management of the trauma patient's care. The surgeon will coordinate all aspects of treatment, including resuscitation, operation, critical care, recuperation and rehabilitation (as appropriate in a Level II facility) and determine if the patient needs transport to a higher lever of care. If transport is required he/she is accountable for coordination of the process with the receiving physician at the receiving facility. If the patient is to be admitted to the Level II trauma center, the surgeon is the admitting physician and will coordinate the patient care while hospitalized. Guidelines should be written at the local level to determine which types of patients should be admitted to the Level II trauma center or which patients should be considered for transfer to a higher level of care.

The general surgery liaison and emergency physician liaison must participate in a multidisciplinary trauma committee and the PI process. Peer review committee attendance must be greater than fifty percent over a year's period of time. General Surgery and Emergency physicians must be currently certified in ATLS. General surgeons and emergency physicians must demonstrate evidence of participation in the internal trauma education plan.

NOTE: ATLS requirement may take up to five years to obtain. Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements are waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

For those physicians providing emergency medicine coverage, board certification in Emergency Medicine is desirable. However, career emergency medicine physicians who are board certified in a specialty recognized by the American Board of Medical Specialties, a Canadian Board or other equivalent foreign board meets the requirements.

Alternative criteria for the non-boarded physician working in the Emergency Department are as follows:

a. He/she must be licensed to practice medicine

b. Approved by the hospital's credentialing committee for emergency medicine privileges.

c. The physician must meet all criteria established by the trauma and emergency medical director to serve on the trauma team.

d. The physician's experience in caring for the trauma patient must be tracked by the PI program.

e. The trauma and emergency medical director must attest to the physician's experience and quality as part of the recurring granting of trauma team privileges.

f. Residency in Emergency Medicine is desirable.

902. FACILITY STANDARDS

902.01 Emergency Department

The facility must have an emergency department, division, service, or section staffed so trauma patients are assured immediate and appropriate initial care. The emergency physician must be in-house 24 hours/day and immediately available at all times. The emergency department medical director must meet the recommended requirements related to commitment, experience, continuing education, ongoing credentialing, and board certification in emergency medicine.

The director of the emergency department, along with the trauma director, will establish trauma-specific credentials that should exceed those that are required for general hospital privileges. Examples of credentialing requirements would include skill proficiency, training requirements, conference attendance, education requirements, ATLS verification and specialty board certification.

The emergency physicians who are members of the trauma team must maintain 48 hours of trauma related CME over 3 years. Over a three-year period, at least one half (24 hours) should be obtained outside the physicians own institution. These physicians must maintain a current ATLS certification.

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

The emergency medicine physician or designee will be responsible for activating the trauma team based on predetermined response protocols. He will provide team leadership and care for the trauma patient until the arrival of the surgeon in the resuscitation area. The emergency department must have established standards and procedures to ensure immediate and appropriate care for the adult and pediatric trauma patient. The emergency department medical director, or his/her designee, must act as a

liaison and participate with the Multidisciplinary Trauma Committee and the trauma PI process.

Basic to qualification for trauma care for any physician is board certification in a specialty recognized by the American Board of Medical Specialties, the Advisory Board for Osteopathic Specialties, the Royal College of Physicians and Surgeons of Canada, or other appropriate foreign board.

Alternate criteria in lieu of board certification are as follows:

a. A non-board certified physician must have completed an approved residency program.

b. He/she must be licensed to practice medicine.

c. Approved for emergency medicine by the hospital's credentialing committee.

d. The physician must meet all criteria established by the trauma director and emergency medical director to serve on the trauma team.

e. The physician's experience in caring for the trauma patient must be tracked by the PI program.

f. The trauma director and emergency medicine director must attest to the physicians' experience and quality as part of the recurring granting of trauma team privileges.

g. Must have at least 12 months experience caring for the trauma patient tracked by the PI program.

There should be an adequate number of RN's staffed for the trauma resuscitation area in-house 24 hours/day. Emergency nurses staffing the trauma resuscitation area must be a current provider of Trauma Nurse Core Curriculum (TNCC) and participate in the ongoing PI process of the trauma program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

NOTE: ER nurses must obtain TNCC within 18 months.

There is a complete list of required equipment necessary for the ED found in Section 904.01.

902.02 Surgical Suites/Anesthesia

It is recommended that the OR be staffed and available in-house 24 hours/day. If the staff is not in-house, Hospital policy must be written to assure notification and prompt response. The PI process must document and monitor the ongoing availability of OR crews and absence of delay.

The OR nurses should participate in the care of the trauma patient and be competent in the surgical stabilization of the major trauma patient.

The surgical nurses are an integral member of the trauma team and must participate in the ongoing PI process of the trauma program and must be represented on the Multidisciplinary Trauma Committee.

The OR supervisor must be able to demonstrate a prioritization scheme to assure the availability of an operating room for the emergent trauma patient during a busy operative schedule. There must be an on-call system for additional personnel for multiple patient admissions.

A complete list of required equipment necessary for the Surgery can be found in Section 904.01.

The anesthesia department in a Level II trauma center should be ideally organized and run by an anesthesiologist who is experienced and devoted to the care of the injured patient. If this is not, the director, an anesthesiologist liaison with the same qualifications should be identified. Anesthesiologists on the trauma team must have successfully completed an anesthesia residency program approved by the Accreditation Council for Graduate Medical Education, the American Board of Osteopathic Specialties, or the American Osteopathic Board and should have board certification in anesthesia. One anesthesiologist should maintain commitment to education in trauma related anesthesia. Anesthesiologists must demonstrate evidence of participation in the internal trauma education plan.

Anesthesia must be available 24 hours/day with a mechanism established to ensure notification of the on-call anesthesiologist. Anesthesia requirements may be fulfilled by anesthesia chief residents or Certified Registered Nurse Anesthetists (CRNAs) who are capable of assessing emergent situations in trauma patients and of providing an indicated treatment, including initiation of surgical anesthesia. When the CRNA or chief resident is used to meet this requirement, the staff Anesthesiologist will be advised and promptly available at all times and present for operations. Trauma centers must document conditions when the anesthesiologist must be immediately available for airway emergencies and operative management of the trauma patient. The availability of the anesthesiologist and the absence of delays in operative anesthesia must be documented and monitored by the PI process. The anesthesiologist participating on the trauma team should have the necessary educational background in the care of the trauma patient; participate in the Multidisciplinary Trauma Committee and the trauma PI process.

902.03 Post Anesthesia Care Unit (PACU)

It is essential to have a PACU staffed 24 hours/day and available to the postoperative trauma patient. If the staff is not in-house, Hospital policy must be written to assure early notification and prompt response. The PI process must document and monitor the ongoing availability of OR crews and absence of delay. Frequently it is advantageous to bypass the PACU and directly admit to the ICU. In this instance, the ICU may meet these requirements.

PACU nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

PACU staffing should be in sufficient numbers to meet the critical needs of the trauma patient. A complete list of required equipment necessary for the PACU is found in Section 904.01.

902.04 Intensive Care Unit

Level II trauma centers must have an Intensive Care Unit (ICU) that meets the needs of the adult trauma patient.

Surgical Director

The surgical director for the ICU – which houses trauma patients - must have obtained critical care training during residency or fellowship and must have expertise in the preoperative and post injury care of the injured patient. This is best demonstrated by a certificate of added qualification in surgical critical care from the American Board of Surgery and may also be fulfilled by documentation of active participation during the preceding 12 months in trauma patients' ICU care and ICU administration and critical care-related continuing medical education. The director is responsible for the quality of care and administration of the ICU and will set policy and establish standards of care to meet the unique needs of the trauma patient.

Physician Coverage

The trauma service assumes and maintains responsibility for the care of the multiple injured patient. A surgically directed ICU physician team is desirable. The team will provide in-house physician coverage for all ICU trauma patients at all times. This service can be staffed by appropriately trained physicians from different specialties, but must be led by a qualified surgeon as determined by critical care credentials consistent with the medical staff privileging process of the institution.

There should be physician coverage for the ICU at all times. A physician credentialed by the facility for critical care should be promptly available to the trauma patient in the ICU 24 hours/day. This coverage is for emergencies only and is not intended to replace the primary surgeon but rather is intended to ensure that the patient's immediate needs are met while the surgeon is contacted.

The trauma service should maintain the responsibility for the care of the patient as long as the patient remains critically ill. The trauma service must remain in charge of the patient and coordinate all therapeutic decisions. The responsible trauma surgeon or designee should write all orders. The trauma surgeon should maintain control over all aspects of care, including but not limited to respiratory care and management of mechanical ventilation; placement and use of pulmonary catheters; management of fluid and electrolytes, antimicrobials, and enteral and parenteral nutrition.

Nursing Personnel

Level II trauma centers must provide staffing in sufficient numbers to meet the critical needs of the trauma patient. Critical care nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing critical care education. ICU nurses are an integral part of the trauma team and

as such, should be represented on the Multidisciplinary Trauma Committee and participate in the PI process of the trauma program.

There is a complete list of necessary equipment for the ICU in Section 904.01.

903. CLINICAL SUPPORT SERVICES

903.01 Respiratory Therapy Service

The service should be staffed with qualified personnel in-house 24 hours/day to provide the necessary treatments for the injured patient.

903.02 Radiological Service

A radiological service must have a certified radiological technician in-house 24 hours/day and immediately available at all times for general radiological procedures. It is desirable to have a technician in-house and immediately available for computerized tomography (CT) for both head and body. If the technician is not in-house 24 hours/day for special procedures the performance improvement process must document and monitor that the procedure is promptly available. Sonography and Angiography must be available to the trauma team. It is desirable that MRI services be available to the trauma team. Specialty procedures such as angiography and sonography may be covered with a technician on-call.

A board-certified radiologist should administer the department and participate actively in the trauma education and PI process. A staff radiologist must be promptly available, when requested, for the interpretation of radiographs, performance of complex imaging studies or interventional procedures. The radiologist must insure the preliminary interpretations are promptly reported to the trauma team and the PI program must monitor all changes in interpretation.

Written policy should exist delineating the prioritization/availability of the CT scanner for trauma patients. The PI process must endure that trauma patients are accompanied by appropriately trained licensed providers and that the appropriate resuscitation and monitoring are provided during transportation to and while in the radiology department.

The radiologist must ensure the preliminary interpretations are promptly reported to the trauma team and the PI Program must monitor all changes in interpretation.

903.03 Clinical Laboratory Service

A clinical laboratory service must have the following services available in-house 24 hours/day:

a. Access to a blood bank and adequate storage facilities. Sufficient quantities of blood and blood products should be maintained at all times. Blood typing and cross-match capabilities must be readily available.

b. Standard analysis of blood, urine, and other body fluids including microsampling when appropriate.

c. Blood gas and pH determinations (this function may be performed by services other than the clinical laboratory service, when applicable).

d. Alcohol screening is required and drug screening is highly recommended.

e. Coagulation studies

f. Microbiology

Sufficient numbers of clinical laboratory technologists shall be in-house 24 hours/day and promptly available at all times. It is anticipated that facilities may cross-train personnel for other roles. This is acceptable as long as there is no response delay.

903.04 Acute Hemodialysis

There must be a written transfer agreement with a facility that provides this service if this service if it is not available at the Level II trauma center.

903.05 Burn Care

There must be a written transfer agreement to a Burn Center. Policies and procedures should be in place to assure the appropriate care is rendered during the initial resuscitation and transfer of the patient.

903.06 Rehabilitation/Social Services:

The rehabilitation of the trauma patient and the continued support of the family members are an important part of the trauma system. Each facility will be required to address a plan for integration of rehabilitation into the acute and primary care of the trauma patient, at the earliest stage possible after admission to the trauma center. Hospitals will be required to identify a mechanism to initiate rehabilitation services and/or consultation in a timely manner as well as policies regarding coordination of the Multidisciplinary Rehabilitation Team. Policies must be in place to address the coordination of transfers between acute care facilities and approved rehabilitation facilities. There must be a written transfer agreement with a facility that provides this service if this service is not available at the Level II trauma center. Transfer agreements should include a feedback mechanism for the acute care facilities to update the health care team on the patient's progress and outcome for inclusion in the trauma registry. The rehabilitation services must minimally include Occupational Therapy, Physical Therapy, and Speech Pathology.

The nature of traumatic injury requires that the psychological needs of the patient and family are considered and addressed in the acute stages of injury and throughout the continuum of recovery. Adequate numbers of trained personnel should be readily available to the trauma patients and family. Programs must be available to meet the unique needs of the trauma patient.

903.07 Prevention/Public Outreach

Level II trauma centers will be responsible for participating with appropriate agencies, professional groups and hospitals in their region to develop a strategic plan for public

awareness. This plan must take into consideration public awareness of the trauma system, access to the system, public support for the system, as well as specific prevention strategies. Prevention programs must be specific to the needs of the region. The trauma registry data should be utilized to identify injury trends and focus prevention needs.

Outreach is the act of providing resources to individuals and institutions that do not have the opportunities to maintain current knowledge and skills. Staff members at the Level II trauma center should provide consultation to staff members at other facilities in the region. Advanced Trauma Life Support (ATLS), Pre Hospital Trauma Life Support (PHTLS), Trauma Nurse Curriculum Course (TNCC), and Flight Nurse Advanced Trauma Course (FNATC) courses for example can be coordinated by the trauma center. Trauma physicians should provide a formal follow up to referring physicians/designee about specific patients to educate he practitioner for the benefit of further injured patients.

903.08 Transfer Protocol

Level II trauma centers should work in collaboration with the referral trauma facilities in their region and develop interfacility transfer guidelines. These guidelines must address criteria to identify high-risk trauma patients that could benefit from a higher level of trauma care. All designated facilities will agree to provide services to the trauma victim regardless of his/her ability to pay.

When a patient in need of trauma services is transferred to a receiving facility capable of providing the needed care, from a transferring facility which cannot provide an adequate level of care, the following shall apply: When a determination is made by appropriate medical personnel of the receiving facility that a patient transferred from the transferring facility has been stabilized, no longer has an emergency medical condition or no longer requires the specialty services provided at the receiving facility, but the patient still requires further acute care, the transferring facility, with the consent of the patient and the patient's physician, agrees to readmit the transferred patient for appropriate acute care within 24 to 48 hours of such a determination. The patient's physician, the chief of the medical staff or other authorized representative of the transferring facility shall facilitate the identification of the patient's physician or his/her designee to accept the patient and transfer the patient back to the transferring facility.

Transfer protocols must be written for specialty referral centers such as pediatrics, burn or spinal cord injury when these services are not available at the trauma center. The transfer protocols must include a feedback loop so that the primary provider has a good understanding of the patient outcome. Every effort should be made to repatriate the trauma patient to his/her local community hospital or provider hospital if appropriate.

903.09 Performance Improvement/Evaluation

A key element in trauma system planning is evaluation. All licensed hospitals which have organized emergency services or departments will be required to participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since these data relate to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential as provided in Miss. Code Ann.§41-59-77. Level II

trauma facilities may be responsible for direct assistance to all other levels of referring facilities in providing data for inclusion in the registry.

Each trauma center must develop an internal Performance Improvement plan that minimally addresses the following key components and is fully integrated into the hospital wide program:

a. An organizational structure that facilitates performance improvement (Multidisciplinary Trauma Committee).

b. Clearly defined authority and accountability for the program.

c. Clearly stated goals and objectives one of which should be reduction of inappropriate variations in care.

d. Development of expectations (criteria) from evidenced based guidelines, pathways and protocols. These should be appropriate, objectively defined standards to determine quality of care.

e. Explicit definitions of outcomes derived from institutional standards

f. Documentation system to monitor performance, corrective action and the result of the actions taken.

g. A process to delineate privileges credentialing all trauma service physicians.

h. An informed peer review process utilizing a multidisciplinary method.

i. A method for comparing patient outcomes with computed survival probability.

j. Autopsy information on all deaths when available.

k. Review of prehospital care.

l. Review of times and reasons for trauma bypass.

m. Review of times and reasons for trauma transfers.

n. Audit all trauma deaths.

o. Morbidity and Mortality review.

Representatives from the Level II trauma center shall participate in the Regional Trauma Advisory Councils and the statewide performance improvement process.

903.10 Trauma Registry

All licensed hospitals which have organized emergency services or departments must participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since this data relates to specific trauma patients and are used to evaluate and improve the

quality of health care services, this data is confidential and will be governed by the Miss. Code Ann.§41-59-77.

Compliance with the above will be evidenced by:

a. Documentation of utilization of the Trauma Registry data in the trauma performance improvement process

b. Timely submission of Trauma Registry Data to the Bureau of EMS and the appropriate Region at least monthly.

903.11 Education

Level II trauma centers must have medical education programs including educational training in trauma for physicians, nurses and prehospital providers. The Level II trauma centers assist and cooperate with the Level I trauma center in providing educational activities. Education may be accomplished via many mechanisms (i.e. classic CME, preceptorships, fellowships, clinical rotations, telecommunications or providing locum tenens, etc.)

904.01 Essential and Desirable Chart for Level II Trauma Centers

		Level II
1	Institutional Organization	
2	Trauma Program	E
3	Trauma Service	E
4	Trauma Team	E
5	Trauma Program Medical Director	E
6	Trauma Multidisciplinary Committee	E
7	Trauma Program Manager	E
8	Hospital Departments/Divisions/Sections	
9	Surgery	E
10	Neurological Surgery	E
11	Neurosurgical Trauma Liaison	E
12	Orthopaedic Surgery	E
13	Orthopaedic Trauma Liaison	E
14	Emergency Medicine	E
15	Anesthesia	E
16	Clinical Capabilities	
17	(Specialty Immediately Available 24 hours/day)	
18	Published on-call schedule	E
19	General Surgery	E
20	Published back-up schedule	E
21	Dedicated to single hospital when on-call	D
22	Anesthesia	E
23	Emergency Medicine	E
24	On-call and promptly available 24 hours/day	

25	Cardiac Surgery	D
26	Hand Surgery	D
27	Microvascular/replant Surgery	D
28	Neurological Surgery	E
29	Dedicated to one hospital or back-up call	E*(11)
30	Obstetrics/Gynecologic Surgery	D
31	Ophthalmic Surgery	D
32	Oral/Maxillofacial Surgery	D
33	Orthopaedic Surgery	E
34	Plastic Surgery	D
35	Critical Care Medicine	D
36	Radiology	D
37	Thoracic Surgery	D
38	Clinical Qualifications	
39	General/Trauma Surgeon:	
40	Current Board Certification	E *(1)
41	16 Hours CME/Year (7)	E
42	ATLS Completion *(2) (10)	E
43	Peer Review Committee liaison Attendance ≥ 50%	E
44	Multidisciplinary Committee liaison Attendance	E
45	Emergency Medicine:	
46	Board Certification	E *(6)
47	16 Hours CME/Year (7)	E
48	ATLS Completion *(2) (10)	E
49	Peer Review Committee liaison Attendance ≥ 50%	E
50	Multidisciplinary Committee liaison Attendance	E
51	Neurosurgery:	
52	Current Board Certification	E
53	16 Hours CME/Year (7)	E
54	ATLS Completion *(2) (10)	D
55	Peer Review Committee liaison Attendance ≥ 50%	E
56	Multidisciplinary Committee liaison Attendance	E
57	Orthopaedic Surgery:	
58	Current Board Certification	E
59	16 Hours CME In Trauma/Year (7)	E
60	ATLS Completion *(2) (10)	D
61	Peer Review Committee liaison Attendance ≥ 50%	E
62	Multidisciplinary Committee liaison	E

	Attendance	
63	Facilities/Resources/Capabilities	
64	Volume Performance	
65	Trauma Admissions: 1,200/year	--
66	Patients with ISS > 15 (240 total or 35 patients/surgeon)	--
67	Presence of Surgeon at resuscitation	E
68	Presence of Surgeon at Operative Procedures	E
69	Emergency Department	
70	Personnel	
71	Designated physician director	E
72	RN in-house and available	E *(4)
73	Equipment for Resuscitation for Patients of all ages	
74	Airway control and ventilation equipment	E
75	Pulse Oximetry	E
76	Suction Devices	E
77	Electrocardiograph-Oscilloscope-Defibrillator	E
78	Internal Paddles	E
79	CVP Monitoring Equipment	E
80	Standard IV Fluids and Administration Sets	E
81	Large bore intravenous catheters	E
82	Sterile Surgical Sets for:	
83	Airway control/cricothyrotomy	E
84	Thoracostomy	E
85	Venous cut-down	E
86	Central line insertion	E
87	Thoracotomy	E
88	Peritoneal lavage	E
89	Arterial catheters	D
90	Ultrasound	D
91	Drugs necessary for emergency care	E *(5)
92	X Ray availability 24 hours/day	E
93	Cervical spine stabilization devices	E
94	Broselow tape	E
95	Thermal control equipment:	
96	For Patient	E
97	For fluids and blood	E
98	Rapid Infuser system	E *(8)
99	Qualitative end-tidal CO2 determination	E
100	Communication with EMS vehicles	E
101	Operating Room	
102	Immediately available 24 hours/day	D

103	Personnel	
104	In-house 24 hours/day	D
105	Available 24 hours/day	E
106	Age-specific equipment	
107	Cardiopulmonary bypass	D
108	Operating microscope	D
109	Thermal control equipment	
110	For patient	E
111	For blood/fluids	E
112	X Ray capability, including c-arm image intensifier	E
113	Endoscopes, bronchoscope	E
114	Craniotomy instruments	E
115	Equipment for long bone and pelvic fixation	E
116	Rapid infuser system	E *(9)
117	Pulse oximetry	E
118	Qualitative end-tidal CO2 determination	E
119	Postanesthetic Recovery Room (SICU acceptable)	
120	Registered nurses available 24 hours/day	E
121	Equipment for monitoring and resuscitation	E
122	Intercranial pressure monitoring equipment	E
123	Pulse oximetry	E
124	Thermal control	E
125	Intensive or Critical Care Unit for Injured Patients	
126	Registered nurses with trauma education	E *(9)
127	Designated surgical director or surgical co-director	E
128	Surgical ICU service physician in-house 24 hours/day	D
129	Surgically directed and staffed ICU service	D
130	Equipment for monitoring and resuscitation	E
131	Intracranial monitoring equipment	E
132	Pulmonary artery monitoring equipment	E
133	Respiratory Therapy Services	
134	Available in-house 24 hours/day	E
135	On call 24 hours/day	--
136	Radiological Services (Available 24 hours/day)	
137	In-house radiology technologist	E
138	Angiography	E
139	Sonography	E
140	Computed Tomography	E
141	In-house CT technician	D
142	Magnetic resonance imaging	D

143	Clinical Laboratory Services (Available 24 hours/day)	
144	Standard analysis of blood, urine and other body fluids, including microsampling when appropriate	E
145	Blood typing and cross-matching	E
146	Coagulation studies	E
147	Comprehensive blood bank or access to a community central blood bank and adequate storage facilities	E
148	Blood gases and pH determinations	E
149	Microbiology	E
150	Acute Hemodialysis	
151	In-house	E
152	Transfer agreement	E
153	Burn Care - Organized	
154	In-house or transfer agreement with Burn Center	E
155	Rehabilitation Services	
156	Transfer agreement to an approved rehab facility	E
157	Physical Therapy	E
158	Occupational Therapy	E
159	Speech Therapy	E
160	Social Services	E
161	Performance Improvement	
162	Performance improvement programs	E
163	Trauma Registry	
164	In-house	E
165	Participation in state, local, or regional registry	E
166	Orthopaedic database	D
167	Audit of all trauma deaths	E
168	Morbidity and mortality review	E
169	Multidisciplinary trauma committee	E
170		
171	Review of prehospital trauma care	E
172	Review of times/reasons for trauma-related bypass	E
173	Review of times/reasons for transfer of injured patients	E
174		
	Participate in regional review of prehospital trauma care,	

175	times/reasons for trauma-related bypass, times/treasons for transfer of injured patient	E
176	PI process established to monitor response times for all on-call personnel	E
194	Trauma registry PI activities	E
177	Continuing Education/Outreach	
177	General surgery residency program	D
178	ATLS provide/participate	D
179	Programs provided by hospital for:	
180	Staff/Community physicians (CME)	E
181	Nurses	E
182	Allied health personnel	E
183	Prehospital personnel provision/participation	E
184	Prevention	
185	Injury control studies	D
186	Collaboration with other institutions	D
187	Monitor progress/effect of prevention programs	D
188	Designated prevention coordinator/spokesperson	E
189	Outreach activities	E
190	Information resources for public	E
191	Collaboration with existing programs	E
192	Coordination and/or participation in community prevention activities	E
193	Research	
195	Research committee	D
196	Identifiable IRB process	D
197	Extramural education presentations	D
199	Number of scientific publications	D

200	* (1) Mississippi standards will require at least one general surgeon to be board certified. Alternated criteria may be substituted for other staff.
201	* (2) Mississippi standards will require a current ATLS completion card. Physicians have up to one (1) year after hiring to obtain ATLS certification.
202	* (3) Some mechanisms for “grandfathering” in non-board certified neurosurgeons and orthopedic surgeons will be developed by hospital policy.
203	* (4) The RN in-house and available in the ED must be a current provider of TNCC.
204	* (5) Drugs necessary for emergency care will be defined by the prehospital drug list set forth by the Bureau of Emergency Medical Services.
205	* (6) Board certified or alternative criteria as established by hospital policy.
206	* (7) Can be accompanied with 48 hours of trauma education over three (3) years.

207	* (8) Simple pressure bag.
208	* (9) Ongoing critical care education bi-annually.
209	*(10) ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.
210	*(11) If neurosurgery is not dedicated to one hospital while on-call a published back-up call schedule must be available.

Chapter 10 LEVEL III TRAUMA CENTERS

It is important to incorporate all facilities in trauma planning. A Level III trauma center is an acute care facility with the commitment, medical staff, personnel and specialty training necessary to provide initial resuscitation of the trauma patient. Generally, a Level III trauma center is expected to provide initial resuscitation of the trauma patient and immediate operative intervention to control hemorrhage and to assure maximal stabilization prior to referral to a higher level of care. In many instances, patients will remain in the Level III trauma center unless the medical needs of the patient require secondary transfer. The decision to transfer a patient rests with the physician attending the trauma patient. All Level III trauma centers will work collaboratively with other trauma facilities to develop transfer protocols and a well-defined transfer sequence.

1000 HOSPITAL ORGANIZATION

1000.01 Trauma Program

There must be a written commitment on behalf of the entire facility to the organization of trauma care. The written commitment shall be in the form of a resolution passed by an appropriate quorum of the members of the governing authority. Should the business organization be other than a corporation, a letter explaining such together with a written commitment of the hospital's chief executive officer to the establishment of a trauma care program may be sufficient. The trauma program must be established and recognized by the medical staff and hospital administration. The trauma program must come under the direction of a board-certified surgeon with special interest in trauma care. An administrative structure should ideally include an administrator, medical director, trauma program manager, trauma registrar and other appropriate staff. At minimum, an identified hospital administrative leader should work closely with the trauma medical director to establish and maintain the components of the trauma program including appropriate financial support. The trauma program location in the organizational structure of the hospital should be placed so that it may interact effectively with at least equal authority with other departments providing patient care. The trauma program should be multidisciplinary in nature and the performance improvement evaluation of this care must extend to all the involved departments.

Compliance with the above will be evidenced by but not limited to:

1. Governing authority and medical staff letter of commitment in the form of a resolution

2. Written policies and procedures and guidelines for care of the trauma patient

3. Defined trauma team and written roles and responsibilities

4. Appointed Trauma Medical Director with a written job description

5. Appointed Trauma Program Manager with a written job description

6. A written Trauma Performance Improvement plan

7. Documentation of trauma center representative attendance at the regional trauma advisory committee meetings

1000.02 Trauma Service

A trauma service is an organized structure of care for the patient. The Trauma Service must be established and recognized by the medical staff. The service includes personnel and resources necessary to ensure the appropriate efficient care delivery. The composition of the service will vary depending on the nature of the medical center, available resources and personnel and patient clinical need. The trauma service must come under the organization and direction of a surgeon who is board certified with special interest in trauma care. All patients with multiple system trauma or major injury must be evaluated by the trauma service. Injured patients may be admitted to individual surgeons.

1000.03 Trauma Team

The team approach is optimal in the care of the multiple injured patients. There must be identified members of the trauma team. Policies should be in place describing the roles of all personnel on the trauma team. The composition of the trauma team in any hospital will depend on the characteristics of that hospital and its resources. In some instances, a tiered response may be appropriate. If a tiered response is employed written policy must be in place and the system monitored by the PI process. The team leader must be a qualified general surgeon. All physicians on the trauma team responsible for directing any phase of the resuscitation (emergency physician and general surgeons) must be currently certified in ATLS.

Suggested composition of the trauma team for severely injured patients may include:

a. Physicians

b. Specialists

c. Laboratory Technicians as dictated by clinical needs

d. Nursing: ED, OR, ICU, etc.

e. Auxiliary Support Staff

f. Respiratory Therapists

g. Security Officers

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

1000.04 Medical Director

Level III Trauma Centers must have a physician director of the trauma program. The medical director plays an important administrative role. The medical director must be a board-certified surgeon with special interest in trauma care. The medical director will be responsible for developing a performance improvement process and, through this process, will have overall accountability for all trauma patients and administrative authority for the hospital's trauma program. The medical director must be given administrative support to implement the requirements specified by the State trauma plan. The director is responsible for working with the credentialing process of the hospital and, in consultation with the appropriate service chiefs, recommending appointment and removal of physicians from the trauma team. He should cooperate with nursing administration to support the nursing needs of the trauma patient and develop treatment protocols for the trauma patients. The director in collaboration with the Trauma Program Manager/TPM should coordinate the budgetary process for the trauma program

The director must be currently certified by the American College of Surgeons Advanced Trauma Life Support (ATLS), maintain personal involvement in care of the injured, maintain education in trauma care, and maintain involvement in professional organizations. The trauma director, or his designee, must be actively involved with the trauma system development at the community, regional and state level.

1000.05 Multidisciplinary Trauma Committee

The purpose of the committee is to provide oversight and leadership to the entire trauma program. The exact format will be hospital specific and may be accomplished by collaboration with another designated trauma center in the region. The major focus will be on PI activities, policy development, communication among all team members, development of standards of care, education and outreach programs, and injury prevention. The committee has administrative and systematic control and oversees the implementation of the process which includes all program related services, meets regularly, takes attendance, maintains minutes and works to correct overall program deficiencies to optimize patient care. Suggested membership for the committee includes representatives (if available in the community) from:

a. Administration

b. Orthopedics

c. Anesthesia

d. Pediatrics

e. Emergency Department

f. Prehospital Care Providers

g. General Surgery

h. Radiology

i. Intensive Care

j. Rehabilitation

k. Laboratory

l. Respiratory Therapy

m. Nursing

n. Trauma Program Manager/TPM

o. Operating Room

The clinical managers (or designees) of the departments involved with trauma care should play an active role with the committee.

The trauma center may wish to accomplish performance improvement activities in this committee or develop a separate peer review committee. This committee should handle peer review independent from department based review. The committee must meet regularly and maintain attendance and minutes. This committee must report findings to the overall hospital performance improvement program.

1000.06 Trauma Program Manager/TPM

Level III trauma centers must have a registered nurse working in the role of Trauma Program Manager/TPM. Working in conjunction with the medical director, the Trauma Program Manager/TPM is responsible for organization of the program and all systems necessary for the multidisciplinary approach throughout the continuum of trauma care. The Trauma Program Manager/TPM is responsible for working with the trauma team to assure optimal patient care. There are many requirements for data coordination and performance improvement, education and prevention activities incumbent upon this position.

The Trauma Program Manager/TPM or his/hers designee should offer or coordinate services for trauma education. The Trauma Program Manager/TPM should liaison with local EMS personnel, the Department, Regional Trauma Advisory Committee and other trauma centers.

1000.07 Hospital Departments, Divisions, Sections

The Level III trauma center must have the following departments, divisions or sections:

a. General Surgery

b. Orthopedic Surgery

c. Emergency Medicine

d. Anesthesia

1001. CLINICAL CAPABILITIES

Level III trauma centers must have published on-call schedules and have the following medical specialists immediately available 24 hours/day to the injured patient:

a. Trauma/General Surgery

Note: It is desirable that a back up surgeon schedule is published. It is desirable that the surgeon on-call is dedicated to the trauma center and not on-call to any other hospital while on trauma call. A system should be developed to assure notification of the on-call surgeon and compliance with these criteria and their appropriateness must be documented and monitored by the PI process.

b. Anesthesia

Note: Anesthesia must be promptly available with a mechanism established to ensure early notification of the on-call anesthesiologist. Anesthesia must be available 24 hours/day. Anesthesia chief residents or Certified Nurse Anesthetist (CRNAs) may fill this requirement. When residents or CRNAs are utilized, the staff anesthesiologist on-call will be advised, promptly available, and present for all operations. Hospital policy must be established to determine when the anesthesiologist must be immediately available for airway control and assisting with resuscitation. The availability of the anesthesiologist and the absence of delays in airway control or operative anesthesia must be documented and monitored by the PI process.

c. Emergency Medicine (in-house 24 hours/day)

The following specialist must be on-call and promptly available:

a. Orthopedic Surgery

b. Radiology

It is desirable (although not required) to have the following specialist available to a Level III trauma center:

a. Hand Surgery

b. Obstetrics/Gynecology Surgery

c. Ophthalmic Surgery

d. Oral/Maxillofacial Surgery

e. Plastic Surgery

f. Critical Care Medicine

g. Thoracic Surgery

The staff specialist on-call will be notified at the discretion of the trauma surgeon and will be promptly available. The PI program will continuously monitor this availability.

Policies and procedures should exist to notify the patient's primary physician of the patient's condition at an appropriate time.

1001.02 Qualifications of Physicians on the Trauma Team

Basic to qualification for trauma care for any surgeon is Board Certification in a surgical specialty recognized by the American Board of Medical Specialties, the Advisory Board for Osteopathic Specialties, the American Dental Association, the Royal College of Physicians and Surgeons of Canada, or other appropriate foreign board. Many boards require a practice period. Such an individual may be included when recognition by major professional organizations has been received in their specialty. The board certification criteria apply to the general surgeons, orthopedic surgeons, and neurosurgeons.

1. Alternate criteria in lieu of board certification are as follows:

a. Non-board certified general surgeon must have completed a surgical residency program.

b. He/she must be licensed to practice medicine.

c. Approved by the hospital's credentialing committee for surgical privileges.

d. The surgeon must meet all criteria established by the trauma director to serve on the trauma team.

e. The surgeon's experience in caring for the trauma patient must be tracked by the PI program.

2. The trauma director must attest to the surgeons' experience and quality as part of the recurring granting of trauma team privileges.

3. The trauma director, using the trauma PI program is responsible for determining each general surgeon’s ability to participate on the trauma team.

The surgeon is expected to serve as the captain of the resuscitating team and is expected to be in the emergency department upon arrival of the seriously injured patient to make key decisions about the management of the trauma patient's care. The surgeon will coordinate all aspects of treatment, including resuscitation, operation, critical care, recuperation and rehabilitation (as appropriate in a Level III facility) and determine if the patient needs transport to a higher lever of care. If transport is required he/she is accountable for coordination of the process with the receiving physician at the receiving facility. If the patient is to be admitted to the Level III trauma center, the surgeon is the admitting physician and will coordinate the patient care while hospitalized. Guidelines should be written at the local level to determine which types of patients should be admitted to the Level III trauma center or which patients should be considered for transfer to a higher level of care.

The general surgeons and emergency physicians must participate in a multidisciplinary trauma committee and the PI process. Peer review committee attendance must be greater than fifty percent over a year's period of time. These physicians must be

currently certified in ATLS, and it is desirable that they be involved in at least forty eight (48) hours of trauma related continuing education (CME) every 3 years.

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements are waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

For those physicians providing emergency medicine coverage, board certification in Emergency Medicine is desirable. However, career emergency medicine physicians who are board certified in a specialty recognized by the American Board of Medical Specialties, a Canadian Board or other equivalent foreign board meets the requirements.

Alternative criteria for the non-boarded physician working in the Emergency Department are as follows:

a. He/she must be licensed to practice medicine

b. Approved by the hospital's credentialing committee for emergency medicine privileges.

c. The physician must meet all criteria established by the trauma and emergency medical director to serve on the trauma team.

d. The physician's experience in caring for the trauma patient must be tracked by the PI program.

e. The trauma and emergency medical director must attest to the physician's experience and quality as part of the recurring granting of trauma team privileges.

f. Residency in Emergency Medicine is desirable.

1002. FACILITY STANDARDS

1002.01 Emergency Department

The facility must have an emergency department, division, service or section staffed so those trauma patients are assured immediate and appropriate initial care. The emergency physician must be in-house 24 hours/day, immediately available at all times, and capable of evaluating trauma patients and providing initial resuscitation. The emergency medicine physician will provide team leadership and care for the trauma patient until the arrival of the surgeon in the resuscitation area. The emergency department must have established standards and procedures to ensure immediate and appropriate care for the adult and pediatric trauma patient. The medical director for the department, or his designee, must participate with the Multidisciplinary Trauma Committee and the trauma PI process.

The director of the emergency department, along with the trauma director, may establish trauma-specific credentials that should exceed those that are required for general hospital privileges. (i.e. ATLS verification)

There should be an adequate number of RN's staffed for the trauma resuscitation area in-house 24 hours/day. Emergency nurses staffing the trauma resuscitation area must be a current provider of TNCC and participate in the ongoing PI process of the trauma program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

NOTE: ER nurses must obtain TNCC within 18 months.

There is a complete list of required equipment necessary for the ED found in Section 1004.01.

1002.02 Surgical Suites

The surgical team must be on-call with a well-defined mechanism for notification to expedite transfer to the operating room if the patient's condition warrants. The process should be monitored by trauma PI program.

The OR nurses should participate in the care of the trauma patient and be competent in the surgical stabilization of the major trauma patient.

The surgical nurses are integral members of the trauma team and must participate in the ongoing PI process of the trauma program and must be represented on the Multidisciplinary Trauma Committee.

The OR supervisor must be able to demonstrate a prioritization scheme to assure the availability of an operating room for the emergent trauma patient during a busy operative schedule.

There is a complete list of necessary equipment for the surgical suites found in Section 1004.01.

Anesthesia must be promptly available with a mechanism established to ensure notification of the on-call anesthesiologist. The Level III trauma center must document conditions when the anesthesiologist must be immediately available for airway emergencies and operative management of the trauma patient.

Anesthesiologists on the trauma team must have successfully completed an anesthesia residency program approved by the Accreditation Council for Graduate Medical Education, the American Board of Osteopathic Specialties, or the American Osteopathic Board and should have board certification in anesthesia.

Anesthesia requirements may be fulfilled by Certified Registered Nurse Anesthetists (CRNAs) and/or anesthesia residents who are capable of assessing emergent situations in trauma patients and of providing an indicated treatment, including initiation of surgical anesthesia. When the CRNA is used to meet this requirement, the staff Anesthesiologist will be advised and promptly available at all times and present for operations. Trauma centers must document conditions when the anesthesiologist must be immediately available for airway emergencies and operative management of the trauma patient. The availability of the anesthesiologist and the absence of delays in operative anesthesia must be documented and monitored by the PI process. The anesthesiologist participating on the trauma team should have the necessary educational

background in the care of the trauma patient; participate in the Multidisciplinary Trauma Committee and the trauma PI process.

1002.03 Post Anesthesia Care Unit (PACU)

A Level III trauma center must have a PACU available 24 hours/day to the postoperative trauma patient. Hospital policy must be written to assure early notification and prompt response. Frequently, it is advantageous to bypass the PACU and directly admit to the ICU. In this instance, the ICU may meet these requirements.

PACU nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing critical care education. PACU staffing should be in sufficient numbers to meet the critical need of the trauma patient.

There is a complete list of necessary equipment for the PACU in Section 1004.01.

1002.04 Intensive Care Unit

1. Surgical Director/Physician Coverage

The ICU must have a surgical director or surgical co-director who is responsible to set policy and administration and establish standards of care to meet the unique needs of the trauma patient. He/she is responsible for the quality of care and administration of the ICU. The trauma medical director must work to assure trauma patients admitted to the ICU will be admitted under the care of a general surgeon or appropriate surgical subspecialists. In addition to overall responsibility for patient care by the primary surgeon, it is desirable to have in-house physician coverage for the ICU at all times. This may be provided by a hospitalist or emergency physician.

2. Nursing Personnel

Level III trauma center should provide staffing in sufficient numbers to meet the needs of the trauma patient. There must be a written plan ensuring nurses maintain ongoing critical care education. ICU nurses are an integral part of the trauma team and as such, should be represented on the Multidisciplinary Trauma Committee and participate in the PI process of the trauma program.

ICU nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

There is a complete list of necessary equipment for the ICU in Section 1004.01.

1003. CLINICAL SUPPORT SERVICES

1003.01 Respiratory Therapy Service

The service must be staffed with qualified personnel on-call 24 hours/day to provide the necessary treatments for the injured patient.

1003.02 Radiological Services

A board-certified radiologist should administer the department and participate actively in the trauma PI process. The radiologist is a key member of the trauma team and should be represented on the Multidisciplinary Trauma Committee. A certified radiological technician must be available in-house 24 hours/day to meet the immediate needs of the trauma patient for general radiological procedures. Sonography should be available to the trauma team. If the radiology technician and the specialty technician are on-call from home, a mechanism must be in place to assure the technicians are available. The performance improvement process must verify that radiological services are promptly available. Written policy should exist delineating the prioritization/availability of the CT scanner for trauma patients. The use of teleradiology is acceptable. It is anticipated that facilities may cross-train personnel for other roles. This is acceptable as long as there is no response delay.

The PI process must ensure that trauma patients are accompanied by appropriately trained licensed providers and that the appropriate resuscitation and monitoring are provided during transportation to and while in the radiology department.

The radiologist must ensure the preliminary interpretations are promptly reported to the trauma team and the PI Program must monitor all changes in interpretation.

1003.03 Clinical Laboratory Services

The clinical laboratory service shall have the following services available in-house 24 hours/day:

a. Access to a community central blood bank and adequate storage facilities. Sufficient quantities of blood and blood products should be maintained at all times. Blood typing and cross-match capabilities must be readily available.

b. Standard analysis of blood, urine, and other body fluids includes microsampling when appropriate.

c. Blood gas and Ph determinations (this function may be performed by services other than the clinical laboratory service, when applicable).

d. Alcohol screening is required and drug screening is highly recommended.

e. Coagulation studies.

f. Microbiology

Sufficient numbers of clinical laboratory technologists shall be in-house 24 hours/day and promptly available at all times. It is anticipated that facilities may cross-train personnel for other roles. This is acceptable as long as there is no response delay.

1003.04 Acute Hemodialysis

There must be a written transfer agreement with a facility that provides this service if this service if it is not available at the Level III trauma center.

1003.05 Burn Care

There must be a written transfer agreement to a Burn Center. Policies and procedures should be in place to assure the appropriate care is rendered during the initial resuscitation and transfer of the patient.

1003.06 Rehabilitation/Social Services

The rehabilitation of the trauma patient and the continued support of the family members are important parts of the trauma system. Each facility will be required to address a plan for integration of rehabilitation into the acute and primary care of the trauma patient at the earliest stage possible after admission to the trauma center. Level III hospitals will be required to identify a mechanism to initiate rehabilitation services and/or consultation in a timely manner, as well as to develop policies regarding coordination of the Multidisciplinary Rehabilitation Team. Policies must be in place to address the coordination of transfers between acute care facilities and approved rehabilitation facilities. There must be a written transfer agreement with a facility that provides this service if this service is not available at the Level III trauma center. Transfer agreements should include a feedback mechanism for the Rehab/Skilled Nursing facilities to update the health care team on the patient's progress and outcome for inclusion in the trauma registry. The rehabilitation services must include Physical Therapy and Social Service. It is desirable to have Occupational and Speech Therapy.

The nature of traumatic injury requires that the psychological needs of the patient and family are considered and addressed in the acute stages of injury and throughout recovery. A Level III trauma center may utilize community resources as appropriate to meet the needs of the trauma patient.

1003.07 Prevention/Public Outreach

Level III trauma centers must work cooperatively with referral facilities to develop and implement an outreach program for trauma care in the region. The Level III trauma center will work to plan, facilitate and provide professional education programs for the prehospital care providers, nurses and physicians, from referral facilities in their region. Prevention programs should be specific to the needs of the region. The trauma registry data should be utilized to identify injury trends and focus prevention needs.

Outreach is the act of providing resources to individuals and institutions that do not have the opportunities to maintain current knowledge and skills.

The Level III trauma center is responsible for working with the other centers to develop education and prevention programs for the public and professional staff. The plan must include implementation strategies to assure information dissemination to all residents in the region.

1003.08 Transfer Protocols

The Level III trauma center will have transfer protocols in place with Level I and Level II trauma centers, as well as all specialty referral centers (such as burn, pediatrics, spinal cord injury and rehabilitation) when these services are not available at the trauma center. Level III trauma centers should work in collaboration with the referral trauma

facilities in their region and develop interfacility transfer guidelines. These guidelines must address criteria to identify high-risk trauma patients that could benefit from a higher level of trauma care. All designated facilities will agree to provide services to the trauma victim regardless of his/her ability to pay.

When a patient in need of trauma services is transferred to a receiving facility capable of providing the needed care, from a transferring facility which cannot provide an adequate level of care, the following shall apply: When a determination is made by appropriate medical personnel of the receiving facility that a patient transferred from the transferring facility has been stabilized, no longer has an emergency medical condition or no longer requires the specialty services provided at the receiving facility, but the patient still requires further acute care, the transferring facility, with the consent of the patient and the patient's physician, agrees to readmit the transferred patient for appropriate acute care within 24 to 48 hours of such a determination. The patient's physician, the chief of the medical staff or other authorized representative of the transferring facility shall facilitate the identification of the patient's physician or his/her designee to accept the patient and transfer the patient back to the transferring facility.

Additionally, transfer protocols must be written with all referral facilities in the immediate service area. All facilities will work together to develop transfer guidelines indicating which patients should be considered for transfer and procedures to assure the most expedient, safe transfer of the patient. The transfer protocols must include a feedback loop so the primary provider has a good understanding of patient outcome and assures this information becomes part of the trauma registry. Every effort should be made to repatriate the trauma patient to his/her local community hospital or provider hospital as appropriate.

1003.09 Performance Improvement/Evaluation

A key element in trauma system planning is evaluation. All licensed hospitals which have organized emergency services or departments will be required to participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since these data relate to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential as provided in Miss. Code Ann.§41-59-77. Level I and II trauma facilities may be responsible for direct assistance to Level III, referring facilities in providing data for inclusion in the registry.

Each trauma center must develop an internal Performance Improvement plan that minimally addresses the following key components:

a. An organizational structure that facilitates performance improvement (Multidisciplinary Trauma Committee).

b. Clearly defined authority and accountability for the program.

c. Clearly stated goals and objectives one of which should be reduction of inappropriate variations in care.

d. Development of expectations (criteria) from evidenced based guidelines, pathways and protocols. These should be appropriate, objectively defined standards to determine quality of care.

e. Explicit definitions of outcomes derived from institutional standards.

f. Documentation system to monitor performance, corrective action and the result of the actions taken.

g. A process to delineate privileges credentialing all trauma service physicians.

h. An informed peer review process utilizing a multidisciplinary method.

i. A method for comparing patient outcomes with computed survival probability.

j. Autopsy information on all deaths when available.

k. Review of prehospital care.

l. Review of times and reasons for trauma bypass.

m. Review of times and reasons for trauma transfers.

n. Audit of all trauma deaths.

o. Morbidity and Mortality review.

Representatives from the Level III trauma center shall participate in the RTACs and the statewide performance review process.

1003.10 <u>Trauma Registry</u>

All licensed hospitals which have organized emergency services or departments must participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since this data relates to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential and will be governed by the Miss. Code Ann.§41-59-77.

Compliance with the above will be evidenced by:

a. Documentation of utilization of the Trauma Registry data in the trauma performance improvement process

b. Timely submission of Trauma Registry Data to the Bureau of EMS and the appropriate Region at least monthly.

1004.01 Essentials and Desirables for Level III Trauma Centers

		Level III
1	Institutional Organization	
2	Trauma Program	E
3	Trauma Service	E
4	Trauma Team	E
5	Trauma Program Medical Director	E
6	Trauma Multidisciplinary Committee	E
7	Trauma Program Manager	E
8	Hospital Departments/Divisions/Sections	
9	Surgery	E
10	Neurological Surgery	--
11	Neurosurgical Trauma Liaison	--
12	Orthopaedic Surgery	D
13	Orthopaedic Trauma Liaison	D
14	Emergency Medicine	E
15	Anesthesia	E
16	Clinical Capabilities	
17	(Specialty Immediately Available 24 hours/day)	
18	Published on-call schedule	E
19	General Surgery	E
20	Published back-up schedule	D
21	Dedicated to single hospital when on-call	D
22	Anesthesia	E
23	Emergency Medicine	E
24	On-call and promptly available 24 hours/day	
25	Cardiac Surgery	--
26	Hand Surgery	D
27	Microvascular/replant Surgery	--
28	Neurological Surgery	---
29	Dedicated to one hospital or back-up call	--
30	Obstetrics/Gynecologic Surgery	D
31	Ophthalmic Surgery	D
32	Oral/Maxillofacial Surgery	D
33	Orthopaedic Surgery	E
34	Plastic Surgery	D
35	Critical Care Medicine	D
36	Radiology	E
37	Thoracic Surgery	D
38	Clinical Qualifications	
39	General/Trauma Surgeon:	
40	Current Board Certification	E *(1)
41	16 Hours CME/Year (7)	D
42	ATLS Completion *(2) (10)	E

43	Peer Review Committee liaison Attendance ≥ 50%	E
44	Multidisciplinary Committee liaison Attendance	E
45	Emergency Medicine:	
46	Board Certification	E *(6)
47	16 Hours CME/Year (7)	D
48	ATLS Completion *(2) (10)	E
49	Peer Review Committee liaison Attendance ≥ 50%	E
50	Multidisciplinary Committee liaison Attendance	E
51	Neurosurgery:	
52	Current Board Certification	--
53	16 Hours CME/Year (7)	--
54	ATLS Completion *(2) (10)	--
55	Peer Review Committee liaison Attendance ≥ 50%	--
56	Multidisciplinary Committee liaison Attendance	--
57	Orthopaedic Surgery:	
58	Current Board Certification	E
59	16 Hours CME In Trauma/Year (7)	D
60	ATLS Completion *(2) (10)	D
61	Peer Review Committee liaison Attendance ≥ 50%	E
62	Multidisciplinary Committee liaison Attendance	E
63	Facilities/Resources/Capabilities	
64	Volume Performance	
65	Trauma Admissions: 1,200/year	--
66	Patients with ISS > 15 (240 total or 35 patients/surgeon)	--
67	Presence of Surgeon at resuscitation	E
68	Presence of Surgeon at Operative Procedures	E
69	Emergency Department	
70	Personnel	
71	Designated physician director	E
72	RN in-house and available	E *(4)
73	Equipment for Resuscitation for Patients of all ages	
74	Airway control and ventilation equipment	E
75	Pulse Oximetry	E

76	Suction Devices	E
77	Electrocardiograph-Oscilloscope-Defibrillator	E
78	Internal Paddles	E
79	CVP Monitoring Equipment	E
80	Standard IV Fluids and Administration Sets	E
81	Large bore intravenous catheters	E
82	Sterile Surgical Sets for:	
83	Airway control/cricothyrotomy	E
84	Thoracostomy	E
85	Venous cut-down	E
86	Central line insertion	E
87	Thoracotomy	E
88	Peritoneal lavage	E
89	Arterial catheters	D
90	Ultrasound	D
91	Drugs necessary for emergency care *(5)	E
92	X Ray availability 24 hours/day	E
93	Cervical spine stabilization devices	E
94	Broselow tape	E
95	Thermal control equipment:	
96	For Patient	E
97	For fluids and blood	E
98	Rapid Infuser system *(8)	E
99	Qualitative end-tidal CO2 determination	E
100	Communication with EMS vehicles	E
101	Operating Room	
102	Immediately available 24 hours/day	D
103	Personnel	
104	In-house 24 hours/day	D
105	Available 24 hours/day	E
106	Age-specific equipment	
107	Cardiopulmonary bypass	--
108	Operating microscope	D
109	Thermal control equipment	
110	For patient	E
111	For blood/fluids	E
112	X Ray capability, including c-arm image intensifier	E
113	Endoscopes, bronchoscope	E
114	Craniotomy instruments	D
115	Equipment for long bone and pelvic fixation	D
116	Rapid infuser system * (9)	E
117	Pulse oximetry	E
118	Qualitative end-tidal CO2 determination	E
119	Postanesthetic Recovery Room (SICU	

	acceptable)	
120	Registered nurses available 24 hours/day	E
121	Equipment for monitoring and resuscitation	E
122	Intercranial pressure monitoring equipment	D
123	Pulse oximetry	E
124	Thermal control	E
125	Intensive or Critical Care Unit for Injured Patients	
126	Registered nurses with trauma education* (9)	E
127	Designated surgical director or surgical co-director	E
128	Surgical ICU service physician in-house 24 hours/day	D
129	Surgically directed and staffed ICU service	D
130	Equipment for monitoring and resuscitation	E
131	Intracranial monitoring equipment	D
132	Pulmonary artery monitoring equipment	E
133	Respiratory Therapy Services	
134	Available in-house 24 hours/day	E
135	On call 24 hours/day	-
136	Radiological Services (Available 24 hours/day)	
137	In-house radiology technologist	E
138	Angiography	D
139	Sonography	E
140	Computed Tomography	E
141	In-house CT technician	--
142	Magnetic resonance imaging	D
143	Clinical Laboratory Services (Available 24 hours/day)	
144	Standard analysis of blood, urine and other body fluids, including microsampling when appropriate	E
145	Blood typing and cross-matching	E
146	Coagulation studies	E
147	Comprehensive blood bank or access to a community central blood bank and adequate storage facilities	E
148	Blood gases and pH determinations	E
149	Microbiology	E
150	Acute Hemodialysis	
151	In-house	D
152	Transfer agreement	E
153	Burn Care - Organized	

154	In-house or transfer agreement with Burn Center	E
155	Rehabilitation Services	
156	Transfer agreement to an approved rehab facility	E
157	Physical Therapy	E
158	Occupational Therapy	D
159	Speech Therapy	D
160	Social Services	E
161	Performance Improvement	
162	Performance improvement programs	E
163	Trauma Registry	
164	In-house	E
165	Participation in state, local, or regional registry	E
166	Orthopaedic database	--
167	Audit of all trauma deaths	E
168	Morbidity and mortality review	E
169	Multidisciplinary trauma committee	E
170		
171	Review of prehospital trauma care	E
172	Review of times/reasons for trauma-related bypass	E
173	Review of times/reasons for transfer of injured patients	E
174		
175	Participate in regional review of prehospital trauma care, times/reasons for trauma-related bypass, times/treasons for transfer of injured patient	E
176	PI process established to monitor response times for all on-call personnel	E
194	Trauma registry PI activities	E
177	Continuing Education/Outreach	
177	General surgery residency program	--
178	ATLS provide/participate	D
179	Programs provided by hospital for:	
180	Staff/Community physicians (CME)	D
181	Nurses	E
182	Allied health personnel	E
183	Prehospital personnel provision/participation	E
184	Prevention	
185	Injury control studies	--

186	Collaboration with other institutions	D
187	Monitor progress/effect of prevention programs	D
188	Designated prevention coordinator/spokesperson	D
189	Outreach activities	D
190	Information resources for public	D
191	Collaboration with existing programs	D
192	Coordination and/or participation in community prevention activities	E
193	Research	
195	Research committee	--
196	Identifiable IRB process	--
197	Extramural education presentations	D
199	Number of scientific publications	--

200	* (1) Mississippi standards will require at least one general surgeon to be board certified. Alternated criteria may be substituted for other staff.
201	* (2) Mississippi standards will require a current ATLS completion card. Physicians have up to one (1) year after hiring to obtain ATLS certification.
202	* (3) Some mechanisms for “grandfathering” in non-board certified neurosurgeons and orthopedic surgeons will be developed by hospital policy.
203	* (4) The RN in-house and available in the ED must be a current provider in TNCC.
204	* (5) Drugs necessary for emergency care will be defined by the prehospital drug list set forth by the Bureau of Emergency Medical Services.
205	* (6) Board certified or alternative criteria as established by hospital policy.
206	* (7) Can be accompanied with 48 hours of trauma education over three (3) years.
207	* (8) Simple pressure bag.
208	* (9) Ongoing critical care education bi-annually.
209	*(10) ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

Chapter 11 LEVEL IV TRAUMA CENTERS

Level IV trauma centers are generally licensed, small, rural facilities with a commitment to the resuscitation of the trauma patient and written transfer protocols in place to assure those patients who require a higher level of care are appropriately transferred. These facilities may be staffed by a physician, or a licensed midlevel practitioner (i.e. advanced practice nurse) or Registered Nurse. The major trauma patient will be resuscitated and transferred. This categorization does not contemplate that Level IV hospitals will have resources available for emergency surgery for the trauma patient.

Level IV trauma centers may meet the following standards in their own facility through a formal affiliation with another trauma center.

1100 HOSPITAL ORGANIZATION

1100.01 Trauma Program/Service

There must be a written commitment letter from the Board of Directors and the medical staff on behalf of the entire facility which states the facility's commitment to compliance with the Mississippi Trauma Care Regulations. The written commitment shall be in the form of a resolution passed by an appropriate quorum of the members of the governing authority. Should the business organization be other than a corporation, a letter explaining such together with a written commitment of the hospital's chief executive officer to the establishment of a trauma care program may be sufficient. A trauma program must be established and recognized by the organization.

Compliance with the above will be evidenced by:

a. Board of Director's and medical staff letter of commitment

b. Written policies, procedures and guidelines for care of the trauma patient

c. A defined Trauma Team with written roles and responsibilities

d. Appointed Trauma Medical Director with a written job description

e. A written Trauma Performance Improvement Plan

f. Appointed Trauma Program Manager with a written job description

g. Documentation of trauma center representative's attendance at the Regional Trauma Advisory Committee meetings

1100.02 Trauma Team

The team approach is optimal in the care of the multiple injured patients. The trauma center must have a written policy for notification and mobilization of an organized trauma team to the extent that one is available. The Trauma Team may vary in size and composition when responding to the trauma activation. The physician leader or licensed advance practice nurse on the trauma team is responsible for directing all

phases of the resuscitation in compliance with ATLS protocol. Suggested composition of the trauma team includes, if available:

a. Physicians or licensed advance practice nurse

b. Laboratory Technicians

c. Nursing

d. Ancillary Support Staff

Compliance with the above will be evidenced by:

a. A written resuscitation protocol which adheres to the principles of ATLS

b. A written trauma team activation criteria policy which includes physiologic, anatomic and mechanism of injury criteria

1100.03 Medical Director

The Level IV trauma center must have a physician director of the trauma program. In this instance the physician is responsible for working with all members of the trauma team, and overseeing the implementation of a trauma specific performance improvement process for the facility. Through this process, he/she should have overall responsibility for the quality of trauma care rendered at the facility. The director must be given administrative support to implement the requirements specified by the Mississippi Trauma Plan. The director should assist in the development of standards of care and assure appropriate policies and procedures are in place for the safe resuscitation and transfer of trauma patients. The physician director must have current verification in ATLS.

NOTE: ATLS requirement may take up to five years to obtain. Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

Compliance with the above will be evidenced by:

a. Chairing and participating in the committee where trauma performance improvement is presented

b. Documentation of current ATLS verification

c. Administrative support can be documented in the organizational chart which depicts the reporting relationship between the trauma program medical director and administration

d. Trauma specific policies, procedures and guidelines approved by the Trauma Medical Director

1100.04 Multidisciplinary Trauma Committee

The purpose of the committee is to provide oversight and leadership to the entire trauma program. The exact format will be hospital specific and may be accomplished by collaboration with another designated trauma center in the region. The major focus will be on PI activities, policy development, communication among all team members, development of standards of care, education and outreach programs, and injury prevention. The committee oversees the implementation of the process which includes all program related services, meets regularly, takes attendance, maintains minutes and works to correct overall program deficiencies to optimize patient care. Suggested membership for the committee includes representatives (if available in the community) from:

a. Administration

b. Emergency Department

c. Prehospital Care Providers

d. Radiology

e. Rehabilitation

f. Laboratory

g. Respiratory Therapy

h. Nursing

i. Trauma Program Manager/TPM

The clinical managers (or designees) of the departments involved with trauma care should play an active role with the committee.

The trauma center may wish to accomplish performance improvement activities in this committee or develop a separate peer review committee. This committee should handle peer review independent from department based review. The committee must meet regularly and maintain attendance and minutes. This committee must report findings to the overall hospital performance improvement program.

1100.05 <u>Trauma Program Manager/TPM</u>

The trauma center must have a person to act as a liaison to the regional evaluation process to conduct many of the administrative functions required by the trauma program. It is not anticipated that this would be a full-time role. Specifically, this person is responsible, with the medical director, for coordinating optimal patient care for all injured victims. This position will ideally serve as liaison with local EMS personnel, the Regional Trauma Advisory Council (RTAC) and the Department as well as other trauma centers.

Compliance with the above will be evidenced by:

a. Attendance at and participation in the committee where trauma performance improvement is presented

b. A written job description of roles and responsibilities to the trauma program which include: management of the trauma program, monitoring of clinical activities on trauma patients, providing staff with trauma related education, implementation of trauma specific performance improvement and supervision of the trauma registry

c. Documentation of collaboration with Trauma Program Medical Director in the development and implementation of trauma specific policies, procedures and guidelines.

1101. CLINICAL CAPABILITIES

The trauma center must maintain published on-call schedules for physicians or licensed advance practice nurses on-call to the facility.

1101.01 Emergency Department

The facility must have an emergency department staffed so trauma patients are assured immediate and appropriate initial care. There must be a designated physician director. It is not anticipated that a physician will be available on-call to an emergency department in a Level IV trauma center; however it is a desirable characteristic of a Level IV. The on-call practitioner must respond to the emergency department based on local written criteria. A system must be developed to assure early notification of the on-call practitioner. Compliance with this criterion must be documented and monitored by the Trauma Performance Improvement process.

Emergency nurses staffing the trauma resuscitation area must be a current provider in TNCC. Adequate numbers of nurses must be available in-house 24 hours/day, to meet the need of the trauma patient. The nurse may perform other patient care activities within the hospital when not needed in the emergency department.

NOTE: ER nurses must obtain TNCC within 18 months.

A complete list of required equipment necessary for the Emergency Department can be found in Section 1103.01.

Compliance with the above will be evidenced by:

a. Written trauma specific education plan for nurses

b. Published on-call list of practitioners to the Emergency Department

c. Documentation of nursing staffing patterns to assure 24-hour coverage

1102. CLINICAL SUPPORT SERVICES

It is not anticipated that Level IV trauma centers have any of the following services available:

a. Respiratory Therapy Services

b. Radiology Services

c. Clinical Laboratory Services

d. Acute Hemodialysis

Should any of these services be available, the facility should make them available to the trauma patient as necessary and within the capabilities of the facility.

1102.02 Burn Care

There must be a written transfer agreement to a Burn Center. Policies and Procedures should be in place to assure the appropriate care is rendered during the initial resuscitation and transfer of the patient.

1102.03 Outreach/Prevention/Public Education

The Level IV trauma center is responsible for working with other trauma centers and the trauma care region to develop education and prevention programs for the public and professional staff.

Compliance with the above will be evidenced by documentation of collaborative efforts of trauma specific education and injury prevention programs with other trauma centers and/or the trauma care region

1102.04 Transfer Agreements

There must be written transfer agreements with other trauma facilities in the region. A policy must be in place to facilitate and expedite the transfer sequence to assure the most appropriate care is rendered. Agreements must be in place for higher level of care and specialty referral for pediatrics, burns, acute hemodialysis, head or spinal cord injury and rehabilitation. All facilities will work together to develop transfer guidelines indicating which patients should be considered for transfer and procedures to ensure the most expedient, safe transfer of the patient. The transfer guidelines need to make certain that feedback is provided to the facilities and assure that this information becomes part of the trauma registry. All designated facilities will agree to provide service to the trauma patient regardless of their ability to pay.

When a patient in need of trauma services is transferred to a receiving facility capable of providing the needed care, from a transferring facility which cannot provide an adequate level of care, the following shall apply: When a determination is made by appropriate medical personnel of the receiving facility that a patient transferred from the transferring facility has been stabilized, no longer has an emergency medical condition or no longer requires the specialty services provided at the receiving facility, but the patient still requires further acute care, the transferring facility, with the consent of the patient and the patient's physician, agrees to readmit the transferred patient for appropriate acute care within 24 to 48 hours of such a determination. The patient's

physician, the chief of the medical staff or other authorized representative of the transferring facility shall facilitate the identification of the patient's physician or his/her designee to accept the patient and transfer the patient back to the transferring facility.

Compliance with the above will be evidenced by documentation of Transfer Agreements with higher levels of care and specialty facilities.

1102.05 Performance Improvement/Evaluation

The trauma center must develop and implement a trauma specific performance improvement plan. Key elements in trauma system planning are evaluation, measurement and improvement of performance. The goal is to decrease variation in care and improve patient outcomes.

Compliance with the above will be evidenced by:

a. Review of compliance with Regional EMS Triage Guidelines and Protocols which must be reported to the Regional Performance Improvement Committee

b. Compliance with written Trauma Team Activation Criteria

c. Compliance with the principles of ATLS

d. Peer Review of all trauma deaths to determine timeliness and appropriateness of care and preventability of death

e. Review of trauma related morbidities for appropriateness of care and preventability

f. Nursing Audit (Clinical review of nursing documentation and quality of care rendered to trauma patients)

g. Review of timeliness and appropriateness of all Transfers Out

h. Review of prehospital trauma care.

i. Review of times/reasons for trauma-related bypass.

j. Review of time/reasons for transfer of injured patients

This information must be documented and reported at a trauma specific meeting or in conjunction with other ongoing committees in the facility.

1102.06 Trauma Registry

All licensed hospitals which have organized emergency services or departments must participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since this data relates to specific trauma patients and are used to evaluate and improve the

quality of health care services, this data is confidential and will be governed by the Miss. Code Ann.§41-59-77.

Compliance with the above will be evidenced by:

b. Documentation of utilization of the Trauma Registry data in the trauma performance improvement process

c. Timely submission of Trauma Registry Data to the Bureau of EMS and the appropriate Region at least monthly.

1104.01 <u>Essentials and Desirable Chart for Level IV Trauma Centers</u>

		Level IV
1	Institutional Organization	
2	Trauma Program	E
3	Trauma Service	--
4	Trauma Team	E
5	Trauma Program Medical Director	E
6	Trauma Multidisciplinary Committee	E
7	Trauma Program Manager	E
8	Hospital Departments/Divisions/Sections	
9	Surgery	--
10	Neurological Surgery	--
11	Neurosurgical Trauma Liaison	--
12	Orthopaedic Surgery	--
13	Orthopaedic Trauma Liaison	--
14	Emergency Medicine	--
15	Anesthesia	--
16	Clinical Capabilities	
17	(Specialty Immediately Available 24 hours/day)	
18	Published on-call schedule	--
19	General Surgery	--
20	Published back-up schedule	--
21	Dedicated to single hospital when on-call	--
22	Anesthesia	--
23	Emergency Medicine	--
24	On-call and promptly available 24 hours/day	
25	Cardiac Surgery	--
26	Hand Surgery	--
27	Microvascular/replant Surgery	--
28	Neurological Surgery	--
29	Dedicated to one hospital or back-up call	--
30	Obstetrics/Gynecologic Surgery	--
31	Ophthalmic Surgery	--
32	Oral/Maxillofacial Surgery	--

33	Orthopaedic Surgery	--
34	Plastic Surgery	--
35	Critical Care Medicine	--
36	Radiology	--
37	Thoracic Surgery	--
38	Clinical Qualifications	
39	General/Trauma Surgeon:	
40	Current Board Certification	--
41	16 Hours CME/Year (7)	--
42	ATLS Completion *(2) (10)	E
43	Peer Review Committee liaison Attendance ≥ 50%	--
44	Multidisciplinary Committee liaison Attendance	--
45	Emergency Medicine:	
46	Board Certification	--
47	16 Hours CME/Year (7)	--
48	ATLS Completion *(2) (10)	E
49	Peer Review Committee liaison Attendance ≥ 50%	--
50	Multidisciplinary Committee liaison Attendance	--
51	Neurosurgery:	
52	Current Board Certification	--
53	16 Hours CME/Year (7)	--
54	ATLS Completion *(2) (10)	--
55	Peer Review Committee liaison Attendance ≥ 50%	--
56	Multidisciplinary Committee liaison Attendance	--
57	Orthopaedic Surgery:	
58	Current Board Certification	--
59	16 Hours CME In Trauma/Year (7)	--
60	ATLS Completion *(2) (10)	--
61	Peer Review Committee liaison Attendance ≥ 50%	--
62	Multidisciplinary Committee liaison Attendance	--
63	Facilities/Resources/Capabilities	
64	Volume Performance	
65	Trauma Admissions: 1,200/year	--
66	Patients with ISS > 15 (240 total or 35 patients/surgeon)	--
67	Presence of Surgeon at resuscitation	

68	Presence of Surgeon at Operative Procedures	
69	Emergency Department	
70	Personnel	
71	Designated physician director	E
72	RN in-house and available	D
73	Equipment for Resuscitation for Patients of all ages	
74	Airway control and ventilation equipment	E
75	Pulse Oximetry	E
76	Suction Devices	E
77	Electrocardiograph-Oscilloscope-Defibrillator	E
78	Internal Paddles	--
79	CVP Monitoring Equipment	--
80	Standard IV Fluids and Administration Sets	E
81	Large bore intravenous catheters	E
82	Sterile Surgical Sets for:	
83	Airway control/cricothyrotomy	
84	Thoracostomy	D
85	Venous cut-down	
86	Central line insertion	--
87	Thoracotomy	--
88	Peritoneal lavage	
89	Arterial catheters	
90	Ultrasound	
91	Drugs necessary for emergency care *(5)	E
92	X Ray availability 24 hours/day	D
93	Cervical spine stabilization devices	D
94	Broselow tape	E
95	Thermal control equipment:	
96	For Patient	
97	For fluids and blood	
98	Rapid Infuser system *(8)	D
99	Qualitative end-tidal CO2 determination	E
100	Communication with EMS vehicles	E
101	Operating Room	
102	Immediately available 24 hours/day	--
103	Personnel	
104	In-house 24 hours/day	--
105	Available 24 hours/day	--
106	Age-specific equipment	
107	Cardiopulmonary bypass	--
108	Operating microscope	--
109	Thermal control equipment	
110	For patient	--

111	For blood/fluids	--
112	X Ray capability, including c-arm image intensifier	--
113	Endoscopes, bronchoscope	--
114	Craniotomy instruments	--
115	Equipment for long bone and pelvic fixation	--
116	Rapid infuser system * (9)	--
117	Pulse oximetry	--
118	Qualitative end-tidal CO2 determination	--
119	Postanesthetic Recovery Room (SICU acceptable)	
120	Registered nurses available 24 hours/day	--
121	Equipment for monitoring and resuscitation	--
122	Intercranial pressure monitoring equipment	--
123	Pulse oximetry	--
124	Thermal control	--
125	Intensive or Critical Care Unit for Injured Patients	
126	Registered nurses with trauma education* (9)	--
127	Designated surgical director or surgical co-director	--
128	Surgical ICU service physician in-house 24 hours/day	--
129	Surgically directed and staffed ICU service	--
130	Equipment for monitoring and resuscitation	--
131	Intracranial monitoring equipment	--
132	Pulmonary artery monitoring equipment	--
133	Respiratory Therapy Services	
134	Available in-house 24 hours/day	--
135	On call 24 hours/day	D
136	Radiological Services (Available 24 hours/day)	
137	In-house radiology technologist	D
138	Angiography	--
139	Sonography	D
140	Computed Tomography	D
141	In-house CT technician	--
142	Magnetic resonance imaging	--
143	Clinical Laboratory Services (Available 24 hours/day)	
144	Standard analysis of blood, urine and other body fluids, including microsampling when appropriate	--
145	Blood typing and cross-matching	--
146	Coagulation studies	--

147	Comprehensive blood bank or access to a community central blood bank and adequate storage facilities	--
148	Blood gases and pH determinations	--
149	Microbiology	--
150	Acute Hemodialysis	
151	In-house	--
152	Transfer agreement	E
153	Burn Care - Organized	
154	In-house or transfer agreement with Burn Center	E
155	Rehabilitation Services	
156	Transfer agreement to an approved rehab facility	E
157	Physical Therapy	D
158	Occupational Therapy	D
159	Speech Therapy	--
160	Social Services	D
161	Performance Improvement	
162	Performance improvement programs	E
163	Trauma Registry	
164	In-house	E
165	Participation in state, local, or regional registry	E
166	Orthopaedic database	--
167	Audit of all trauma deaths	E
168	Morbidity and mortality review	E
169	Multidisciplinary trauma committee	E
170		
171	Review of prehospital trauma care	E
172	Review of times/reasons for trauma-related bypass	E
173	Review of times/reasons for transfer of injured patients	E
174		
175	Participate in regional review of prehospital trauma care, times/reasons for trauma-related bypass, times/treasons for transfer of injured patient	E
176	PI process established to monitor response times for all on-call personnel	E
194	Trauma registry PI activities	--
177	Continuing Education/Outreach	

177	General surgery residency program	–
178	ATLS provide/participate	D
179	Programs provided by hospital for:	
180	Staff/Community physicians (CME)	D
181	Nurses	D
182	Allied health personnel	--
183	Prehospital personnel provision/participation	D
184	Prevention	
185	Injury control studies	--
186	Collaboration with other institutions	E
187	Monitor progress/effect of prevention programs	D
188	Designated prevention coordinator/spokesperson	--
189	Outreach activities	D
190	Information resources for public	--
191	Collaboration with existing programs	--
192	Coordination and/or participation in community prevention activities	E
193	Research	
195	Research committee	--
196	Identifiable IRB process	--
197	Extramural education presentations	--
199	Number of scientific publications	--

200	* (1) Mississippi standards will require at least one general surgeon to be board certified. Alternated criteria may be substituted for other staff.
201	* (2) Mississippi standards will require a current ATLS completion card. Physicians have up to one (1) year after hiring to obtain ATLS certification.
202	* (3) Some mechanisms for “grandfathering” in non-board certified neurosurgeons and orthopedic surgeons will be developed by hospital policy.
203	* (4) The RN in-house and available in the ED must be current provider of TNCC.
204	* (5) Drugs necessary for emergency care will be defined by the prehospital drug list set forth by the Bureau of Emergency Medical Services.
205	* (6) Board certified or alternative criteria as established by hospital policy.
206	* (7) Can be accompanied with 48 hours of trauma education over three (3) years.
207	* (8) Simple pressure bag.
208	* (9) Ongoing critical care education bi-annually.
209	*(10) ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

Chapter 12 STATE DESIGNATION OF TRAUMA CENTERS

1200 DESIGNATION PROCESS

1200.01 Trauma Center Application Process

All/any Mississippi licensed hospitals with a functioning emergency room will apply for trauma center designation. An applicant hospital does not have to be within an active trauma care region to obtain designation; however, the department may prioritize the designation process for hospitals located within and participating as a member of a designated trauma care region.

Note: State funding for trauma care is available only to designated trauma center hospitals which are actively participating in a designated trauma care region.

To receive state designation as a Trauma Center, any applicant hospital and its medical staff shall set forth such intention in a letter to the department accompanied by two completed copies of the department's "Application for Trauma Center Designation".

Within 30 days of receipt of the application, the Department shall provide written notification to the applicant hospital of the following:

a. that the application has been received by the Department;

b. whether the Department accepts or rejects the application;

c. if accepted, the date scheduled for hospital inspection;

d. if rejected, the reasons for rejection and a deadline for submission of the corrected "Application for Trauma Center Designation" to the Department.

1200.02 Trauma Center Inspection Process

The Department shall provide for the inspection of the applicant hospital, provided that its application has been formally approved by the Department, on the date scheduled and indicated in the Department's acceptance letter to the applicant hospital, unless:

a. the Department provides written notification with justification of change to the applicant hospital 14 days prior to the inspection date; or

b. the applicant hospital provides written request with justification for a change to the Department 30 days prior to the inspection date;

c. the Level IV hospital applicant does not require an on-site inspection.

An applicant hospital may request an initial "Consultative Review" of its facilities. Such a review is used to assist the applicant hospital in preparation for a Trauma Center inspection.

Results of Trauma Center Consultative Reviews will be provided by the Department in writing to each applicant hospital. These results will be held in confidence by the Department. The Department will work with and provide assistance to the applicant hospital to correct any deficiencies noted during the Consultative Review.

If an applicant hospital requests a Trauma Center inspection without having first received a Consultative Review and said hospital fails to meet designation criteria the inspection shall be deemed a Consultative Review.

A Consultative Review, regardless of outcome, confers no designation status upon said applicant hospital.

A hospital, having completed a Consultative review, may apply for a Trauma Center inspection at any time after receiving the Report of Survey from the Consultative Review.

Results of Trauma Center inspections will be provided by the Department in writing to each applicant hospital. Details related to hospital's inspection will be considered confidential and will not be released.

1200.03 <u>Trauma Center Inspection Teams</u>

The Department shall provide multidisciplinary teams for all Trauma Center inspections.

Trauma Center Inspection Teams shall consist of disciplines as follows:

a. **Level I and II Trauma Centers**

As a minimum, teams shall consist of the following representative disciplines: trauma surgeon, emergency physician and trauma nurse. (The Department may add additional team members as it deems necessary.) All members of teams for Levels I and II shall reside and practice outside the State of Mississippi.

b. **Level III Trauma Centers**

As a minimum, teams shall consist of the following representative disciplines: trauma surgeon and trauma nurse. One member of each team for Level III must reside and practice out of the State of Mississippi. The remaining two members may reside and practice in Mississippi; however, they may not practice or reside in any hospital or area of the trauma care region in which the applicant hospital is located.

c. **Level IV Trauma Centers**

The Level IV trauma center inspection process shall consist of a review of the completed trauma center application, compliance with all of the "Essential" elements listed in the Mississippi Trauma Care Regulations' Essential and Desirables Chart, and satisfactory review of specific trauma registry data reports as identified in the trauma center application.

These documents shall be reviewed off-site by the OEPR Trauma System Development staff. If the information contained in the completed application and the trauma registry data reports do not demonstrate compliance with the Mississippi Trauma Care Regulations, there will be a request for additional information and an opportunity to supply supplementary data/information for review. If this additional information does not demonstrate compliance with the Mississippi Trauma Care Regulations, an on-site survey inspection will be scheduled. At a minimum, the on-site team shall consist of one member of the Trauma System Development staff and one of the following representative disciplines: a physician or trauma nurse. The member of the inspection team that is not Trauma System Development staff may reside and practice in Mississippi, however; they may not practice or reside in any hospital or area of the trauma care region in which the applicant hospital is located.

1200.04 Categories of Trauma Center Designation

a. **Complete Designation**

The hospital has completed all of the requirements for designation at their application level. This is a three (3) year designation subject to periodic compliance audits.

b. **Complete Designation with Conditions**

The hospital has completed all of the requirements for Complete Designation at their application level with the exception of minor (no patient or Regional operations impact) condition(s). This designation category may be used for initial designations or an interim change in status from Complete Designation due to a temporary loss of a capacity or capability.

Any hospital receiving written notification of Complete Designation with Conditions must immediately notify the Trauma Care Region and submit to the Department within thirty (30) working days from the receipt of notification a written plan of correction and an interim operations plan including time lines. The Department, upon receipt, shall either approve or disapprove the plan within thirty (30) working days. The hospital is responsible for contacting the Department to request a "Focused Survey" at any time prior to the end of the recognized timeline. Upon such a request the Department shall assemble a survey team to review the hospitals' "Plan of Correction" for complete implementation. If the Focused Survey team deems the "Plan of Correction" fully implemented the hospital will receive complete trauma Center designation.

c. **Suspended Designation**

The hospital has completed the requirements for Complete Designation at their application level. However, upon receipt of information and verification by the Department of regulation violations and a determination by the Department that

it is in the best interest of patient care or Regional operations, the Department may temporarily suspend the Trauma Center Designation for said hospital.

Any hospital receiving notice of Suspension of their Trauma Center Designation shall immediately notify the Trauma Care Region and all prehospital providers who routinely transport trauma patients to said hospital of the suspension of their Trauma Center designation. Any hospital receiving notice of suspension of their Trauma Center Designation shall no longer be permitted to act as nor be permitted to hold itself out as a Designated Trauma Center.

Further, the hospital shall, within ten (10) working days of notification of said suspension shall submit a written plan of correction, including correction time lines to the Department. Upon receipt of said plan the Department shall either approve or disapprove the plan within ten (10) working days.

Upon completion of the Plan of Correction, the hospital shall notify the Department and request a verification visit. The Department shall conduct a focused survey of the hospital to verify completion of the Plan of Correction and compliance with regulations. The Department may, subsequently, reinstate the hospital to its original Trauma Center status.

In addition, the appropriate fee associated with the unmet level commensurate with the facilities level as determined by its license resources shall be made payable to the Mississippi TCTF.

d. **Non-Designated Trauma Centers**

Any hospital that has not completed the Trauma Center Application process or has had its Trauma Center Designation revoked by the Department will be considered a Non-Designated Trauma Center. Such facilities shall not advertise nor hold itself out to the public as a Designated Trauma Center.

Hospitals that have been designated as Trauma Centers may have their designation status revoked for any of the following reasons:

a. By the State Health Officer for reasons of serious threat or jeopardy to patients health or welfare;

b. Refusal to satisfactorily complete the reinstatement process, described above, for hospitals having had their Trauma Center Designation Suspended.

c. Failure to adhere to laws or regulations.

d. Hospitals having their Trauma Center Designation status revoked may reapply for trauma center designation after resolution of all issues related to the revocation and completion of a complete new trauma center designation process.

Should a trauma center's status be changed or revoked, the facility is responsible for paying the fees as set forth in the Pay or Play section of these regulations.

1200.05 Plan of Correction

Each applicant hospital, which receives Complete Designation with Conditions as a Trauma Center, shall submit to the Department a "Plan of Correction" within thirty (30) days. The Plan shall address each of the conditions noted by the inspection team and outline a corrective process and timeline for completion. During this period of time the Department will work with and provide assistance to the hospital in the implementation of their "Plan of Correction"

The hospital is responsible for contacting the Department to request a "Focused Survey" at any time prior to the end of the recognized timeline. Upon such a request the Department shall assemble a survey team to review the hospitals' "Plan of Correction" for complete implementation. If the Focused Survey team deems the "Plan of Correction" fully implemented the hospital will receive complete trauma Center designation. Failure to pass the "Focused Survey" does not extend the time period.

Failure to fully complete and implement the "Plan of Correction" within the recognized time period shall result in the automatic lapse of the Designation and the hospital will automatically return to its' original non-designated status. If the Designation status lapses the hospital shall not be eligible for any allocated trauma funds and will be required to pay according to Section 400.05, 7, E.

The facility must report to the Bureau of Emergency Medical Services (BEMS) any loss of 24-hour specialty physician coverage that is required within the Trauma Care Regulations. The facility must provide a plan of corrections that details how the facility will become compliant. The hospital must submit to the BEMS evidence of recruiting efforts. Such evidence must be determined appropriate by the Mississippi Trauma Advisory Committee (MTAC). In the event a hospital is unable to fulfill their physician requirement, the hospital will submit a letter to BEMS requesting its' Trauma Center Level status reduced to the next lowest, most appropriate, level. Such evidence must be determined appropriate by the MTAC.

No inspection or designation process provided by any other agency, organization or group maybe substituted in lieu of the Department's.

1200.06 Length of Trauma Center Designation

The department shall designate Trauma Centers for a period not to exceed three (3) years. Complete designations shall remain active for three years provided no substantive changes or variances have occurred and that the designated Trauma Center continues to comply with all rules and regulations of the Department after receipt of the Trauma Center designation by the department. The Department may perform periodic trauma center audit/reviews at each designated Trauma Center.

1200.07 Trauma Center Designation Renewals (re-designation)

Designated Trauma Centers regarding re-designation (6 months prior to the designation expiration date) of its intent to seek or not seek re-designation or designation at a level different from its original designation level. The Department will acknowledge receipt of such notification in writing within 30 days to the applicant hospital and begin the application process as provided in 1200.1 and subsequent sections. All applications for

re-designation must be received no later than sixty (60) days prior to expiration of designation.

1200.08 Process of Appeal for Failing Trauma Center Inspection

If a hospital fails a trauma center inspection, the hospital shall have 30 days from the date of notification of the failure to appeal the decision in writing to the Department. The Department shall make a determination within three months of receipt of the appeal. The Department will provide the hospital with a written report of its decision. If the decision of the Department is unfavorable to the hospital, the hospital may request to be inspected for trauma center designation at another level but must pay all cost associated with the request. In addition, the appropriate fee associated with the unmet level commensurate with the facilities level as determined by its license resources shall be made payable to the Mississippi TCTF.

1200.09 Change of Trauma Center Designation

1. Trauma Centers will be permitted to change their designation if the following conditions are met in their entirety:

    a) The Trauma Center has been inspected and designated by the Department, the designation is current, and the Trauma Center is in full compliance with Department and Region rules, regulations, policies, procedures, and protocols.
    b) The request to change designation has been approved by the applicable Trauma Care Region.
    c) The Department's Trauma Consultant has reviewed the request and determines that there is no adverse impact to the Region or Trauma Care System.
    d) The Mississippi Trauma Advisory Council (MTAC) has recommended approval of the request.
    e) The Department Trauma System Administrator (TSA) concurs with the request.
    f) The State Health Officer (SHO) or designee issues the new designation.

2. A Trauma Center may make a request to change its designation by sending a letter of intent to the appropriate Trauma Care Region.

3. The Trauma Center will submit an application for the new designation level in accordance with Section 1200.01. (Note: If the Trauma Center has a current application and inspection report on file with the Department, for a level equal to or higher than the requested level, they will not be required to submit another application.)
4. The Board of Directors of the Trauma Care Region will review the request, and will recommend approval/disapproval to the Department, along with any conditions. Specifically, the Board will determine if a non-participation fee, in accordance with Section 400.05, is required.

5. The Department will forward the Region's letter, application package, and inspection report (if applicable) to the Trauma Consultant for review. The consultant will prepare a written report which will include any anticipated positive/negative impacts

to the Region and/or Trauma Care System as a result of this action. The Trauma Consultant will also determine if a new inspection is required to substantiate this request, or will prepare a report of inspection compliance based on the file inspection report.

6. The TSA will consolidate all documentation and include the request on the agenda for the next MTAC meeting. The TSA will also include the Department's concurrence or non-concurrence with justification. A representative(s) of the Trauma Center and the Region will be invited to present the request to the MTAC. If a representative of the requesting Trauma Center is not present at the MTAC, the request will be tabled to the next meeting. If the Trauma Center representative does not appear at two consecutive MTAC meetings, the request will be dismissed without action.

7. If the MTAC approves the request, the TSA will forward a letter to the SHO requesting designation of the Trauma Center to the new level. If a non-participation fee is required for the new designation, an invoice will be prepared and sent to the Trauma Center. Designation will only occur after receipt of the non-participation fee.

8. If the MTAC does not approve the request, the TSA will return the application package to the Trauma Center and the Region via certified mail. The Trauma Center will have twenty (20) days after receipt of the returned application to file an appeal with the Director, Bureau of EMS, in accordance with Section 400.06.

Chapter 13 PEDIATRIC TRAUMA CENTERS

1300 REQUIREMENTS

1300.01 Hospital Requirements

The hospital resources for adult trauma centers are described in Sections 800, 900, 1000, and 1100. The traumatized pediatric patient has special requirements that go beyond the resources required for an adult trauma center. Those components that must be present in a trauma center designated to care for pediatric patients are represented in Table 1.

TABLE 1

Requirements	Tertiary	Secondary	Primary
Trauma Surgeons credentialed by the hospital for pediatric trauma care	E	E	D
6 hours of pediatric CME per year, per surgeon	D	D	D
Pediatric emergency department area	E	D	D
Pediatric resuscitation equipment in all patient care areas	E	E	E
Micro-sampling	E	E	E
Pediatric-specific performance improvement program	E	E	E
Pediatric ICU	E	D	D

All adult trauma centers in Mississippi are required to function at one of the three levels of pediatric trauma care. An adult hospital does not have to function at the same or similar level but must function at some level of pediatric trauma care. The three levels of pediatric trauma care include: tertiary, secondary, and primary. For the adult trauma center wishing to provide pediatric trauma care at the tertiary level all the requirements stated in Table I are essential. At the secondary and primary levels certain requirements remain essential while other requirements become desirable.

At tertiary and secondary levels it is essential that the trauma center credential its trauma surgeons to do pediatric trauma care. It is desirable that the primary level trauma center credential its trauma surgeons to do pediatric trauma care. The multi-specialty concept is important in obtaining the best results when caring for traumatized children. This may include pediatric and other medical specialists. If there is a board-certified surgeon identified as the adult trauma program medical director, then this same individual can and often will assume supervision of the pediatric program.

The necessary pediatric resuscitation equipment that should be included in each Pediatric Trauma Center emergency department is listed in Table 2.

1300.02 Pediatric Resuscitation Equipment

TABLE 2 PEDIATRIC RESUSCITATION EQUIPMENT
Infant and pediatric laryngoscope blades, one of each (Miller, 0,1,2 and MacIntosh 0,1,2)
Infant and pediatric blood pressure cuffs
Pediatric defibrillation paddles
Volumetric IV sets
Angiocaths – sizes 22 gauge and 24 gauge
Broslow tape
Intra-Osseous needles
Infant and pediatric cervical collars
Pediatric immobilization devices
Pediatric oral airways
Pediatric endotracheal tube, one of each (uncuffed and cuffed), sizes 2.5 mm – 6.0 mm

1300.03 Performance Improvement

Performance improvement for pediatric patients should be measured at all levels of the system. Pediatric process and outcome measures are also necessary for participation as a designated trauma center in a trauma care region and are therefore requirements for indigent care reimbursement.

1300.04 Regional Care of the injured child

The primary pediatric trauma center must have transfer protocols in place with tertiary and/or secondary pediatric trauma centers. Additionally, transfer protocols must be written with all referral facilities in the region. All facilities will work together to develop transfer guidelines indicating which pediatric patients should be considered for transfer and procedures to assure the most expedient, safe transfer of the pediatric patient. These guidelines must address criteria to identify high-risk pediatric trauma patients that could benefit from a higher level of pediatric trauma care. Transfer protocols shall include a feedback loop so that the primary provider has a good

understanding of the patient's outcome. All designated facilities must agree to provide services to the pediatric trauma victim regardless of his/her ability to pay.

Trauma centers caring for injured pediatric patients should establish and aggressively pursue a leadership role in injury prevention. Injury prevention needs to become an integral component of the trauma center at all levels. Prevention programs should be specific to the needs of the region. The trauma registry should be utilized to identify injury trends and focus on prevention needs.

~~Chapter 14 – MISSISSIPPI BURN CARE FUND~~

1400 ~~MISSISSIPPI BURN CARE FUND~~

~~The Mississippi Burn Care Fund (MBCF) (Statute 7-9-70, Mississippi code of 1972)~~

~~Created by the Mississippi Legislature and is authorized to accept any gift, donation, bequest, appropriation or other grant from any source, governmental or private, for deposit into the fund.~~

~~Funds are distributed from the Mississippi Burn Care Fund for uncompensated burn care of Mississippians transferred from a Mississippi hospital to a qualified United States Burn Care facility or a facility approved by the Mississippi State Department of Health. Approval criteria shall include, but not be limited to, a Mississippi Trauma Care System Level I Trauma Care Center or facilities having advanced research capabilities and programs; partner hospitals or comprehensive remote, satellite, or outpatient clinics in Mississippi; the existence of comprehensive burn programs, including advanced pediatric treatment capabilities, and both physical and occupational therapy departments staffed by a board-certified physiatrist.~~

~~Uncompensated care is care for which the provider has been unable to collect payment because of the patient's inability to pay. A claim is considered to be uncompensated if, after the provider's due diligence to collect monies due, total payment from all sources (including third-party payors) of five percent (5%) or less has been made on the total trauma-related gross charges. Any payment received from Medicaid shall preclude reimbursement from the Mississippi Burn Care Fund, whether the five percent (5%) payment threshold has been met or not.~~

~~In addition, funds are distributed from the Mississippi Burn Care Fund for reimbursement of uncompensated care incurred by Mississippi licensed aero medical and ground EMS providers transporting patients from a licensed a qualified United States Burn Care facility or a facility approved by the Mississippi State Department of Health. Approval criteria shall include, but not be limited to, a Mississippi Level I Trauma Care Facility or facilities having advanced research capabilities and programs; partner hospitals or comprehensive remote, satellite, or outpatient clinics in Mississippi; the existence of comprehensive burn programs, including advanced pediatric treatment capabilities, and both physical and occupational therapy departments staffed by a board-certified physiatrist.~~

~~Funds may be allocated from the Mississippi Burn Care Fund to assist burn victims' families with out of state travel expenses. Funds so distributed shall not exceed the maximums for federal per diem and lodging rates for the geographic area in which the out of state burn center is located. Family, for the purpose of reimbursement, is defined as a burn victim's spouse, father, mother, sister, brother, son or daughter, or the corresponding "step" or half-blood relationship.~~

1400.01 ~~Distribution of the Mississippi Burn Care Fund~~

~~For each fiscal year, funds from the MBCF are allocated and based on the hospital's Diagnosis Related Groups (DRG) Relative Weights related to burn injury for those Mississippi burn patients submitted for reimbursement by participating Burn Care Facilities.~~

~~Reimbursement of aero medical and ground EMS services will be based on contractually negotiated rates arrived at by agreements with existing providers.~~

~~Funds will be distributed on an annual basis following an audit of Submitted claims for reimbursement.~~

1400.02 ~~Data Collection~~

~~A. To be eligible to receive funds from the Mississippi Burn Care Fund (MBCF) the Burn Facility must:~~

a. ~~Implement the Mississippi Department of Health standardized Trauma Burn Data Collection instrument or compatible burn registry for the mutual benefit of the Burn Care Facility, The Mississippi Trauma System and the burn injured Mississippians.~~

b. ~~Enter into a cooperative agreement with the Mississippi Department of Health, which will include a list of allowable charges, not to exceed the Medicare allowable rate.~~

Chapter 14 MISSISSIPPI BURN CARE SYSTEM

A burn care system is a coordinated multidisciplinary component of an emergency medical services system that encompasses one or more burn centers and features communication links to and triage-transfer protocols between health care facilities, pre-hospital personnel, and transportation services.

1400. HOSPITAL ORGANIZATION

1400.01 Organizational Structure

The burn center must be an acute care facility licensed in Mississippi. The burn center must have a medical and an administrative commitment to the care or patients with burns. There must be a written commitment on behalf of the entire facility to the organization of burn care. The written commitment shall be in the form of a resolution passed by an appropriate quorum of the members of the governing authority. The burn center must have written guidelines for the triage, treatment, and transfer of burned patients from other facilities. The burn center must maintain an organizational chart relating personnel within the burn center and the hospital. The burn center must maintain current accreditation by the Joint Commission (TJC) or other recognized accrediting organization(s).

1400.02 Burn Program

The burn center hospital must formally establish and maintain an organized burn program that is responsible for coordinating the care of burned patients. Compliance will be evidenced by, but not limited to:

a. Governing authority and medical staff letter of commitment in the form of a resolution

b. Written policies and procedures and guidelines for care of the burn patient

c. Defined burn team and written roles and responsibilities

d. Appointed Burn Center Medical Director with a written job description

e. Appointed Burn Center Program Manager with a written job description

f. A written Burn Center Performance Improvement plan

g. Documentation of burn center representative attendance at the regional trauma care meetings

1400.03 Burn Team

The team approach is optimal in the care of the multiple injured patient. There must be identified members of the burn team. Policies should be in place describing the respective role of all personnel on the team. The composition of the team in any hospital will depend on the characteristics of the hospital and its staff. In some instances a tiered response may be appropriate. If a tiered response is employed, written policy must be in place and the system monitored by the PI process. Suggested composition of the burn team for an injured patient may include:

c. Anesthesiologist

d. Emergency Physicians

e. Physician Specialist(s)

f. Laboratory Technicians as dictated by clinical needs

g. Mental Health/Social Services/Radiology Technicians

h. Pastoral Care

i. Respiratory Therapist

j. Nurses: ED, OR, ICU, etc.

k. General/Trauma Surgeon

l. Security officers

1400.04 Multidisciplinary Burn Care Committee

The purpose of the committee is to provide oversight and leadership to the entire burn program. The exact format will be hospital specific and may be accomplished by collaboration with another designated burn center. Each burn center may choose to have one or more committees as needed to accomplish the task. One committee should be multidisciplinary and focus on program oversight and leadership. The major focus will be on PI activities, policy development, communication among all team members, and establishment of standards of care, and education and outreach programs for injury prevention. The committee has administrative and systematic control and oversees implementation of all program related services, meets regularly, takes

attendance, maintains minutes and works to correct overall program deficiencies to optimize patient care. Suggested membership for the committee includes representatives from:

a. Administration

b. Operating Room

c. Anesthesia

d. Plastic Surgery

e. Orthopedics

f. Emergency Medicine

g. General Surgery

h. Pre-hospital providers

i. Intensive Care

j. Radiology

k. Laboratory

l. Rehabilitation

m. Neurosurgery

n. Respiratory Therapy

o. Nursing

p. Burn Program Manager/BPM

q. The clinical managers (or designees) of the departments involved with burn care should play an active role with the committee.

The burn center may wish to accomplish performance improvement activities in this committee or develop a separate peer review committee. This committee should handle peer review independent from department based review. The committee must meet regularly and maintain attendance and minutes. This committee must report findings to the overall hospital performance improvement program.

1400.05 Burn Center Director

The burn center director must be a surgeon with board certification by American Board of Surgery or American Board of Plastic Surgery; certification of special qualifications in surgical critical care is desirable. The burn center director must have completed a 1-year fellowship in burn treatment or must have experience in the care of patients with acute burn injuries for 2 or more years during the previous 5 years. The burn center director must participate in continuing medical education in burn treatment (48 hours of burn/trauma related CME in a 3 year period)

and must demonstrate ongoing involvement in burn-related research and community education in burn care and/or prevention.

Responsibilities of the burn center director must include, but not be limited to, the following:

a. Creation of policies and procedures within the burn center that specify the care of burned patients

b. Creation of policies and protocols for use throughout the burn care system for referral care, triage, and transport of burn patients

c. Cooperation with the trauma care region in all aspects of patient treatment

d. Communications on a regular basis with physicians and other authorities about patients who have been refused

e. Direction of the burn center administrative functions, including approval of medical staff credentialing.

f. Direction and active participation in the burn center performance improvement program

g. Liaison with adjacent and regional burn centers

h. Development and participation in internal and external continuing medical education programs in the care and prevention of burn injuries.

1400.06 Policies and Procedures

The burn center must maintain an appropriate policy and procedure manual that is reviewed annually by the burn center director and the nurse manager. The policy and procedure manual must contain, at a minimum, the following policies addressing the following:

a. Administration of the burn center

b. Staffing of the burn center

c. Criteria for admission to the burn center by the burn service

d. Use of burn center beds by other medical or surgical services

e. Criteria for discharge and follow-up care

f. Availability of beds and the transfer of burn patients to other medical or surgical units within the hospital

g. Care of patients with burns in areas of the burn center hospital other than the burn center.

1400.07 Personnel

The burn center must be granted the necessary authority to direct and coordinate all services for patients admitted to the burn service. The burn center director must make sure that medical care conforms to the burn center protocols. Privileges for physicians participating in the burn service must be determined by the medical staff credentialing process and approved by the burn center director. Qualifications for surgeons who are responsible for the care of burned patients must conform to criteria documenting appropriate training, patient care experience, continuing medical education, and commitment to teaching and research in the care of burned patients.

1400.08 Burn Service Coverage

The burn service must maintain an on-call schedule for attending staff surgeons who are assigned to the burn service. The staff surgeons must be promptly available on a 24-hour basis.

1400.09 Burn Center Program Manager (Nurse Manager)

Burn Centers must have a registered nurse, with two (2) or more years of experience as a nurse in a burn center, working full time in the role of Burn Program Manager/BPM, who is administratively responsible for the burn center. The Burn Program Manager/BPM must have at least two (2) years or more of experience in acute burn care and six (6) months or more managerial experience. Working in conjunction with the medical director, the Burn Program Manager/BPM is responsible for organization of the program and all systems necessary for the multidisciplinary approach throughout the continuum of burn care. The Burn Program Manager/BPM is responsible for working with the burn team to assure optimal patient care. There are many requirements for data coordination and performance improvement, education and prevention activities incumbent upon this position.

The Burn Program Manager/BPM or his/hers designee should offer or coordinate services for burn education. The Burn Program Manager/BPM should liaison with local EMS personnel, the Department, Regional Trauma Care committee(s), trauma centers, and other burn centers.

The Burn Program Manager/BPM must participate in 16 or more hours of burn-related education (can be met by attendance at the annual meetings of the American Association for the Surgery of Trauma, ABA, or any ABA-endorsed meetings or continuing education programs, such as ABLS or ABLS Now) each year or 48 hours in a three year period.

There must be an organizational chart relating the nurse manager to the burn service and other members of the burn team.

1401. CLINICAL COMPONENTS

Patients with burns and trauma must be evaluated and/or stabilized at a trauma center before transfer to a burn center. Physician judgment will be necessary in such situations and should be in concert with the regional medical control plan and triage protocols.

1401.01 Burn Center Referral Criteria

Burn injuries that should be referred to a burn center include, but are not limited to the following:

a. Partial-thickness burns of greater than 10% of the total body surface area

b. Burns that involve the face, hands, feet, genitalia, perineum, or major joints

c. Third-degree burns

d. Electrical burns, including lightning injury

e. Chemical burns

f. Inhalation injury

g. Burn injury in patients with pre-existing medical disorders that could complicate management, prolonged recovery, or affect mortality

h. Burn injury in patients who will require special social, emotional, or rehabilitative intervention

1401.02 Qualifications of Attending Staff Surgeons

The director must appoint qualified attending staff surgeons to participate in the care of patients on the burn service. Attending staff surgeons must be board-certified or board eligible with current Advanced Burn Life Support (ABLS). Certification of special qualifications in critical care is desirable. The attending staff surgeon must have demonstrated expertise in burn treatment. Attending staff surgeons must participate in continuing medical education in burn treatment. Other attending surgeons must demonstrate participation in an internal education plan.

1401.03 Specialty Services

The following specialists must be available for consultation:

a. General surgery

b. Cardiothoracic surgery

c. Neurological surgery

d. Obstetrics/gynecology

e. Ophthalmology

f. Anesthesiology

g. Pediatrics

h. Orthopedic surgery

i. Otolaryngology

j. Plastic surgery

k. Urology

l. Pulmonary

m. Radiology

n. Nephrology

o. Psychiatry

p. Cardiology

q. Gastroenterology

r. Hematology

s. Neurology

t. Pathology

u. Infectious disease

1402. FACILITY STANDARDS

1402.01 Nursing Staff

There must be a patient care system in effect that is used to determine nurse staffing for each patient in the burn center. This system must be used to determine daily staffing needs. There must be a burn center orientation program that documents nursing competencies specific to the care and treatment of burn patients, including critical care, wound care, and rehabilitation. Burn center nursing staff must be provided with a minimum of two (2) burn-related continuing education opportunities annually.

1402.02 Operating Suites

The burn center hospital must have operating rooms available 24 hours a day.

1402.03 Emergency Services

The emergency department must have written protocols mutually developed with the burn service for the care of acutely burned patients.

1402.04 Allograft Use

The burn center hospital's policies and procedures for the use of allograft tissues must be in compliance with all federal, state, and the Joint Commission/other recognized accrediting organizations' requirements, and with standards of the American Association of Tissue Banks.

1403. CLINICAL SUPPORT SERVICES

1403.01 Pre-hospital Care

The burn center must have a written multiple-casualty plan for the triage and treatment of patients burned in a multiple casualty incident occurring within its service area. The multiple casualty plan must be reviewed and updated as needed, and on an annual basis by EMS representatives and the burn center director.

1403.02 Trauma Registry

All facilities designated as burn centers in Mississippi must participate in the statewide Trauma Registry for the purpose of supporting peer review and performance improvement activities at the local, regional, and state levels. Since this data relates to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential and will be governed by the Miss. Code Ann. §41-59-77

This database must include all patients who are admitted to the burn center hospital for acute burn care treatment. Compliance with the above will be evidenced by:

a. Documentation of utilization of the Trauma Registry data in the trauma/burn performance improvement process.

b. Timely submission of Trauma Registry Data to the Department and the appropriate Trauma Region.

1403.03 Education

The burn center must be actively engaged in promoting Advanced Burn Life Support (ABLS) courses in its region. It is desirable for the director to be an ABLS instructor and essential that the director is current in ABLS. The unit should have one or more employees who are ABLS instructors.

The burn center must offer education on the current concepts in emergency and inpatient burn care treatment to pre-hospital and hospital care providers within its service area.

The burn center must have an internal burn education plan for the staff.

1403.04 Rehabilitation Personnel

There must be a rehabilitation program designed for burned patients that identifies specific goals.

The primary burn care therapist must have annual participation in 16 hours or more of burn-related education (can be met by attendance at the annual meetings of the American Association for the Surgery of Trauma, American Burn Association (ABA), or any ABA-endorsed meetings or continuing education programs, such as ABLA or ABLS Now) each year or 48 hours over a three (3) year period.

1403.05 Physician Extenders

Appropriate credentialed physician extenders may be used as members of the burn team. These individuals may include, but are not limited to, physician assistants, surgical assistants, or nurse practitioners. They may augment but do not replace the physician member of the team.

1403.06 Social Services

Social service consultation must be available to the burn service. Members must participate in an internal education plan.

1403.07 Nutritional Support

A dietician must be available on a daily basis for consultation. Members must participate in an internal education plan.

1403.08 Pharmacy

A pharmacist who has at least six (6) months of experience in critical care and the pharmacokenetics implications for patients with acute burn injuries must be available on a 24-hour basis. Members must participate in an internal education plan.

1403.09 Respiratory Care

Respiratory therapists must be available for the assessment and management of patients on the burn service on a 24-hour basis. Members must participate in an internal education plan.

1403.10 Clinical Psychiatry

A psychiatrist or clinical psychologist should be available for consultation by the burn service on a 24-hour basis. Members must participate in an internal education plan.

1403.11 Performance Improvement

The burn program must have a performance improvement program that is multidisciplinary. The burn center director must be responsible for the performance improvement program. The burn center multi-disciplinary committee, which oversees the performance improvement program, must meet at least quarterly. Sufficient documentation must be maintained to verify problems, identify opportunities for improvement, take corrective actions, and resolve problems. Morbidity and mortality conferences must be held at least monthly with physicians other than the immediate burn care team to ensure objective review of the presentations. Attendees at this conference must include specialist staff members other than those practicing in the burn center. All significant complications and deaths must be discussed. Actions recommended must also be documented, and there must be documentation of loop closure. Records of this conference must be kept.

The burn center must develop an internal, specific Performance Improvement (PI) plan that minimally addresses the following key components and is fully integrated into the hospital wide program:

a. An organizational structure that facilitates performance improvement (Multidisciplinary Committee).

b. Clearly defined authority and accountability for the program.

c. Clearly stated goals and objectives one of which should be reduction of inappropriate variations in care.

d. Development of expectations (criteria) from evidenced based guidelines, pathways and protocols. These should be appropriate, objectively defined standards to determine quality of care.

e. Explicit definitions of outcomes derived from institutional standards.

f. Documentation system to monitor performance, corrective action and the result of the actions taken.

g. A process to delineate credentialing of all burn service physicians.

h. An informed peer review process utilizing a multidisciplinary method.

i. A method for comparing patient outcomes with computed survival probability.

j. Autopsy information on all deaths when available.

k. Review of pre-hospital care.

l. Review of times and reasons for burn bypass.

m. Review of times and reasons for burn transfers.

n. Audit of burn deaths.

o. Morbidity and Mortality review.

p. Feedback process with the referring hospital/physician.

Representatives from the burn center shall participate in the Trauma Region committees and the statewide performance improvement process.

1403.12 Weekly Patient Care Conferences

Patient care conferences must be held at least weekly to review and evaluate the status of each patient admitted to the burn center. Each clinical discipline should be represented to appropriately contribute to the treatment plan for each patient. Patient care conferences must be documented in the progress notes of each patient and/or in minutes of the conference.

1403.13 Infection Control Program

The burn center must have effective means of isolation that are consistent with principles of universal precautions and barrier techniques to decrease the risk of cross-infection and cross-contamination. The burn center hospital must provide ongoing review and analysis of nosocomial infection data and risk factors that relate to infection prevention and control for burn patients. These data must be available to the burn team to assess infection risk factors that relate to infection prevention and control for burn patients.

1403.14 Continuity of Care Program

The burn center must provide the following services:

a. Patient and family education in rehabilitation programs

b. Support for family members or other significant persons

c. Coordinated discharge planning

d. Follow-up after hospital discharge

e. Access to community resources

f. Evaluation of the patient's physical., psychological, developmental, and vocational status

g. Planning for future rehabilitative and reconstructive needs

1403.15 Burn Prevention Program

The burn center will be responsible for taking a lead role in coordination of appropriate agencies, professional groups and hospitals in their region to develop a strategic plan for public awareness. This plan must take into consideration public awareness of the burn system, access to the system, public support for the system, as well as specific prevention strategies. Prevention programs must be specific to the needs of the region. The trauma registry data must be utilized to identify injury trends and focus prevention needs.

1403.16 Research Program

The burn center must participate in basic, clinical, and health sciences research. The medical director must demonstrate ongoing involvement in burn-related research.

1403.17 Other Services

Renal dialysis, radiological services (including computed tomography scanning), and clinical laboratory services must be available 24 hours per day.

1404. Essential and Desirable Chart for Burn Centers (Reserved)

APPENDIX A – MISSISSIPPI TRAUMA ADVISORY COMMITTEE

William T. Avara, III, M.D., Chairman

Singing River Hospital

2525 Telephone Road

Pascagoula, MS 39567

Expires: 7/01/2010

Coastal Trauma Care Region

Rodney Frothingham, M.D.

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Greenville, MS 38701

Expires: 6/30/2010

MS State Med. Association

H.S. McMillan

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Jackson, MS 39215-1698

Expires: 6/30/2010

Dept of Rehabilitation Services

John Nelson, M.D.

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Hattiesburg

39402-8341

Expires: 6/30/2010

MS Chapter, ACEP

G. Douglas Higginbotham, Exec. Dir.

South Central Regional Medical Center

P. O. Box 607

Laurel, MS 39441

Expires: 7/01/2008

MS Hospital Association

Clyde Deschamp, Ph.D

University of Mississippi Medical Center

2500 North State Street

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Expires: 7/01/2010

Central Trauma Care Region

Ben Yarbrough, M. D.

Franklin County Memorial Hospital

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Expires: 7/01/2010

Southwest Trauma Care Region

Bennie Wright, M.D.

810 East Sunflower Road

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Expires: 6/30/2010

Delta Trauma Care Region

Jerry M. Howell, CEO

Marion General Hospitals

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Columbia, MS 39429

Expires: 6/30/2010

Southeast Trauma Care Region

K.C. Hamp, Sheriff

Tunica County

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Expires: 6/30/2009

County/Municipal Government

Amber Lindsey Kyle, RN

University of Mississippi Medical Center

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Jackson, MS 39216

Expires: 6/30/2010

MS Emergency Nurses Assoc.

Jonathan Wilson, RN

University of Mississippi Medical Center

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Jackson, MS 39216

Expires: 7/1/2009

Mississippi Nurses Association

Josh Wenzel, NREMT-P

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Tupelo, MS 38801

Expires: 6/30/2010

North Trauma Care Region

JoAnne Coates, M.D.

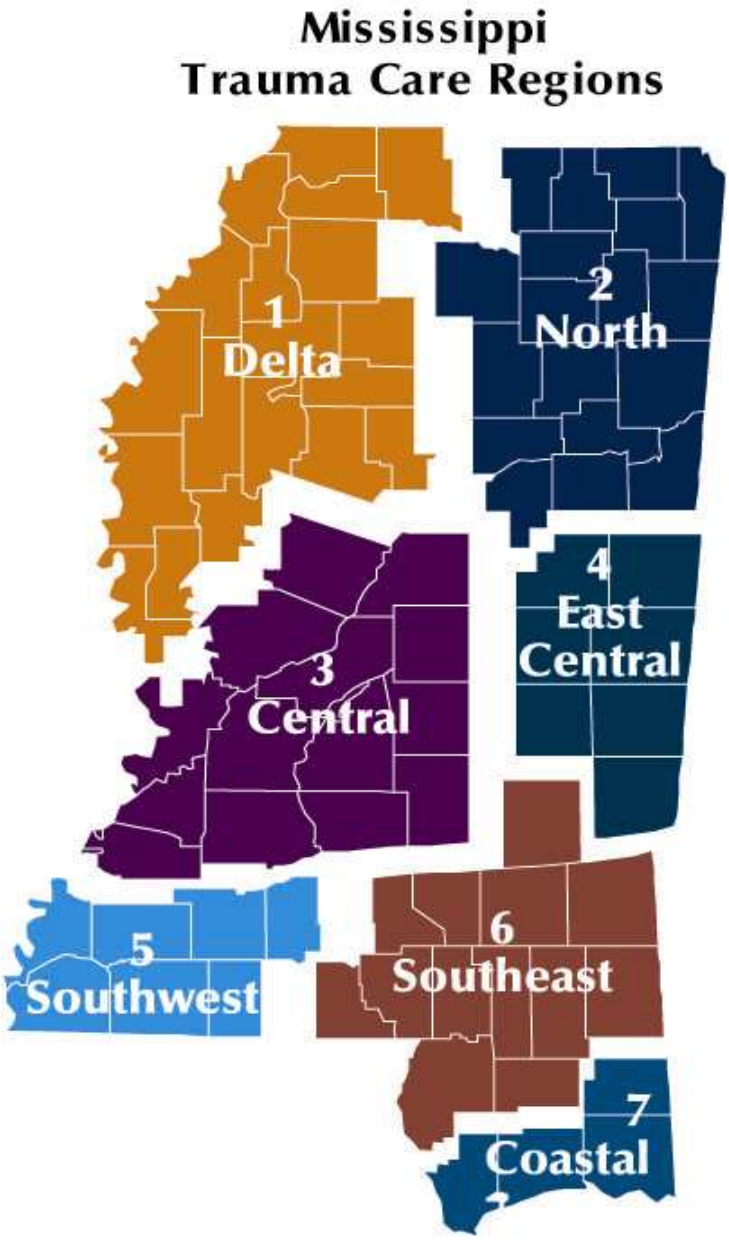
P.O. Box 6254

Philadelphia, MS 39350

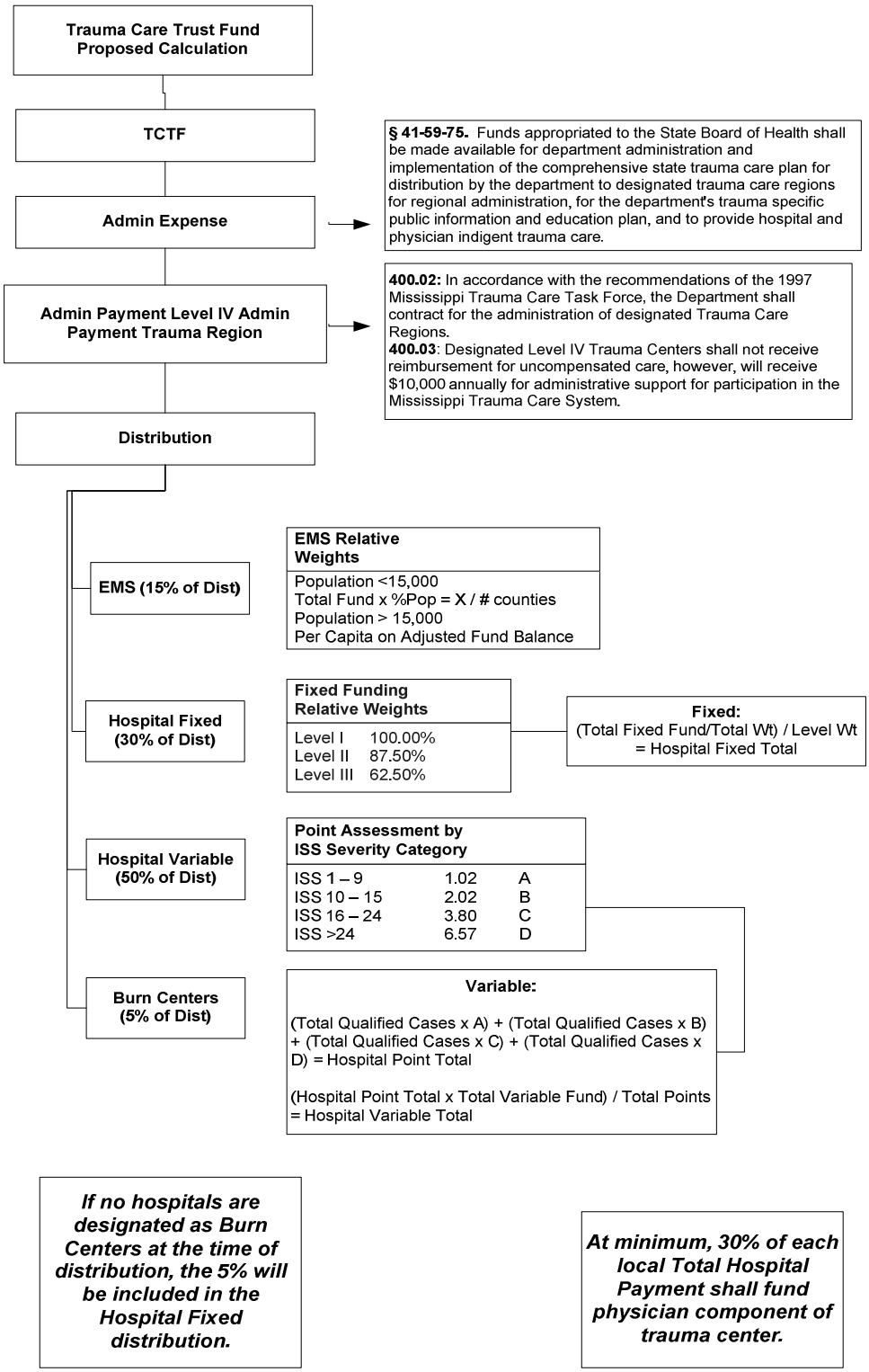
Expires: 7/1/2009

East Central Trauma Care Region

APPENDIX B – TRAUMA CARE REGIONS MAP



Appendix D – Trauma Care Trust Fund Distribution Model



CERTIFICATION OF REGULATION

This is to certify that the above **The Mississippi Trauma Care System Regulations** was adopted by the Mississippi State Board of Health on ~~April 14, 2010~~ October 13, 2010 to become effective ~~May 16, 2010~~ November 19, 2010.

M. Currier, MD, MPH
Secretary and Executive Officer

Title 15 - Mississippi Department of Health

Part III – Office of Health Protection

Subpart 32 – EMS-Trauma

Chapter 04 THE MISSISSIPPI TRAUMA CARE SYSTEM

1401. GENERAL INFORMATION

1401.01 Purpose

In 1998, the Mississippi Legislature amended the Emergency Medical Services Act of 1974 to create a statewide inclusive trauma care system. Miss. Code Ann. 41-59-1, et seq. These statutes authorize and direct the Mississippi State Board of Health to develop, create regulations for, and administer a uniform statewide trauma care system through the Mississippi State Department of Health, Emergency Medical Services, acting as the lead agency.

The Mississippi Legislature, in its 2008 Regular Session, amended the Emergency Medical Services Act of 1974, requiring the Department to develop regulations specifying methods of participating making the system no longer voluntary but a requirement of licensed acute care hospitals. Miss. Code Ann. §63-13-11(as amended) mandates that the department shall promulgate regulations specifying the methods and procedures by which Mississippi-licensed acute care facilities shall participate in the statewide trauma system.

Accordingly, the Board adopts these regulations, to be known as "The Mississippi Trauma Care System Regulations" to address each component necessary for this development. These Regulations have been developed through a consensus process with the advice of nationally recognized trauma system consultants, the Mississippi Trauma Advisory Committee and staff of the Mississippi State Department of Health.

1401.02 §41-59-7. Advisory council.

There is hereby created an emergency medical services advisory council to consist of the following eleven (11) members who shall be appointed by the Governor:

a. One (1) licensed physician to be appointed from a list of nominees presented by the Mississippi Trauma Committee, American College of Surgeons;

b. One (1) licensed physician to be appointed from a list of nominees who are actively engaged in rendering emergency medical services presented by the Mississippi State Medical Association;

c. One (1) registered nurse whose employer renders emergency medical services, to be appointed from a list of nominees presented by the Mississippi Nurses Association;

d. Two (2) hospital administrators who are employees of hospitals which provide emergency medical services, to be appointed from a list of nominees presented by the Mississippi Hospital Association;

e. Two (2) operators of ambulance services; and

f. Three (3) officials of county or municipal government;

g. One (1) licensed physician to be appointed from a list of nominees presented by the Mississippi Chapter of the American College of Emergency Physicians;

h. One (1) representative from each designated trauma care region, to be appointed from a list of nominees submitted by each region;

i. One (1) registered nurse to be appointed from a list of nominees presented buy the Mississippi Emergency Nurses Association;

j. One (1) EMT-Paramedic whose employers renders emergency medical services in a designated trauma care region;

k. One (1) representative from the Mississippi Department of Rehabilitative Services;

l. One (1) member who shall be a person who has been a recipient of trauma care in Mississippi or who has an immediate family member who had been a recipient of trauma care in Mississippi; and

m. One (1) licensed neurosurgeon to be appointed from a list of nominees presented by the Mississippi State Medical Association**,** and

n. One (1) licensed physician with certification or experience in trauma care to be appointed from a list of nominees presented by the Mississippi Medical and Surgical Association.

The terms of the advisory council members shall begin on July 1, 1974. Four (4) members shall be appointed for a term of two (2) years, three (3) members shall be appointed for a term of three (3) years, and three (3) members shall be appointed for a term of four (4) years. Thereafter, members shall be appointed for a term of four (4) years. The executive officer or his designated representative shall serve as ex officio chairman of the advisory council.

The advisory council shall meet at the call of the chairman at least annually. For attendance at such meetings, the members of the advisory council shall be reimbursed for their actual and necessary expenses including food, lodging and mileage as authorized by law, and they shall be paid per diem compensation authorized under Section 25-3-69.

The advisory council shall advise and make recommendations to the board regarding rules and regulations promulgated pursuant to this chapter.

There is created a committee of the Emergency Medical Services Advisory Council to be named the Mississippi Trauma Advisory Committee (hereinafter "MTAC"). This committee shall act as the advisory body for trauma care system development and provide technical support to the department in all areas of trauma care system design, trauma standards, data collection and evaluation, continuous quality improvement, trauma care system funding, and evaluation of the trauma care system and trauma care programs. The membership of the Mississippi Trauma Advisory Committee shall be comprised of Emergency Medical services Advisory Council members appointed by the chairman. Advisory council members may hold over and shall continue to serve until a replacement is named by the Governor.

SOURCES: Laws, 1974, ch. 507, § 4, 1983, ch. 522, § 37; 1986, ch. 363; Laws, 1998, ch. 429, § 3, eff from and after July 1, 1998.

Cross references -

Traveling expenses of state officers and employees, see § 25-3-41.

Advisory council's duties as to the administration of funds appropriated to the state board of health from the emergency medical services operating fund, see § 41-59-61.

Policy for Administration:

The Mississippi Trauma Advisory Council (MTAC) shall meet at least quarterly and report to the State Board of Health at its regularly scheduled quarterly meetings on the performance of trauma in the state.

1401.03 Definitions

The following terms shall have the meanings set forth below, unless the context otherwise requires:

a. **Abbreviated Injury Scale (or "AIS") -** an anatomic severity scoring system.

b. **ACEP -** American College of Emergency Physicians.

c. **ACLS -** Association in Advanced Cardiac Life Support techniques.

d. **ACSCOT -** American College of Surgeons Committee on Trauma.

e. **ALS -** Advanced life support, including techniques of resuscitation, such as, intravenous access, and cardiac monitoring.

f. **Advanced Pediatric Life Support (APLS) -** a course jointly developed and sponsored by the American College of Emergency Physicians and the American Academy of Pediatrics which covers the knowledge and skills necessary for the initial management of pediatric emergencies, including trauma.

g. **Advanced Trauma Life Support (ATLS)** - a course developed and sponsored by the American College of Surgeons Committee on Trauma for physicians who cover trauma knowledge and skills.

h. **BLS** - Basic life support techniques of resuscitation, including simple airway maneuvers, administration of oxygen, and intravenous access.

i. **Board Certified** - Physicians and oral and maxillofacial surgeons certified by appropriate specialty boards recognized by the American Board of Medical Specialties and the Advisory Board of Osteopathic Specialties and the American Dental Association. See definition of Qualified Specialists.

j. **Basic Trauma Life Support (BTLS)** - a course for prehospital care providers sponsored by the American College of Emergency Physicians.

k. **Bypass (diversion)** - A medical protocol or medical order for the transport of an EMS patient past a normally used EMS receiving facility to a designated medical facility for the purpose for accessing more readily available or appropriate medical care.

l. **CCRN** - Critical Care Registered Nurse certification from the American Association of Critical Care Nurses.

m. **CEN** - Certified Emergency Nurse certification from the Board Certification of Emergency Nursing.

n. **Communications System** - A collection of individual communication networks, a transmission system, relay stations, and control and base stations capable of interconnection and interoperation that are designed to form an integral whole. The individual components must serve a common purpose, be technically compatible, employ common procedures, respond to control, and operate in unison.

o. **Co-morbidity** - Significant cardiac, respiratory, or metabolic diseases that stimulate the triage of injured patients to Trauma Centers.

p. **Catchment Area** - That geographic area served by a designated Trauma Care Region for the purpose of regional trauma care system planning, development and operations.

q. **Citizen Access** - the act of requesting emergency assistance for a specific event.

r. **Consolidated Omnibus Budget Reconciliation Act (COBRA)** - the federal A portion of this law commonly referred to as COBRA or OBRA details the requirements Medicare hospitals must meet in providing screening examinations for individuals presenting at the emergency department, and the requirements that must be met prior to transferring a patient in an unstable medical condition or who is pregnant and having contractions.

s. **Department** - the Mississippi State Department of Health, Division of Emergency Medical Services.

t. **Designation** - formal recognition of hospitals by the department as providers of specialized services to meet the needs of the severely injured patient; usually involves a contractual relationship and is based on adherence to standards.

u. **Disaster** - any occurrence that causes damage, ecological destruction, loss of human lives, or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community area.

v. **Dispatch** - coordination of emergency resources in response to a specific event.

w. **Diversion** - see "Bypass."

x. **Emergency Department (or "emergency room")** - the area of a licensed general acute care hospital that customarily receives patients in need of emergency medical evaluation and/or care.

y. **EMS - Emergency Medical Services**- the arrangement of personnel, facilities, and equipment for the effective and coordinated delivery of emergency care required to prevent and manage incidents that occur from a medical emergency or from an accident, natural disaster, or similar situation.

z. **Emergency Medical Services for Children (EMS-C)** - an arrangement of personnel, facilities and equipment for the effective and coordinated delivery of emergency health services to infants and children that is fully integrated within the emergency medical system of which it is a part.

aa. **EMT-P** - Emergency medical technician- paramedic, an individual who is trained to provide emergency medical services and is certified as such by the local authorities in accordance with the current national standard.

bb. **ENA** - Emergency Nurses Association.

cc. **Field Categorization (classification)** - a medical emergency classification procedure for patients that is applicable under conditions encountered at the site of a medical emergency.

dd. **Field Triage** - Classification of patients according to medical need at the scene of an injury or onset of an illness.

ee. **GCS - Glasgow Coma Scale** - a scoring system that defines eye, motor, and verbal responses in the patient with injury to the brain.

ff. **Hospital Criteria** - Essential or desirable characteristics that help categorize Level I, II or III Trauma Centers of a Level IV trauma facility.

gg. **Immediately (or "immediately available")** - (a) unencumbered by conflicting duties or responsibilities; (b) responding without delay when notified; and (c)

being within the specified resuscitation area of the Trauma Center when the patient is delivered in accordance with the policies and procedures of a designated Trauma Care Region.

hh. **Implementation (or "implemented") -** the development and activation of a Regional Trauma Plan by a designated Trauma Care Region including the triage, transport and treatment of trauma patients in accordance with the plan.

ii. **Inclusive Trauma Care System -** a trauma care system that incorporates every health care facility in a community in a system in order to provide a continuum of services for all injured persons who require care in an acute care facility; in such a system, the injured patient's needs are matched to the appropriate hospital resources.

jj. **Indigent Trauma Patient -** a victim of traumatic injury which meets the criteria for admittance into the Mississippi Trauma Registry and has no financial ability to pay for trauma services received.

kk. **Injury Control -** the scientific approach to injury that includes, analysis, data acquisition identification of problem injuries in high risk groups, option analysis and implementing and evaluating countermeasures.

ll. **Injury -** the result of an act that damages, harms, or hurts; unintentional or intentional damage to the body resulting from acute exposure to thermal, mechanical, electrical or chemical energy or from the absence of such essential as heat or oxygen.

mm. **Injury Rate -** a statistical measure describing the number of injuries expected to occur in a defined number of people (usually 100,000) within a period (usually 1 year). Used as an expression of a relative risk of different injuries or groups.

nn. **Injury Prevention -** efforts to forestall or prevent incidents that might result in injuries.

oo. **Injury Severity Score (or "ISS") -** the sum of the squares of the Abbreviated Injury Scale score of the three most severely injured body regions.

pp. **Lead Agency -** an organization that serves as the focal point for program development on the local, regional or State level.

qq. **Level I -** Hospitals that have met the requirements for Level I as stated in Chapter XI and are designated by the Department.

rr. **Level II -** Hospitals that have met the requirements for Level II as stated in Chapter XII and are designated by the Department.

ss. **Level III -** Hospitals that have met the requirements for Level III as stated in Chapter XII and are designated by the Department.

tt. **Level IV** - Hospitals that have met the requirements for Level IV as stated in Chapter XIV and are designated by the Department.

uu. **Major Trauma** - that subset of injuries that encompasses the patient with or at risk for the most severe or critical types of injury and therefore requires a system approach in order to save life and limb.

vv. **Major Trauma Patient (or "major trauma" or " critically injured patient")** - a person who has sustained acute injury and by means of a standardized field triage criteria (anatomic, physiology, and mechanism of injury) is judged to be at significant risk of mortality or major morbidity.

ww. **Mechanism of Injury** - the source of forces that produce mechanical deformations and physiological responses that cause an anatomic lesion of functional change in humans.

xx. **Medical Control** - physician direction over prehospital activities to ensure efficient and proficient trauma triage, transportation, and care, as well as ongoing quality management.

yy. **Mississippi Trauma Advisory Committee (MTAC)** - (See Appendix A) advisory body created by legislature for the purpose of providing assistance in all areas of trauma care system development and technical support to the Department of Health; members are comprised of EMS Advisory Council members appointed by the chairman.

zz. **Mississippi Trauma Care System Plan** - a formally organized plan developed by the Department of Health, pursuant to legislative directive, which sets out a comprehensive system of prevention and management of major traumatic injuries.

aaa. **Morbidity** - the relative incidence of disease.

bbb. **Mortality** - the proportion of deaths to population.

ccc. **Multi-disciplinary Trauma Review Committee** - committee composed of the trauma service Director, other physician members and other members appointed by the trauma director that reviews trauma deaths in a system or hospital.

ddd. **Non-Designated Hospital** - a licensed hospital that has not been designated by the Department as a Trauma Center.

eee. **Off-Line Medical Direction** - the establishment and monitoring of all medical components of an EMS system, including protocols, standing orders, education programs, and the quality and delivery of on-line control.

fff. **On-Call** - available to respond to the Trauma Center in order to provide a defined service.

ggg. **On-Line Medical Direction -** immediate medical direction to prehospital personnel in remote locations (also know as direct medical control) provided by a physician or an authorized communications resource person under the direction of a physician.

hhh. **Overtriage -** directing patients to Trauma Centers when they do not need such specialized care. Overtriage occurs because of incorrect identification of patients as having severe injuries when retrospective analysis indicates minor injuries.

iii. **Pediatric Trauma Center -** Either (a) a licensed acute care hospital which typically treats persons fourteen (14) years of age or less, which meets all relevant criteria contained in these Regulations and which has been designated as a pediatric Trauma Center; or (b) the pediatric component of a Trauma Center with pediatric specialist and a pediatric intensive care unit.

jjj. **Pediatric Advanced Life Support (PALS) -** a course developed and sponsored by the American Heart Association and the American Academy of Pediatrics, for healthcare workers covering the application of advanced life support therapies to pediatric patients.

kkk. **Prehospital Emergency Medical Care Personnel -** prehospital emergency medical care personnel are individuals certified or otherwise credentialed to perform prehospital emergency medical care by the Department.

lll. **Prehospital Trauma Life Support (PHTLS) -** a verification course for prehospital care providers that teaches concepts of basic and advanced trauma life support. It is developed and sponsored by the National Association of Emergency Medical Technicians in cooperation with the American College of Surgeons Committee on Trauma.

mmm. **Promptly Available (or "promptly") -** within the trauma receiving resuscitation area, emergency department, operating room, or other specified area of the Trauma Center within a period of time that is medically prudent and proportionate to the patient's clinical condition and such that the interval between the delivery of the patient at the Trauma Center and the arrival of the respondent should not have a measurably harmful effect on the course of patient management or outcome in accordance with the policies and procedures of a designated Trauma Care Region.

nnn. **Protocols -** standards for EMS practice in a variety of situations within the EMS system.

ooo. **Qualified Specialist (or "qualified surgical specialist" or "qualified non-surgical specialist") -** either (a) a physician or oral and maxillofacial surgeon licensed in Mississippi who has taken special postgraduate medical training, or has met other specified requirements and has become board certified within three (3) years of qualification for board certification in the corresponding specialty, for those specialties that have board certification and are recognized by the American Board of Medical Specialties, the Advisory Board of Osteopathic Specialties, the American Dental Association, or within three (3) years of joining

a trauma team if more than three (3) years have elapsed since qualifying to take the board certification examination is board certified in a specialty by the American Board of Medical specialties, the Advisory Board of Osteopathic Specialties, the American Dental Association, a Canadian board or other appropriate foreign specialty board as determined by the American Board of Medical specialties for that specialty; or, (b) a non-board certified physician who is designated by the Hospital as a Qualified Specialist, after having met one or more of the following conditions:

a. Demonstration that he/she has met requirements which are equivalent to those of the Accreditation Council for Graduate Medical Education, American Board of Medical Specialties, the Advisory Board of Osteopathic Specialties, the American Dental Association, (ACGME) or the Royal College of Physicians and Surgeons of Canada;

b. Demonstration that he/she has substantial education, training and experience in treating and managing major trauma patients; or

c. Successful completion of a residency program.

ppp. **Performance Improvement (or "quality improvement") -** a method of evaluating and improving processes of patient care which emphasizes a multi-disciplinary approach to problem solving, and focuses not on individuals, but systems of patient care which might cause variations in patient outcome.

qqq. **Quality Management (or "performance management") -** a broad term which encompasses both quality assurance and quality improvement, describing a program of evaluating the quality of care using a variety of methodologies and techniques.

rrr. **Regional Trauma Plan -** a document developed by the various Trauma Care Regions, and approved by the Department of Health, which describes the policies, procedures and protocols for a comprehensive system of prevention and management of major traumatic injuries in that Trauma Care Region

sss. **Regionalization -** the identification of available resources within a given geographic area, and coordination of services to meet the need of a specific group of patients.

ttt. **Rehabilitation -** services that seek to return a trauma patient to the fullest physical, psychological, social, vocational, and educational level of functioning of which he or she is capable, consistent with physiological or anatomical impairments and environmental limitations.

uuu. **Research -** clinical or laboratory studies designed to produce new knowledge applicable to the care of injured patients.

vvv. **Residency Program -** a residency program of the Trauma Center or a residency program formally affiliated with the Trauma Center where senior residents can participate in educational rotations.

www. **RTS** - Revised Trauma Score, a prehospital/emergency center scoring system in which numerical values are assigned to differing levels of Glasgow Coma Scale, systolic blood pressure, and respiratory rate.

xxx. **Response Time** - the time lapse between when an emergency response unit is dispatched and arrives at the scene of the emergency.

yyy. **Risk factor** - a characteristic that has been statistically demonstrated to be associated with (although not necessarily the direct cause of) a particular injury. Risk factors can be used for targeting preventative efforts at groups who may be particularly in danger of injury.

zzz. **Rural** - those areas not designated as metropolitan statistical areas (MSAs).

aaaa. **Senior Resident (or "senior level resident")** - a physician licensed in the State of Mississippi who has completed at least two years of the residency under consideration and has the capability of initiating treatment, when the clinical situation demands, and who is in training as a member of the residency program, as defined in regulation, at a designated Trauma Center. Residents in general surgery shall have completed three clinical years of general surgery residency in order to be considered a senior resident.

bbbb. **Service Area (or "catchment area")** - that geographic area defined by the local EMS agency in its Regional Trauma Plan as the area served by a designated Trauma Center.

cccc. **Specialty Care Facility** - an acute care facility that provides specialized services and specially trained personnel to care for a specific portion of the injured population, such as pediatric, burn injury, or spinal cord injury patients.

dddd. **Surveillance** - the ongoing and systematic collection, analysis, and interpretation of health data in the process of describing and monitoring a health event.

eeee. **Trauma** - a term derived from the Greek for "wound"; it refers to any bodily injury (see "Injury").

ffff. **Trauma Care Facility (or "trauma center")** - a hospital that has been designated by the department to perform specified trauma care services within a Trauma Care Region pursuant to standards adopted by the department.

gggg. **Trauma Care Region** - Trauma Care Region is a geographic area of the state formally organized, in accordance with standards promulgated by the department and has received designation from the department, for purposes of developing and inclusive care system.

hhhh. **Trauma Care System Planning and Development Act of 1990** - The federal law that amended the Public Health Service Act to add Title XII - Trauma Programs. The purpose of the legislation being to assist State governments in developing, implementing and improving regional systems of trauma care, and to fund research and demonstration projects to improve rural EMS and trauma.

iiii. **Trauma Care System -** an organized approach to treating patients with acute injuries; it provides dedicated (available 24 hours a day) personnel, facilities, and equipment for effective and coordinated trauma care in an appropriate geographical region, known as a Trauma Care Region.

jjjj. **Trauma Center Designation -** the process by which the Department identifies facilities within a Trauma Care Region.

kkkk. **Trauma Program Manager -** a designated individual with responsibility for coordination of all activities on the trauma service and works in collaboration with the trauma service director.

llll. **Trauma Nursing Core Course (TNCC) -** a verification course providing core-level trauma knowledge and psychomotor skills associated with the delivery of professional nursing care to trauma patient. Developed and sponsored by the Emergency Nurses Association.

mmmm. **Trauma Patient -** an injured patient.

nnnn. **Trauma Prevention Program -** internal institutional and external outreach educational programs designed to increase awareness of methods for prevention and/or avoidance of trauma-related injuries.

oooo. **Trauma Program -** an administrative unit that includes the trauma service and coordinates other trauma-related activities, including, but not limited to, injury prevention, public education, and CMS activities.

pppp. **Trauma Receiving Resuscitation Area -** a designated area within a licensed hospital or designated Trauma Center that routinely receives and manages the care of trauma patients where trauma patients are evaluated upon arrival.

qqqq. **Trauma Registry -** a database software package that hospitals use to track victims of major trauma that are transported to and/or from their facilities.

rrrr. **Trauma Team -** A group of health care professionals organized to provide care to the trauma patient in a coordinated and timely fashion. The composition of a trauma team is delineated by hospital policy.

ssss. **Trauma Service Director -** a physician designated by the institution and medical staff to coordinate trauma care.

tttt. **Triage -** the process of sorting injured patients on the basis of the actual or perceived degree of injury and assigning them to the most effective and efficient regional care resources, in order to insure optimal care and the best chance of survival.

uuuu. **Triage Criteria -** a measure or method of assessing the severity of a person's injuries that is used for patient evaluation, especially in the prehospital setting, and that utilizes anatomic or physiologic considerations or mechanism of injury.

vvvv. **Uncompensated Care -** care for which the provider has been unable to collect payment because of the patient's inability to pay. A claim is considered to be uncompensated if, after the provider's due diligence to collect monies due, total payment from all sources (including third-party payors) of five percent (5%) or less has been made on the total trauma-related gross charges. Any payment received from Medicaid shall preclude reimbursement from the Trauma Care Trust Fund (TCTF), whether the five percent (5%) payment threshold has been met or not.

wwww. **Undertriage** - directing fewer patients to Trauma Centers than is warranted because of incorrect identification of patients as having minor injuries when retrospective analysis indicate severe injuries.

Chapter 05 TRAUMA CARE REGIONS

1402 TRAUMA CARE REGIONS

1402.01 Policy Statement

The Mississippi Trauma Care Plan documents the need for a regional approach toward the development of a statewide trauma care system. This regional development will be coordinated and supported by the legislatively designated "lead trauma agency," the Mississippi State Department of Health, Bureau of Emergency Medical Services (hereinafter "Department").

The Mississippi Trauma Care Plan recognizes the uniqueness within differing parts of the state with regard to personnel, resources, environmental issues, distance to tertiary care and population. Accordingly, the Mississippi Trauma Care Plan provides for a system that allows for flexibility at the regional level, incorporates the use of regional leadership to establish regional/local guidelines, and is sensitive to regional needs and resources. As a result the Mississippi Trauma Care Plan ensures a statewide trauma system design that is based on the resources available within each region, while ensuring optimal care to the trauma victim through transfer agreements when resources may not be available within a certain geographical area.

1402.02 Proposed Trauma Care Regions

The map set forth in Appendix B illustrates the initial configuration of the Trauma Care Regions, developed based upon the Department's experience with regional EMS programs. However, some areas contained within these initial boundaries may prove to more appropriately belong to other adjacent areas. Consequently, the state designation process of the Regions is designed to provide for such flexibility.

1402.03 State Designation of Trauma Care Regions

To receive state designation as a Trauma Care Region, the hospitals and their respective medical staffs intending to establish the Trauma Care Region shall set forth such intention in a letter to the Department which includes:

4. a description of the area to be served,

5. the names of all trauma care hospitals participating, and

6. the form of regional administration for such Trauma Care Region.

1402.04 State Designation of Existing EMS Districts as Trauma Care Regions

EMS Districts which are currently recognized by the Department may request designation by the Department as a Trauma Care Region provided that such EMS District meets the standards established for designated Trauma Care Regions as outlined in these Regulations, and submits annually to the Department documentation of compliance with those standards.

Chapter 06 REGIONAL TRAUMA PLAN DEVELOPMENT

1403 REGIONAL TRAUMA PLAN

1403.01 Procedure for Submission of Regional Trauma Plan

A Trauma Care Region intending to implement a trauma care system shall submit its Regional Trauma Plan to the Department and have it approved prior to implementation.

Within 30 days of receiving the plan, the Department shall provide written notification to the Trauma Care Region of the following:

a. that the plan has been received by the Department;

b. whether the Department approves or disapproves of its Regional Trauma Plan;

c. if disapproved, the reason for disapproval of the Regional Trauma Plan;

NOTE: Revisions in the approved Regional Trauma Plan must be submitted prior to implementation. At a minimum, Regional Trauma Plans shall be submitted to BEMS *every (3) years.*

1403.02 Disapproval of a Regional Trauma Plan

If the Department disapproves a plan submitted to it, the Trauma Care Region shall have 30 days from the date of notification of the disapproval to appeal the decision in writing to the Mississippi Trauma Advisory Committee. The Committee shall make a determination within 3 months of receipt of the appeal. In any event, the Trauma Care Region may always submit a revised plan to the Department.

1403.03 Failure to Properly Implement Plan

Should the Department determine that a Trauma Care Region has failed to implement its Regional Trauma Plan in accordance with the approved plan; the Department may revoke its approval of the plan and suspend and/or terminate any contract with the Region. The Trauma Care Region may appeal this decision in writing to the Mississippi Trauma Advisory Committee which shall make a determination within 3 months of receipt of the appeal.

1403.04 Amendments to Regional Trauma Plan

After approval of a Regional Trauma Plan, the Trauma Care Region shall submit to the Department for approval any significant changes to that Regional Trauma Plan prior to the implementation of the changes. In those instances where a delay in approval would adversely impact the current level of trauma care; the Trauma Care Region may institute the changes and then submit the changes to the Department for approval within 30 days of their implementation.

1403.05 Requirements for Approval of Regional Trauma Plan

The initial plan for a designated Trauma Care Region that is submitted to the Department shall be comprehensive and objectives shall be clearly outlined to the Department. The initial Regional Trauma Plan shall contain the following:

a. table of contents

b. summary of the plan

c. objectives

d. implementation schedule

e. administrative structure

f. medical organization and management

g. inclusive trauma system design which includes all facilities involved in the care of acutely injured patients, including coordination with neighboring Trauma Care Regions

h. documentation of all interfacility Trauma Center agreements

i. written documentation of participation (hospital/medical staff)

j. the system design shall address the operational implementation of the policies developed

k. description of the critical care capability within the Region including but not limited to burns, spinal cord injury, rehabilitation and pediatrics

l. performance improvement process

m. general policies of the Trauma Care Region board, which address those issues set out in Section 300.06 below

1403.06 General Policies to be Addressed in Regional Trauma Plan

A designated Trauma Care Region planning to implement a trauma system shall develop policies which provide a clear understanding of the structure of the trauma system and the manner in which it utilizes the resources available to it. Those policies shall address the following:

a. system organization and management

b. trauma care coordination within the Region

c. trauma care coordination with neighboring Regions and/or jurisdictions, including designated Trauma Care Region agreements

d. data collection and management

e. coordination of designated Trauma Care Regions and trauma systems for transportation including inter-Trauma Center transfers, and transfers from a receiving hospital to a Trauma Center

f. the integration of pediatric hospitals, including pediatric triage criteria, if applicable

g. availability of Trauma Center equipment

h. the availability of trauma team personnel

i. criteria for activation of trauma team

j. mechanism for prompt availability of specialist

k. performance improvement and system evaluation to include

   a. responsibilities of the multidisciplinary trauma peer review committee.

l. training of prehospital designated Trauma Care Region personnel to include trauma triage

m. public information and education about the trauma system

n. lay and professional education about the trauma system

o. coordination with public and private agencies and Trauma Centers in injury prevention programs

1403.07 <u>Additional Standards and Prohibitions</u>

In addition to those requirements set out in Sections 300.5 and 300.6 above, the following standards and prohibitions must be adhered to by all participating providers in the Regional Trauma Plan:

a. The Plan shall include all of the following:

   a. Prehospital trauma protocols with trauma triage/transport criteria.

NOTE: Revisions in the plan must be submitted prior to implementation.

   b. Policies and procedures correlative to the protocols.

   c. A plan for quality assurance/improvement including run audit criteria and schedule.

b. No health care facility shall advertise in any manner or otherwise hold itself out to be a Trauma Center unless so designated by the Department in accordance with these Regulations.

c. No provider of prehospital care shall advertise in any manner or otherwise hold itself out to be affiliated with the trauma system or a Trauma Center unless the provider of prehospital care has been so designated by the Department in accordance with these Regulations.

d. A Trauma Care Region shall hold funds from participating hospitals and licensed EMS providers for non compliance with Mississippi Trauma Care Rules and Regulations and regional plans and policies.

e. All participating hospitals and licensed EMS providers in each respective region shall abide by regional policies.

f. Documentation of Medical Control Plan review and compliance must be submitted to BEMS and the Trauma Care Region annually.

1403.08 Optional Criteria

a. The Trauma Care Region may authorize the utilization of air transport within its jurisdiction to geographically expand the primary service area(s), as long as the expanded service area does not encroach upon another

Trauma Care Region, or another Trauma Center, unless written agreements have been executed between the involved Trauma Care Region and Trauma Centers.

b. A Trauma Care Region may require Trauma Centers to have helicopter landing sites.

1403.09 Annual Certification to Department

The Trauma Care Region shall certify annually to the Department that its approved Regional Trauma Plan is functioning as described.

1404. ADMINISTRATION AND MANAGEMENT OF TRAUMA CARE REGIONS

1404.01 Establishment of a Trauma Care Region Board

All Trauma Care Regions established and designated pursuant to these Regulations shall establish a Trauma Care Region Board which shall be recognized as the lead administrative body of that Region. Board members may be representative(s) of participating and designated trauma care hospital(s), physicians, or any other person deemed appropriate by the Board. The Board shall have administrative authority over the operation of the Trauma Care Region and subsequent trauma system programs.

1404.02 Operation of a Trauma Care Region

After formation of a Trauma Care Region board, the board shall appoint some person or entity which shall have authority over the operation of the Trauma Care Region and subsequent trauma care programs, all under the direction of the Trauma Care Region board. Such management may be carried out by an appointed executive manager, by contracting for management services, or by some other means, to be approved by the Department.

The functions of a Trauma Care Region include, but are not limited to, the following:

9. Track and assist in the reimbursement of hospitals and physicians for trauma care.
10. Maintain regional database including, but not limited to, hospitals in the region, designation status, and expiration date.
11. Monitor Pre hospital Categorization and Triage of the trauma patient.
12. Maintain and ensure compliance of the Regional Trauma Plan.
13. Provide training opportunities for physicians, nurses, and EMS and support personnel, maintain a schedule, and ensure notification to qualifying personnel.
14. Monitor the ongoing PI program of each trauma program in the respective region.
15. Other such activities as may be required by the Mississippi Department of Health through the annual contractual agreement.
16. Performance of each trauma region shall be evaluated annually with continued financial support contingent on adequate performance based on outcome measures.

1404.03 Regional Trauma Care Boards May Receive and Expend Funds

Designated Trauma Care Region boards are authorized to receive funds and to expend funds as may be available for any necessary and proper trauma care program purposes in the manner provided for in these Regulations or in law. Non compliance will result in loss of funding to the region for each corresponding activity.

1404.04 Hospital/Medical Documentation

Designated Trauma Care Regions must provide documentation of formal referral agreements among all participating regional hospitals and, if necessitated by a lack of in-region service, documentation of linkages to other appropriate out-of-region hospitals for referrals. Regions must also provide documentation of linkages to a Level I facility for training, education, and evaluation, which Level I facility must be recognized by the Department and committed to participation in the state trauma care system. Non compliance will result in loss of funding to the region for each corresponding activity.

Chapter 4 FINANCIAL SUPPORT FOR TRAUMA SYSTEM DEVELOPMENT

1405 FINANCIAL SUPPORT FOR TRAUMA SYSTEM

1405.01 The Trauma Care Trust Fund

The Trauma Care Trust Fund shall serve as the financial support mechanism for development of the Mississippi Inclusive Trauma Care System. The Department shall contract with designated Trauma Care Regions for trauma systems development. Contracts with each designated Trauma Care Region are limited to the financial support for:

1. Administration of designated Trauma Care Regions and

2. Funding of documented trauma care (hospitals, physicians, and licensed ambulance services) as defined by the Department.

1405.02 Financial Support for Regional Administration

In accordance with the recommendations of the 1997 Mississippi Trauma Care Task Force, the Department shall contract for the administration of designated Trauma Care Regions for an amount to be determined yearly by the Department, as approved by the MTAC.

The use of these funds shall be determined by the designated Trauma Care Region and approved by the Department in writing. Examples of areas of financial support suggested by the Trauma Care Task Force include, but are not limited to, regional medical director, regional clerical support, telephone, regional trauma advisory committee, hospital trauma registry staff, and trauma registry computer hardware.

1405.03 Financial Support for Trauma Care

Trauma Care reimbursement shall be provided for designated Level I, II, and III Trauma Centers, eligible physicians and eligible licensed ambulance service providers in contracts developed by the Department and initiated between the Department and the Trauma Care Regions. Trauma care reimbursement to trauma centers will be provided only to designated Level I, II, and III Trauma Centers. Designated Level IV Trauma Centers shall not receive reimbursement for trauma care, however, will receive $10,000 annually for administrative support for participation in the Mississippi Trauma Care System. The amount funded shall be paid at least annually to each Trauma Care Region for annual redistribution to Trauma Centers, participating eligible physicians and eligible emergency medical service providers. Distributions of amounts paid to eligible physicians shall be by the Trauma Center according to the formula(s) set out herein. The total reimbursement amount each year will be dependent upon the following:

a. authorization annually by the Mississippi State Legislature;

b. the amount available in the Trauma Care Trust Fund;

c. the number of active and designated Trauma Care Regions;

d. the number of designated hospitals, physicians, and licensed emergency medical service providers within each designated Trauma Care Region; and,

e. Appropriate annual documentation of trauma care rendered by designated hospitals, physicians, and licensed emergency medical service providers in accordance with the requirements of the Department.

1405.04 <u>Trauma Care Distribution Process</u>

Funds are distributed from the Trauma Care Trust Fund (TCTF). This fund is created from multiple funding sources including the following:

7. assessment on all moving traffic violations as noted in §41-59-75, Mississippi Code of 1972, Annotated;
8. assessment on moving traffic violations as noted in §41-59-75, Mississippi Code of 1972, Annotated;
9. assessment on license tags (issuance and renewal) as noted in §27-19-43, Mississippi Code of 1972, Annotated;
10. assessment on speeding, reckless and careless driving violations as noted in §99-19-73, Mississippi Code of 1972, Annotated;
11. a point of sale fee on all terrain vehicles and motorcycles as noted in §99-19-73, Mississippi Code of 1972, Annotated; and
12. Funds appropriated by the state legislature from the state's Health Care Expendable Fund. These funds comprise the TCTF.

In accordance with Miss Code Ann. §41-59-5 (as amended), those Level I facilities located in a state contiguous to the State of Mississippi that participate~~s~~ in the Mississippi trauma care system and has been designated by the department to perform specified trauma care services within the trauma care system under standards adopted by the department shall be eligible to participate in the Trauma Care Trust Fund.

The Trauma Care Escrow Fund is created pursuant to Miss. Code Ann. §41-59-5, (as amended). The Mississippi Trauma Care Escrow Fund is created as a special fund in the State Treasury. Whenever the amount in the Mississippi Trauma Care Systems Fund exceeds Twenty-five Million Dollars ($25,000,000.00) in any fiscal year, the State Fiscal Officer shall transfer the amount above Twenty-five Million Dollars ($25,000,000.00) to the Trauma Care Escrow Fund. Monies in the Trauma Care Escrow Fund shall not lapse into the State General Fund at the end of the fiscal year, and all interest and other earnings on the monies in the Trauma Care Escrow Fund shall be deposited to the credit of the Trauma Care Escrow Fund.

Only patients that meet trauma registry inclusion criteria are eligible for reimbursement. The inclusion criteria are:

a. All state designated patients must have a primary diagnosis of ICD-9 diagnosis code 800-959.9;

b. Only burn patients with an ICD-9 Code of 940-949 qualify for inclusion into the trauma registry. Qualifying burn patients must also meet one of the following criteria.

Plus any one of the following:

a. Transferred between acute care facilities (in or out)

b. Any patient that has sustained an injury (ICD-9: 800.0 - 959.9) and is referred from a trauma center or transferred to a trauma center qualifies for inclusion into the trauma registry.

c. Admitted to critical care unit (no minimum days).

d. Any injury that a patient has sustained in which the patient is admitted to a critical care unit qualifies for inclusion into the trauma registry.

e. Hospitalization for three or more calendar days.

f. Any trauma patient hospitalized for three or more calendar days due to injuries sustained qualifies for inclusion into the trauma registry.

g. Died after receiving any evaluation or treatment.

h. All deaths due to an injury that receive an evaluation or treatment in the Emergency Department qualify for inclusion into the trauma registry.

i. Admitted directly from Emergency Department to Operating Room for major procedure, excluding plastics or orthopedics procedures on patients that do not meet the three day hospitalization criteria.

j. Any trauma patient that is admitted directly from the Emergency Department to the Operating Room for a major procedure qualifies for inclusion into the trauma registry. Plastics and/or orthopedic procedures that do not meet one of the other criteria for inclusion into trauma registry are EXCLUDED and do not quality for inclusion into the trauma registry.

k. Triaged (per regional trauma protocols) to a trauma hospital by pre-hospital care regardless of severity.

l. Any trauma patient that is triaged to a trauma center by pre-hospital care providers, per regional trauma protocols, qualifies for inclusion into the trauma registry. Documentation verifying that this criterion was used must be present in the patient's hospital chart to qualify for inclusion.

m. Treated in the Emergency Department by the trauma team regardless of severity of injury.

n. Any trauma patient that arrives at a trauma center and is treated by a trauma team as delineated by hospital policy qualifies for inclusion into the trauma registry. Documentation verifying a trauma team activation and response must be present in the patient's hospital chart to qualify for inclusion.

o. The following primary ICD-9 diagnosis codes are excluded and should NOT be included in the trauma registry:

p. ICD9Code 905-909 (Late effects of injuries)

q. Late Effects of Injuries, Poisonings, Toxic Effects, and Other External Causes.

r. ICD9Code 930-939 (Foreign bodies)

s. Effects of Foreign Body Entering Through an Orifice.

t. Extremities and/or hip fractures from same height fall in patients over the age of 65.

c. Eighty-five percent of the available funds from the TCTF are allocated to participating trauma centers which shall further allocate at least thirty percent (30%) of the funds received by Level I, II, and III trauma centers to eligible physicians.

d. Fifteen percent (15%) of available funds from the TCTF are allocated to eligible licensed ambulance services that provide pre-hospital care to trauma victims.

e. Funds that are allocated to participating hospitals, eligible physicians and eligible licensed ambulance services are disbursed through each of the designated Trauma Care Regions annually.

f. Funds for the administration and development of the state's trauma care system will be budgeted from available funds from the TCTF. Examples of administrative and development costs are, but are not limited to, salaries and fringe benefit costs for personnel (full-time and part-time equivalents) who expend a portion of their time in trauma care administration and/or development, travel and training costs for such personnel, use of trauma care physicians and/or other trauma professionals used in the development and/or maintenance of the trauma care system, development and/or maintenance of accounting and auditing of the use and distribution of the TCTF, administrative costs for designated trauma care regions, and the costs associated with the development and/or implementation of the state's trauma care system (i.e., telecommunication systems, data storage and/or retrieval systems, public relations costs, advertising, equipment, etc.)

g. Amounts to be disbursed from the Trauma Care Trust Fund shall be calculated in accordance with the following formula:

a. On or about 1 October of each calendar year, or at such other times as the State Health Officer may direct, the Bureau of Emergency Medical Services shall obtain a Treasury report showing the fund balance in the Trauma Care Trust Fund as of 1 October or as of the date the State Health Officer selects. The fund balance in the TCTF on that date will be the amount which in no case can be exceeded in calculating the amount be distributed according to the formula set out herein. To obtain the amount to be distributed, calculate the following sum:

i. Any amounts remaining from any previous fiscal year's balance remaining undistributed. In other words, any dollar amount received in a prior fiscal year not reserved for a specific purpose and not distributed shall be included in the current year's distribution, plus

ii. Any fines or assessments received in a previous fiscal year, plus

iii. Any refunds to the fund of amounts distributed in a previous fiscal year that were received in the current fiscal year, plus

iv. Any "play or pay" funds received in the current fiscal year or a previous fiscal year not reserved for a specific purpose and remaining undistributed.

b. An amount not to exceed Ten Thousand and No/100 Dollars ($10,000.00) shall be set aside to be paid by the Department of Health to the appropriate Trauma Region for disbursement to each Level IV Trauma Center which has completed at least one year of satisfactory, eligible participation in the Mississippi Trauma Care System as of the date of the calculation (para. 7(a), above).

c. An amount to be determined by the Department, and approved by the MTAC shall be paid for administrative expenses and purposes in support of the Mississippi Trauma Care System, to each participating Trauma Region having completed at least one year of satisfactory, eligible participation in the Mississippi Trauma Care System.

d. The amount remaining after the above administrative payments have been calculated, reserved and/or expended, shall be distributed according to the methodology set out in paragraphs "f" and "g" below.

e. Fifteen percent (15%) of the amount remaining after administrative expenses shall be distributed to the Trauma Regions for further distribution to eligible licensed ambulance services. Eligible licensed ambulance services shall be those basic or advanced life support ambulance services licensed by the Bureau of Emergency Medical Services who are active participants in their local trauma region. The fifteen percent (15%) distribution shall be calculated below. In the event there is more than one eligible licensed ambulance service active in one county, funding for that county shall be distributed to both services based on call volume or other appropriate criteria as approved by the department.

i. For purposes of determining amounts to be distributed to participating, eligible, licensed ambulance services pursuant to this section, the following definitions shall apply:

a). "Census" the most recent decennial United States Census

b). "Small Counties" those counties with a population of less than 15,000 as identified in the most recent "Census".

c). "Large Counties" those counties with a population = > 15,000 as identified in the most recent "Census".

d). "Total Fund Balance" that portion of the Trauma Care Trust Fund that is committed to licensed Ambulance Services.

e). "Disbursement" is the amount of the EMS Component of the Trauma Care Trust Fund awarded to a particular county.

f). "Small County Population Percentage" – is the sum of "Small Counties" population as a percent of the total state population as reflected by the most recent decennial United States Census.

g). "Per Capita Portion" is the portion of a Small County's "Disbursement" that is calculated by multiplying that county's "Small County Population Percentage" by the "Total Fund Balance"

h). "Dedicated Portion" is the portion of a Small County's "Disbursement" that is calculated by subtracting an amount from the Total Fund Balance and dividing among the Small Counties so that each Small County receives an equal Disbursement that is equal to or less than the Large County with the lowest population.

i). "Adjusted Population" is determined by adding the population from the Small Counties and subtracting that sum from the state's total population.

j). "Adjusted Fund Balance" was calculated by subtracting the amount dedicated for the smaller counties from the total fund balance.

ii. Methodology:

a). The amount to be disbursed for each Small County shall be equal for all Small Counties and is calculated in three steps - a Per Capita Portion, a Dedicated Portion, and a Total - as follows:

Per Capita Portion

Multiply the Small Counties Population Percentage by the Total Fund Balance.

Per Capita portion = (Small Counties Population Percentage X Total Fund Balance)

Dedicated Portion

The Dedicated Portion is calculated by subtracting an amount from the Total Fund Balance and adding it to the Per Capita Portion so that the sum of the Per Capita Portion plus the Dedicated Portion is divided by the number of Small Counties, AND the result is less than or equal to the Disbursement received by the Large County with the population closest to or equal to 15,000.

Dedicated Portion = [(Per Capita Disbursement + Dedicated Portion) / (Number of Small Counties)] < / = Disbursement of the Large County with lowest population

The Disbursement for small counties is calculated by adding the Per Capita and Dedicated Portions.

Disbursement (for Small Counties) = (Per Capita Portion) + (Dedicated Portion)

The amount to be disbursed for each Large County is calculated as follows:

Disbursement = (census population) / (Adjusted population) X (Adjusted Fund Balance)

f. Eighty-five percent (85%) of the amount remaining after administrative expenses shall be distributed to the Trauma Regions for further distribution to participating Trauma Centers. Thirty percent (30%) of the eighty-five percent (85%) distributed to Level I, II, and III trauma centers shall be allocated to eligible physicians. The eighty-five percent (85%) distribution shall be calculated as set out herein in paragraphs g(i) through g(ii)(k), below.

i. Thirty percent (30%) of the amount reserved for distribution to hospitals shall be distributed according to a “fixed funding” relative weight, which shall be calculated thusly:

a). With reference to the calculation of the fixed funding distribution, the following definitions shall apply.

i). Total Hospital Fixed Fund – Trauma Care Trust Fund – (BEMS Admin Expenses + Trauma Region Admin Expenses + Level IV Admin Expenses + EMS Distribution) X 0.30

ii). Number of Facilities – shall be the number of duly licensed health care facilities

licensed as a Level 1, Level 2 or Level 3 Trauma Center

iii). Relative Weights – Level 1 shall equal 100%; Level 2 shall equal 87.5%; Level 3 shall equal 62.5%

iv). Calculated Weight – Equals the number of facilities licensed at a particular level of trauma center multiplied by the relative weight.

v). Total Weight – equals the sum of calculated weights

vi). Disbursement by Hospital Type – equals Total Hospital Fixed Fund / Total Weight X Relative Weight

vii). Total Disbursement by Hospital Type – equals the sum of Disbursement by Hospital Type

b). Calculate thirty percent (30%) of the eighty-five percent (85%) referred to in paragraph (g), above.

c. The relative weight for Level I Trauma Centers shall be one hundred percent (100.00%). The relative weight for Level II Trauma Centers shall be eighty-seven and one-half percent (87.50%). The relative weight for Level III Trauma Centers shall be sixty-two and one-half percent (62.50%).

d. Multiply the number of facilities in each category (Level I, Level II and Level III) by the relative weights of each category. The product of this operation shall be the calculated weight of each type facility.

e. Sum the relative weights to obtain the "calculated weight."

f. Divide the total Fixed Hospital Reimbursement amount by the product of the sum of the relative weights ("calculated weight") obtained in (e), above and the relative weight assigned to that category.

g. The result is the amount to be distributed to each facility of that particular type (Level I, Level II or Level III).

ii. Fifty percent (50%) of the amount reserved for distribution to hospitals shall be distributed according to a "variable funding" formula which shall be calculated thusly:

a.) Assign all cases an ISS severity index and category of A, B,C or D according to the following table:

ISS Severity Score	ISS Severity Index	Severity Category
1-9	1.02	A
10-15	2.02	B
16-24	3.80	C
>24	6.57	D

b). Calculate the number of cases treated by each trauma center which fall within each ISS Severity Category.

c). Multiply the total number of ISS Severity Category A cases by the relative value assignment of 1.02 to arrive at the total number of Category A points.

d). Multiply the total number of ISS Severity Category B cases by the relative value assignment of 2.02 to arrive at the total number of Category B points.

e). Multiply the total number of ISS Severity Category C cases by the relative value assignment of 3.80 to arrive at the total number of Category C points.

f). Multiply the total number of ISS Severity Category D cases by the relative value assignment of 6.57 to arrive at the total number of Category D points.

g). Add the points from Categories A, B, C, and D to arrive at a total number of points for each trauma center.

h). Sum the number of points from all categories and all hospitals to arrive at a total number of points for all trauma centers.

i). Take the number of points for each hospital and multiply that number by the total dollar amount for the 50 percent of the TCTF available for distribution to participating, eligible trauma centers. Take the product of that calculation and divide the resulting number by the total number of points for all trauma centers.

j). The resulting quotient is the dollar amount of the Hospital Variable Fund to be distributed to that trauma center.

k). Sum all the amounts to be distributed pursuant to the Hospital Variable Fund Calculation. The sum of all distributions should not exceed fifty percent (50%) of the eighty-five percent (85%) of the TCTF available for distribution after administrative expenses, payments to Level IV trauma centers and administrative support payments to trauma regions.

iii. Five percent (5 %) of the amount reserved for distribution to hospitals shall be distributed to designated burn centers within the Trauma Care System. If more than one burn center is operating within the system, the 5% will be distributed based on a pro-rata share of patients as determined by Trauma Registry inputs. (Note: Trauma patients counted toward burn center distribution cannot be used to determine hospital variable distribution.) If no hospital has been designated as a burn center at the time of the distribution, the 5% shall be included in the hospital fixed distribution.

1405.05 <u>Play or Pay</u>

1. Every Mississippi licensed acute care facility (hospital) having an organized emergency service or department shall participate in the Mississippi Statewide Trauma Care System.

2. Hospitals with the potential to serve as Level I, II, or III Trauma Centers must participate at the highest trauma designation level consistent with its capabilities as determined by the Department of Health.

3. Any hospital determined capable of participating as a Level IV Trauma Center may make application to be designated as a Level IV Trauma Center. A Level IV is required to submit data to the statewide trauma registry and is eligible for $10,000 for administrative costs as a participant in the Statewide Trauma System.

4. Every hospital having an organized emergency service or department shall submit data to the Trauma Registry.

5. Each year, all facilities shall complete a pre-application on forms as provided by the Department whereby the facility will attest to the presence or absence of services listed. Based on this paper assessment, the Department shall render a preliminary decision on the facility's maximum potential designation level.

   Paper Assessment Criteria:

   e. Any service offered at a facility during normal business hours for less than seven days a week, an application shall be sent at the appropriate level. Should the hospital choose not to participate in the Mississippi Trauma Care System an invoice will be calculated - and/or prorated as determined appropriate - by the Department.

   f. Level I trauma centers shall act as regional tertiary care facilities at the hub of the trauma care system. The facility must have the ability

to provide leadership and total care for every aspect of injury from prevention to rehabilitation. As a tertiary facility, the Level I trauma center must have adequate depth of resources and personnel.

Required components include:

i. General Surgery

ii. Neurological Surgery

iii. Orthopedic Surgery

iv. Emergency Medicine

v. Anesthesia

vi. Post Anesthesia Care Unit (PACU)

vii. Intensive Care Unit (ICU)

viii. Surgical Residency Program

g. Level II trauma center is an acute care facility with the commitment, resources and specialty training necessary to provide sophisticated trauma care. The Level II trauma center must have the following departments, divisions, or sections:

i. General Surgery

ii. Neurological Surgery

iii. Orthopedic Surgery

iv. Emergency Medicine

v. Anesthesia

vi. Post Anesthesia Care Unit (PACU)

vii. Intensive Care Unit (ICU)

h. Level III is expected to provide initial resuscitation of the trauma patient and immediate operative intervention to control hemorrhage and to assure maximal stabilization prior to referral to a higher level of care. All Level III trauma centers will work collaboratively with other trauma facilities to develop transfer protocols and a well-defined transfer sequence.

i. General Surgery

ii. Emergency Medicine

iii. Orthopedic Surgery

iv. Anesthesia

v. Post Anesthesia Care Unit (PACU)

vi. Intensive Care Unit (ICU)

6. The Department of Health shall utilize the criteria contained herein to determine the most appropriate level of participation. A paper assessment shall be preformed on all qualifying facilities to determine a preliminary level of participation. Information which may be utilized in making said determination may include, but is not limited to:

a. licensure information

b. data provided in trauma center applications

c. inspection team reports

d. designation criteria as provided in these rules and regulations

e. information obtained from other publicly available sources.

f. Evaluation shall be accomplished by the above criteria to determine one of the following:

i. hospitals that are qualified to participate in the trauma system but choose not to participate in the system, or

ii. hospitals that are qualified to participate in the system but participate at a level lower than that for which they are capable.

7. Any hospital that:

g. chooses not to participate in the Statewide Trauma System as a Level I, II, or III Trauma Center,

h. participates at a level lower than the level at which it is capable of participating, as determined by the Department of Health,

i. fails to maintain or becomes incapable of maintaining its designation as a Level I, II or III Trauma Center,

j. has its designation as a Level I, II, or III Trauma Center suspended or revoked by the Department of Health, or

k. becomes “non-designated” as a Level I, II, or III Trauma Center, shall be assessed and shall pay the fee set out below to the Department of Health. All fees are due and payable annually on or before January 1 of each year. Any event (a-d) above,

occurring during the calendar year shall result in the hospital owing a pro-rata portion of the fee. The fee assessed shall be pro-rated on a monthly basis by the Department of Health.

10. The fee shall be paid in full upon written notification from the Department of Health. A schedule of fees follows assesses facilities choosing not to participate in the statewide trauma care system, or participating at a level lower than the level at which they are capable.

    a. A facility shall receive a pre assessment survey during the first week of July of each year to be completed and returned to the appropriate Trauma Care Region by the first week of August.

    b. Each Trauma Care Region will review the survey of each facility within the region, and will forward comments on the Department approved form to the Department detailing the level that each facility is capable of participating in the Trauma Care System by the first week of September.

    c. On or about the third week in September an invoice and application will be sent by the Department to each facility in response to their respective survey.

    d. Payment in full or a completed designation application shall be submitted within deadlines determined by the Department.

11. The fee schedule shall be reassessed and adjusted as necessary each year by the Mississippi Trauma Advisory Council. The Council will recommend any revisions to the Board of Health for approval.

    The current fee schedule is as follows:

Current Level	Projected Level	Fee for Non Compliance
Non Designated	Level II	$1,492,000.00
Non Designated	Level III	$ 758,000.00
Level III to	Level II	$ 423,500.00
Level IV to	Level II	$1,492,000.00
Level IV to	Level III	$ 758,000.00

1405.06 Appeal Process.

Following the receipt of the assessment of any trauma fee assessed hereunder, any party assessed the fee may request a due process hearing on the assessment.

a. Any such request for hearing must be filed by the party assessed with the Director of Emergency Medical Services, Mississippi State Department of Health, within twenty days of the date of the assessment.

b. The date of the assessment is defined as the date which the assessment is placed in the United States Mail, postage pre-paid, addressed to the party assessed at the address furnished by the party assessed to the Bureau of Emergency Medical Services, or to the address published by the party as its usual and customary business address. The date of the postmark shall be prima facie evidence of the date of the assessment.

c. The Director of Emergency Medical Services, upon receipt of a valid, timely request for a hearing, shall set said hearing for a date certain no more than ten calendar days from the receipt of the request for hearing.

d. The hearing officer appointed to conduct the hearing shall be a person chosen or appointed by the Director of the Office of Health Protection.

e. A stenographic record of said hearing shall be made by a certified shorthand reporter. The record shall consist of all sworn testimony taken, written, documentary or other relevant evidence taken at said hearing.

f. The only issues for adjudication are:

    a. The timeliness of notice of the assessment and delivery of the same;

    b. The trauma classification of the party; and

    c. The calculation of the amount of the assessment.

g. Within 20 days of the receipt by the hearing officer of the certified record, he or she shall render findings of fact and conclusions of law contained in an order. The order so produced by the hearing officer shall be the final order of the Mississippi State Department of Health and shall be appealable to a court of competent jurisdiction.

h. If no appeal from the final order is taken within twenty (20) days of the date of the order, the party assessed shall pay on or before the twentieth (20th) day following the date of the order, the entire fee assessed.

400.07 <u>Delinquent Payments to the Trauma Care Trust Fund</u>

4. If a hospital fails to submit an application for designation as a Trauma Center and fails to pay the required fee for Non-compliance by January 1, a letter from the BEMS will be sent via certified mail to the administrator of the hospital and the Trauma Region administrator informing them that payment is due no later than

20 days from the delivery date of the letter, or that the a request for a due process hearing must be received at the BEMS no later than 20 days from the delivery date of the letter.

l) If the administrator fails to respond, or comply with the requirements, of the certified letter, a letter will be sent by BEMS to the Bureau of Health Facilities Licensure and Certification documenting an alleged violation of the Minimum Standards for the Operation of Mississippi Hospitals, section 105.04, specifically that the governing body of the hospital, through its administrator, failed to take all reasonable steps to comply with all applicable federal, state and local laws and regulations. A copy of the letter will be sent to the hospital administrator and the Trauma Region administrator via certified mail.

m) The Bureau of Health Facilities Licensure and Certification will conduct an investigation of the alleged violation(s). If a finding of Substantiated is returned, BEMS will recommend to Licensure and Certification that the hospital's license be revoked. A copy of this recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail. A copy of recommendation will also be sent to CMS.

n) Once the hospital has satisfied the requirements of Section 400.05, BEMS will send a letter to License and Certification recommending reinstatement of the hospital's license with/without restrictions, as appropriate. A copy of this recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail and to CMS.

5. If a hospital elects to participate at a level lower than the assessed capability and fails to pay the required fee for Non-compliance by January 1, a letter from the BEMS will be sent via certified mail to the administrator of the hospital and the Trauma Region administrator informing them that payment is due no later than 20 days from the delivery date of the letter, or that the a request for a due process hearing must be received at the BEMS no later than 20 days from the delivery date of the letter.

o) If the administrator fails to respond, or comply with the requirements of the certified letter, a letter will be sent by BEMS to the Bureau of Health Facilities Licensure and Certification documenting an alleged violation of the Minimum Standards for the Operation of Mississippi Hospitals, section 105.04, specifically that the governing body of the hospital, through its administrator, failed to take all reasonable steps to comply with all applicable federal, state and local laws and regulations. A copy of the letter will be sent to the hospital administrator and the Trauma Region administrator via certified mail.

p) The Bureau of Health Facilities Licensure and Certification will conduct an investigation of the alleged violation(s) and if a finding of Substantiated is returned, BEMS will recommend to Licensure and Certification that the hospital's license be revoked. A copy of this

recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail. A copy of recommendation will also be sent to CMS.

q) Once the hospital has satisfied the requirements of Section 400.05, BEMS will send a letter to License and Certification recommending reinstatement of the hospital's license with/without restrictions as appropriate. A copy of this recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail and to CMS.

6. If a hospital fails to maintain designation as a Trauma Center:

r) The hospital must immediately notify the BEMS and the Trauma Region administrator when the loss of capability is experienced, and must present, within 20 days of the event, supporting documentation of the loss of capability and the proposed corrective action.

s) BEMS will review the documentation and corrective action plan, and will determine the effective date of pro-ration of the fee for Non-compliance.

t) BEMS will send a letter via certified mail to the hospital administrator and the Trauma Region administrator informing them that payment is due no later than 20 days from the delivery date of the letter, or that the a request for a due process hearing must be received at the BEMS no later than 20 days from the delivery date of the letter.

u) If the administrator fails to respond, or comply with the requirements of the certified letter, a letter will be sent by BEMS to the Bureau of Health Facilities Licensure and Certification documenting an alleged violation of the Minimum Standards for the Operation of Mississippi Hospitals, section 105.04, specifically that the governing body of the hospital, through its administrator, failed to take all reasonable steps to comply with all applicable federal, state and local laws and regulations. A copy of the letter will be sent to the hospital administrator and the Trauma Region administrator via certified mail.

v) The Bureau of Health Facilities Licensure and Certification will conduct an investigation of the alleged violation(s) and if a finding of Substantiated is returned, BEMS will recommend to Licensure and Certification that the hospital's license be revoked. A copy of this recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail. A copy of recommendation will also be sent to CMS.

Once the hospital has satisfied the requirements of Section 400.05, BEMS will send a letter to License and Certification recommending reinstatement of the hospital's license with/without restrictions as appropriate. A copy of this recommendation will be sent to the hospital administrator and the Trauma Region administrator via certified mail and to CMS.

1406 DATA COLLECTION

1406.01 Trauma Care Regions to Implement Trauma Data Collection

Trauma Care Regions shall implement the Department's standardized trauma data collection instrument in all licensed hospitals which have organized emergency services or departments, or other trauma data collection instruments compatible with the Department's Trauma Registry as determined by the Department. All trauma data collection instruments shall include the collection of both prehospital and hospital patient care data, and shall be integrated into both the Region's and the Department's data management systems.

All licensed hospitals which have organized emergency services or departments shall participate in the Trauma Care Region data collection effort in accordance with that Region's policies and procedures.

Trauma Registry Data must be submitted by all participating hospitals to the Bureau of EMS and the appropriate Region at least monthly.

401. 02 Reports by Trauma Care Regions

The Trauma Care Regions shall provide periodic reports to all Trauma Centers in the Region and shall provide reports to the Department at intervals specified by the Department.

Chapter 05 TRAUMA SYSTEM EVALUATION

1407 EVALUATION PROCESS

1407.01 Development of Evaluation Process

Each Trauma Care Region shall be responsible for ongoing evaluation of its trauma care system. Accordingly, each Region shall develop a procedure for receiving information from EMS providers, Trauma Centers and the local medical community on the implementation of various components of that Region's trauma system, including but not limited to:

7. components of the Regional Trauma Plan,
8. triage criteria, and effectiveness,
9. activation of trauma team,
10. notification of specialists,
11. trauma center diversion, and
12. any other such information as requested by the Department.

1407.02 Results to be Reported Annually

Based upon information received by the Region in the evaluation process, the Region shall annually (or as often as is necessary to insure system performance) prepare a report containing results of the evaluation and a performance improvement plan. Such report shall be made available to all EMS providers, Trauma Centers and the local medical community.

The Region shall ensure that all Trauma Centers participate in this annual evaluation process, and encourage all other hospitals that treat trauma patients to do likewise.

Specific information related to an individual patient or practitioner shall not be released. Aggregate system performance information and evaluation will be available for review.

Chapter 06 PERFORMANCE IMPROVEMENT

1408 PERFORMANCE IMPROVEMENT PROCESS

1408.01 Performance Improvement process for Trauma Centers

All Trauma Centers shall develop and have in place a performance improvement process focusing on structure, process, and outcome evaluations which focus on improvement efforts to identify root causes of problems, intervene to reduce or eliminate these causes, and take steps to correct the process as set forth in the trauma center level specific requirements. In addition, the process shall include:

a. a detailed audit of all trauma-related deaths, major complications and transfers;

b. a multidisciplinary trauma peer review committee that includes all members of the trauma team;

c. participation in the trauma system data management system; and

d. the ability to follow up on corrective actions to ensure performance improvement activities.

This system shall provide for input and feedback from these patients and guardians to hospital staff regarding the care provided.

1408.02 Performance Improvement process for Trauma Care Regions

Each trauma care region shall be required to develop and implement a region-wide trauma performance improvement program. This program shall, at a minimum, include processes for the review of all region-wide policies, procedures, and protocols.

Chapter 07 INTERFACILITY TRANSFERS OF TRAUMA PATIENTS

1409 INTERFACILITY TRANSFERS

1409.01 When Transfers Permitted

Patients may be transferred between and from Trauma Centers provided that any such transfer be:

a. medically prudent, as determined by the transferring trauma center physician of record;

b. in accordance with the designated Trauma Care Region inter-facility transfer policies.

1409.02 Interfacility Transfer Policies

Trauma Center hospitals shall develop written criteria for consultation and transfer of patients needing a higher level of care.

Trauma Center hospitals that repatriate trauma patients shall provide data required by the system trauma registry, as specified by designated Trauma Care Region policies, to the receiving trauma center for inclusion in the system trauma registry.

Trauma Centers receiving transferred trauma patients shall participate in the Regional performance improvement process outlined in Chapter IX.

1409.03 Burn Unit Referral Criteria

A burn unit may treat adults or children or both.

Burn injuries that should be considered for referral to a burn unit include the following:

a. Partial thickness burns greater than 10% total body surface area (TBSA);

b. Burns that involve the face, hands, feet, genitalia, perineum, or major joints;

c. Third-degree burns in any age group;

d. Electric burns, including lightning injury;

e. Chemical burns;

f. Inhalation injury;

g. Burn injury in patients with preexisting medical disorders that could prolong recovery, or affect mortality;

h. Any patients with burns and concomitant trauma (such as fractures) in which the burn injury poses the greatest risk of morbidity or mortality. In such cases, if the

trauma poses the greater immediate risk, the patient may be initially stabilized in the trauma center before being transferred to a burn unit. Physician judgment will be necessary in such situations and should be in concert with the regional medical control plan and triage protocols;

i. Burned children in hospitals without qualified personnel or equipment for the care of children; and

j. Burn injury in patients who will require special social, emotional, or long-tern rehabilitative intervention.

Chapter 08 TRAUMA CENTER LEVELS

In accordance with Miss. Code Ann. §63-13-11 (as amended), the department shall promulgate regulations specifying the methods and procedures by which Mississippi-licensed acute care facilities shall participate in the statewide trauma system.

The following sections represent the mechanism for determining the appropriate level of participation for each facility or class of facilities. Non compliance with this section shall result in a fee payable by the institution to the Trauma Care Trust Fund as set forth in the "Pay or Play" section of these regulations.

1410 LEVEL I TRAUMA CENTER

Level I trauma centers shall act as regional tertiary care facilities at the hub of the trauma care system. The facility must have the ability to provide leadership and total care for every aspect of injury from prevention to rehabilitation. As a tertiary facility, the Level I trauma center must have adequate depth of resources and personnel.

The Level I trauma centers in the State of Mississippi have the responsibility of providing leadership in education, trauma prevention, research and system planning.

HOSPITAL ORGANIZATION

1410.01 <u>Trauma Program</u>

There must be a written commitment on behalf of the entire facility to the organization of trauma care. The written commitment shall be in the form of a resolution passed by an appropriate quorum of the members of the governing authority. Should the business organization be other than a corporation, a letter explaining such together with a written commitment of the hospital's chief executive officer to the establishment of a trauma care program may be sufficient. The trauma program must be established and recognized by the medical staff and hospital administration. The trauma program must come under the direction of a board-certified surgeon with special interest in trauma care. An identified hospital administrative leader must work closely with the trauma medical director to establish and maintain the components of the trauma program including appropriate financial support. The trauma program location in the organizational structure of the hospital must be such that it may interact effectively with at least equal authority with other departments providing patient care. The administrative structure should minimally include an administrator, medical director, trauma program manager (TPM), trauma registrar and the appropriate support staff. Administrative support includes human resources, education activities, community outreach activities, and research. The trauma program must be multidisciplinary in nature and the performance improvement evaluation of this care should be extended to all the involved departments.

Compliance with the above will be evidenced by but not confined to

1. Governing authority and medical staff letter of commitment in the form of a resolution

2. Written policies and procedures and guidelines for care of the trauma patient

3. Defined trauma team and written roles and responsibilities

4. Appointed Trauma Medical Director with a written job description

5. Appointed Trauma Program Manager with a written job description

6. A written Trauma Performance Improvement plan

7. Documentation of trauma center representative attendance at the regional trauma advisory committee meetings

1410.02 Trauma Service

The trauma service must be established and recognized by the medical staff and be responsible for the overall coordination and management of the system of care rendered to the injured patient. The trauma service will vary in each organization depending on the needs of the patient and the resources available. The trauma service must come under the organization and direction of a surgeon who is board certified with special interest in trauma care. All patients with multiple system trauma or major injury must be evaluated by the trauma service. The surgeon responsible for the overall care of the patient must be identified.

1410.03 Trauma Team

The team approach is optimal in the care of the multiple injured patient. There must be identified members of the trauma team. Policies should be in place describing the respective role of all personnel on the trauma team. The composition of the trauma team in any hospital will depend on the characteristics of the hospital and it's staff. In some instances a tiered response may be appropriate. If a tiered response is employed written policy must be in place and the system monitored by the PI process. All physicians on the trauma team responsible for directing the initial resuscitation of the trauma patients must be currently certified in The American College of Surgeons Advanced Trauma Life Support (ATLS). Suggested composition of the trauma team for a severely injured patient may include:

a. Anesthesiologist

b. Pediatricians

c. Emergency Physicians

d. Physician Specialist

e. Laboratory Technicians as dictated by clinical needs

f. Mental Health/Social Services/Radiology Technicians

g. Pastoral Care

h. Respiratory Therapist

i. Nurses: ED, OR, ICU, etc.

j. General/Trauma Surgeon

k. Security officers

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

1410.04 Medical Director

Level I Trauma Centers must have a physician director of the trauma program. The medical director plays an important administrative role. The medical director must be a board-certified surgeon with special interest in trauma care. The medical director will be responsible for developing a performance improvement process and will have overall accountability and administrative authority for the trauma program. The medical director must be given administrative support to implement the requirements specified by the State trauma plan. The director is responsible for working with the credentialing process of the hospital, and in consultation with the appropriate service chiefs, for recommending appointment and removal of physicians from the trauma team. He should cooperate with nursing administration to support the nursing needs of the trauma patient and develop treatment protocols for the trauma patients. The director in collaboration with the Trauma Program Manager/TPM should coordinate the budgetary process for the trauma program. The director must be currently certified in Advanced Trauma Life Support (ATLS), maintain personal involvement in care of the injured, maintain education in trauma care, and maintain involvement in professional organizations. The trauma director must be actively involved with the trauma system development at the community, regional and state level.

1410.05 Multidisciplinary Trauma Committee

The purpose of the committee is to provide oversight and leadership to the entire trauma program. The exact format will be hospital specific and may be accomplished by collaboration with another designated trauma center in the region. Each trauma center may choose to have one or more committees as needed to accomplish the task. One committee should be multidisciplinary and focus on program oversight and leadership. The major focus will be on PI activities, policy development, communication among all team members, and establishment of standards of care, and education and outreach programs for injury prevention. The committee has administrative and systematic control and oversees implementation of all program related services, meets regularly, takes attendance, maintains minutes and works to correct overall program deficiencies to optimize patient care. Suggested membership for the committee includes representatives from:

a. Administration

b. Operating Room

c. Anesthesia

d. Orthopedics

e. Emergency Medicine

f. Pediatrics

g. General Surgery

h. Prehospital Care Providers

i. Intensive Care

j. Radiology

k. Laboratory

l. Rehabilitation

m. Neurosurgery

n. Respiratory Therapy

o. Nursing

p. Trauma Program Manager/TPM

q. The clinical managers (or designees) of the departments involved with trauma care should play an active role with the committee.

The trauma center may wish to accomplish performance improvement activities in this committee or develop a separate peer review committee. This committee should handle peer review independent from department based review. The committee must meet regularly and maintain attendance and minutes. This committee must report findings to the overall hospital performance improvement program.

1410.06 <u>Trauma Program Manager/TPM</u>

Level I Trauma Centers must have a registered nurse working full time in the role of Trauma Program Manager/TPM. Working in conjunction with the medical director, the Trauma Program Manager/TPM is responsible for organization of the program and all systems necessary for the multidisciplinary approach throughout the continuum of trauma care. The Trauma Program Manager/TPM is responsible for working with the trauma team to assure optimal patient care. There are many requirements for data coordination and performance improvement, education and prevention activities incumbent upon this position.

The Trauma Program Manager/TPM or his/hers designee should offer or coordinate services for trauma education. The Trauma Program Manager/TPM should liaison with

local EMS personnel, the Department, Regional Trauma Advisory Committee and other trauma centers.

1410.07 Hospital Departments/Divisions/Sections

The Level I trauma center must have the following departments, divisions, or sections:

9. General Surgery, (identified liaison)
10. Neurological Surgery, (identified liaison)
11. Orthopedic Surgery, (identified liaison)
12. Emergency Medicine, (identified liaison)
13. Anesthesia, (identified liaison)
14. PACU,
15. Intensive Care Unit,
16. Respiratory Therapy

1411. CLINICAL COMPONENTS

1411.01 Required Components

Level I trauma centers must maintain published call schedules and have the following medical specialist immediately available 24 hours/day:

a. Emergency Medicine (In-house 24 hours/day)

b. Trauma/General Surgery (In-house 24/hours)

Note: The trauma surgeon on-call must be unencumbered and immediately available to respond to the trauma patient. The 24 hour-in-house availability of the attending surgeon is the most direct method for providing this involvement. A PGY 4 or 5 resident may be approved to begin the resuscitation while awaiting the arrival of the attending surgeon but cannot be considered a replacement for the attending surgeon in the ED. This may allow the attending surgeon to take call from outside the hospital. The general surgeon is expected to be in the emergency department upon arrival of the seriously injured patient. Hospital policy must be established to define conditions requiring the trauma surgeon's presence with the clear requirement on the part of the hospital and surgeon that the surgeon will participate in the early care of the patient. The trauma surgeon's participation in major therapeutic decisions, presence in the emergency department for major resuscitation and presence at operative procedures is mandatory. There must be a back-up surgeon schedule published. The surgeon on-call must be dedicated to the trauma center and not on-call to any other hospital while on trauma call. A system must be developed to assure early notification of the on-call to any other hospital while on trauma call. A system must be developed to assure notification of the on-call surgeon and compliance with these criteria and their appropriateness must be documented and monitored by the PI process.

c. Anesthesia (In-house 24 hours/day)

Note: Anesthesia must be promptly available with a mechanism established to ensure early notification of the on-call anesthesiologist. Anesthesia must be in-house and available 24 hours/day. Anesthesia chief residents or Certified Nurse Anesthetist (CRNAs) may fill this requirement. When residents or CRNAs are utilized, the staff anesthesiologist on-call will be advised, promptly available, and present for all operations. Hospital policy must be established to determine when the anesthesiologist must be immediately available for airway control and assisting with resuscitation. The availability of the anesthesiologist and the absence of delays in airway control or operative anesthesia must be documented and monitored by the PI process.

The following specialists must be on-call and promptly available 24 hours/day:

i. Cardiac Surgery

ii. Cardiology

iii. Critical Care Medicine

iv. Hand Surgery

v. Infectious Disease

vi. Microvascular Surgery

vii. Nephrology

viii. Neurologic Surgery

Note: The neurosurgeons on the trauma team must be board certified The neurosurgery liaison must maintain 48 hours of trauma CME over 3 years and it is desirable maintain current ATLS certification, a mechanism may be established to "grandfather" non-board certified neurosurgeons as determined by hospital policy. The neurosurgeon liaison to the trauma service must attend 50% of the peer review committees annually and participate in the Multidisciplinary Trauma Committee. It is desirable to have the neurosurgeon dedicated to the trauma center solely while on-call or a back up schedule should be available.

ix. Nutritional Support

x. Obstetrics/Gynecologic Surgery

xi. Ophthalmic Surgery

xii. Oral/Maxillofacial

xiii. Orthopedic Surgery

Note: The orthopedics liaison on the trauma team must be board certified, maintain 48 hours of trauma related CME over 3 years and it is desirable to maintain current ATLS certification. In Mississippi, a mechanism may be established to "grandfather" non-board certified orthopedists as determined by hospital policy. Achieving the standard for ATLS may take three to five years due to availability to ATLS course in the state. The

orthopedic liaison to the Trauma Service must attend 50% of the peer review committees annually and participate with the Multidisciplinary Trauma Committee. It is desirable to have the orthopedists dedicated to the trauma center solely while on-call or a back up schedule should be available.

xiv. Pediatrics

xv. Plastic Surgery

xvi. Pulmonary Medicine

xvii. Radiology

xviii. Thoracic Surgery

Recognizing that early rehabilitation is imperative for the trauma patient, a physical medicine and rehabilitation specialist must be available for the trauma program.

A trauma surgeon is presumed to be qualified and have privileges to provide emergency thoracic surgical care to patients with thoracic injuries. If this is not the case, the facility should have a board-certified thoracic surgeon immediately available.

Polices and procedures should exist to notify the patient's primary physician of the patient's condition.

1411.02 <u>Qualifications of Physicians on the Trauma Team</u>

Basic to qualification for trauma care for any surgeon is Board Certification in a surgical specialty recognized by the American Board of Medical Specialties, the Advisory Board for Osteopathic Specialties, the Royal College of Physicians, the American Dental Association and Surgeons of Canada, or other appropriate foreign board. Many boards require a practice period. Such an individual may be included when recognition by major professional organizations has been received in their specialty. The board certification criteria apply to the general surgeons, orthopedic surgeons, and neurosurgeons.

a. Alternate criteria in lieu of board certification are as follows:

b. A non-board certified general surgeon must have completed a surgical residency program.

c. He/she must be licensed to practice medicine.

d. Approved by the hospital's credentialing committee for surgical privileges.

e. The surgeon must meet all criteria established by the trauma director to serve on the trauma team.

f. The surgeons' experience in caring for the trauma patient must be tracked by the PI program.

b. The trauma director must attest to the surgeons' experience and quality as part of the recurring granting of trauma team privileges.

c. The trauma director using the trauma PI program is responsible for determining each general surgeon's ability to participate on the trauma team.

The surgeon is expected to serve as the captain of the resuscitating team and is expected to be in the emergency department upon arrival of the seriously injured patient to make key decisions about the management of the trauma patient's care. The surgeon will coordinate all aspects of treatment, including resuscitation, operation, critical care, recuperation and rehabilitation (as appropriate in a Level I facility) and determine if the patient needs transport to a higher lever of care. If transport is required he/she is accountable for coordination of the process with the receiving physician at the receiving facility. If the patient is to be admitted to the Level I trauma center, the surgeon is the admitting physician and will coordinate the patient care while hospitalized. Guidelines should be written at the local level to determine which types of patients should be admitted to the Level I trauma center or which patients should be considered for transfer to a higher level of care.

The general surgery liaison and emergency physician liaison must participate in a multidisciplinary trauma committee and the PI process. Peer review committee attendance must be greater than fifty percent over a year's period of time. General Surgery and Emergency physicians must be currently certified in ATLS, and it is desirable that they be involved in at least forty eight (48) hours of trauma related continuing education (CME) every 3 years.

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements are waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

For those physicians providing emergency medicine coverage, board certification in Emergency Medicine is desirable. However, career emergency medicine physicians who are board certified in a specialty recognized by the American Board of Medical Specialties, a Canadian Board or other equivalent foreign board meets the requirements.

Alternative criteria for the non-boarded physician working in the Emergency Department are as follows:

a. He/she must be licensed to practice medicine

b. Approved by the hospital's credentialing committee for emergency medicine privileges.

c. The physician must meet all criteria established by the trauma and emergency medical director to serve on the trauma team.

d. The physician's experience in caring for the trauma patient must be tracked by the PI program.

e. The trauma and emergency medical director must attest to the physician's experience and quality as part of the recurring granting of trauma team privileges.

f. Residency in Emergency Medicine is desirable.

1412. FACILITY STANDARDS

1412.01 Emergency Department

The facility must have an emergency department, division, service, or section staffed so trauma patients are assured immediate and appropriate initial care. The emergency physician must be in-house 24 hours/day and immediately available at all times. The emergency department medical director must meet the recommended requirements related to commitment, experience, continuing education, ongoing credentialing, and board certification in emergency medicine.

The director of the emergency department, along with the trauma director, will establish trauma-specific credentials that should exceed those that are required for general hospital privileges. Examples of credentialing requirements would include skill proficiency, training requirements, conference attendance, education requirements, ATLS verification and specialty board certification.

The emergency physician liaison must maintain 48 hours of trauma related CME over 3 years. Over a three-year period, at least one-half (24 hours) should be obtained outside the physician's own institution.

Emergency physicians must maintain ATLS verification

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

The emergency medicine physician will be responsible for activating the trauma team based on predetermined response protocols. He will provide team leadership and care for the trauma patient until the arrival of the surgeon in the resuscitation area. The emergency department must have established standards and procedures to ensure immediate and appropriate care for the adult and pediatric trauma patient. The emergency department medical director, or his/her designee, must act as a liaison and participate with the Multidisciplinary Trauma Committee and the trauma PI process.

Basic to qualification for trauma care for any physician is board certification in a specialty recognized by the American Board of Medical Specialties, the Advisory Board of Osteopathic Specialties, the Royal College of Physicians and Surgeons of Canada, or other appropriate foreign board.

Alternate criteria in lieu of board certification are as follows:

8. A non-board certified physician must have completed an approved residency program.

9. He/she must be licensed to practice medicine.

10. Approved for emergency medicine by the hospital's credentialing committee.

11. The physician must meet all criteria established by the trauma director and emergency medical director to serve on the trauma team.

12. The physician's experience in caring for the trauma patient must be tracked by the PI Program.

13. The trauma director and emergency medicine director must attest to the physicians' experience and quality as part of the recurring granting of trauma team privileges.

14. Must have at least 12 months experience caring for the trauma patient tracked by the PI program.

There should be an adequate number of RN's staffing the trauma resuscitation area in-house 24 hours/day. Emergency nurses staffing the trauma resuscitation area must be a current provider of Trauma Nurse Core Curriculum (TNCC) and participate in the ongoing PI process of the trauma program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

NOTE: ER nurses must obtain TNCC within 18 months.

There is a complete list of required equipment necessary for the ED can be found in Section 804.01.

1412.02 <u>Surgical Suites/Anesthesia</u>

The operating room (OR) must be staffed and available in-house 24 hours/day.

The OR nurses should participate in the care of the trauma patient and be competent in the surgical stabilization of the major trauma patient.

The Surgical nurses are an integral member of the trauma team, and must participate in the ongoing PI process of the trauma program and be represented on the Multidisciplinary Trauma Committee.

The OR supervisor must be able to demonstrate a prioritization scheme to assure the availability of an operating room for the emergent trauma during a busy operative schedule. There must be an on-call system for additional personnel for multiple patient admissions.

There is a complete list of required equipment necessary for Surgery can be found in Section 804.01.

The anesthesia department in a Level I trauma center should be ideally organized and run by an anesthesiologist who is highly experienced and devoted to the care of the injured patient. If this is not the director, an anesthesiology liaison with the same qualifications should be identified. Anesthesiologist on the trauma team must have

successfully completed an anesthesia residency program approved by the Accreditation Council for Graduate Medical Education, the American Board of Osteopathic Specialties and have board certification in anesthesia. One anesthesiologist should maintain commitment to education in trauma related anesthesia.

Anesthesia must be available in-house 24 hours/day with a mechanism established to ensure early notification of the on-call anesthesiologist. Anesthesia requirements may be fulfilled by anesthesia chief residents or Certified Registered Nurse Anesthetist (CRNAs) who are capable of assessing emergent situations in trauma patients and of providing indicated treatment, including initiation of surgical anesthesia. When the CRNA or chief resident is used to meet this requirement, the staff Anesthesiologist will be advised and promptly available at all times and present for operations. Trauma centers must document conditions when the anesthesiologist must be immediately available for airway emergencies and operative management of the trauma patient. The availability of the anesthesiologist and the absence of delays in operative anesthesia must be documented and monitored by the PI process. The anesthesiologist participating on the trauma team must participate in the Multidisciplinary Trauma Committee and the trauma PI process.

1412.03 Post Anesthesia Care Unit (PACU)

Level I trauma centers must have a PACU staffed 24 hours/day and available to the postoperative trauma patient. Frequently it is advantageous to bypass the PACU and directly admit to the ICU. In this instance, the ICU may meet these requirements.

PACU nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

PACU staffing should be in sufficient numbers to meet the critical needs of the trauma patient. A complete list of required equipment necessary for the PACU can be found in Section 804.01.

1412.04 Intensive Care Unit

Level I trauma centers must have an Intensive Care Unit (ICU) that meets the needs of the adult trauma patient.

a. **Surgical Director**

The surgical director for the ICU – which houses trauma patients - must have obtained critical care training during residency or fellowship and must have expertise in the preoperative and post injury care of the injured patient. This is best demonstrated by a certificate of added qualification in surgical critical care from the American Board of Surgery and may also be fulfilled by documentation of active participation during the preceding 12 months in trauma patients' ICU care and ICU administration and critical care-related continuing medical education. The director is responsible for the quality of care and administration of the ICU and will set policy and establish standards of care to meet the unique needs of the trauma patient.

b. **Physician Coverage**

The trauma service assumes and maintains responsibility for the care of the multiple injured patient. A surgically directed ICU physician team is essential. The team will provide in-house physician coverage for all ICU trauma patients at all times. This service can be staffed by appropriately trained physicians from different specialties, but must be led by a qualified surgeon as determined by critical care credentials consistent with the medical staff privileging process of the institution.

There must be in-house physician coverage for the ICU at all times. A physician credentialed by the facility for critical care should be promptly available to the trauma patient in the ICU 24 hours/day. This coverage is for emergencies only and is not intended to replace the primary surgeon but rather is intended to ensure that the patient's immediate needs are met while the surgeon is contacted.

The trauma service should maintain the responsibility for the care of the patient as long as the patient remains critically ill. The trauma service must remain in charge of the patient and coordinate all therapeutic decisions. The responsible trauma surgeon or designee should write all orders. The trauma surgeon should maintain control over all aspects of care, including but not limited to respiratory care and management of mechanical ventilation; placement and use of pulmonary catheters; management of fluid and electrolytes, antimicrobials, and enteral and parenteral nutrition.

c. **Nursing Personnel**

Level I trauma centers must provide staffing in sufficient numbers to meet the critical needs of the trauma patient. Critical care nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing trauma specific education. ICU nurses are integral part of the trauma team and as such, should be represented on the Multidisciplinary Trauma Committee and participate in the PI process of the trauma program.

There is a complete list of necessary equipment for the ICU in Section 804.01.

1413. CLINICAL SUPPORT SERVICES

1413.01 Respiratory Therapy Service

The service must be staffed with qualified personnel in-house 24 hours/day to provide the necessary treatment for the injured patient.

1413.02 Radiological Service

A radiological service must have a certified radiological technician in-house 24 hours/day and immediately available at all times for general radiological procedures. Sonography, angiography, and MRI must be available to the trauma team. A technician must be in-house and immediately available for computerized tomography (CT) for both head and body. Specialty procedures such as angiography, MRI, and sonography

may be covered with a technician on-call. If the technician is not in-house 24 hours/day for special procedures the performance improvement process must document and monitor that the procedure is promptly available.

A board-certified radiologist should administer the department and participate actively in the trauma education and PI process. A staff radiologist must be promptly available, when requested, for the interpretation of radiographs, performance of complex imaging studies or interventional procedures. The radiologist must insure the preliminary interpretations are promptly reported to the trauma team and the PI program must monitor all changes in interpretation.

Written policy should exist delineating the prioritization/availability of the CT scanner for trauma patients. The PI process must ensure that trauma patients are accompanied by appropriately trained licensed providers and that the appropriate resuscitation and monitoring are provided during transportation to and while in the radiology department.

The radiologist must ensure the preliminary interpretations are promptly reported to the trauma team and the PI Program must monitor all changes in interpretation.

1413.03 <u>Clinical Laboratory Service</u>

Clinical laboratory service must have the following services available in-house 24 hours/day:

a. Access to a blood bank and adequate storage facilities. Sufficient quantities of blood and blood products must be maintained at all times. Blood typing and cross-match capabilities must be readily available.

b. Standard analysis of blood, urine and other body fluids including micro-sampling when appropriate.

c. Blood gas and PH determinations (this function may be performed by services other than the clinical laboratory service, when applicable.)

d. Alcohol screening is required and drug screening is highly recommended.

e. Coagulation studies.

f. Microbiology

Sufficient numbers of clinical laboratory technologists shall be in-house 24 hours/day and promptly available at all times. It is anticipated that facilities may cross-train personnel for other roles. This is acceptable as long as there is no response delay.

1413.04 <u>Acute Hemodialysis</u>

Level I Trauma Centers must have Acute Hemodialysis services. There must be a written transfer agreement with a facility that provides this service if this service if it is not available at the Level I trauma center.

1413.05 Burn Care

There must be a written transfer agreement to a Burn Center if this service is unavailable at the Level I trauma center. Policies and procedures should be in place to assure the appropriate care is rendered during the initial resuscitation and transfer of the patient.

1413.06 Rehabilitation/Social Services

The rehabilitation of the trauma patient and the continued support of the family members are an important part of the trauma system. Each facility will be required to address a plan for integration of rehabilitation into the acute and primary care of the trauma patient, at the earliest stage possible after admission to the trauma center. Hospitals will be required to identify a mechanism to initiate rehabilitation services and/or consultation in a timely manner as well as policies regarding coordination of the Multidisciplinary Rehabilitation Team. Policies must be in place to address the coordination of transfers between acute care facilities and approved rehabilitation facilities. There must be a written transfer agreement with a facility that provides this service if this service is not available at the Level I Trauma Center. Transfer agreements should include a feedback mechanism for the acute care facilities to update the health care team on the patient's progress and outcome for inclusion in the trauma registry. The rehabilitation services should minimally include; Occupational Therapy, Physical Therapy, and Speech Pathology.

The nature of traumatic injury requires that the psychological needs of the patient and family are considered and addressed in the acute stages of injury and throughout the continuum of recovery. Adequate number of trained personnel must be readily available to the trauma patients and family. Programs must be available to meet the unique need of the trauma patient.

1413.07 Prevention/Public Outreach

Level I trauma centers will be responsible for taking a lead role in coordination of appropriate agencies, professional groups and hospitals in their region to develop a strategic plan for public awareness. This plan must take into consideration public awareness of the trauma system, access to the system, public support for the system, as well as specific prevention strategies. Prevention programs must be specific to the needs of the region. The trauma registry data must be utilized to identify injury trends and focus prevention needs.

Outreach is the act of providing resources to individuals and institutions that do not have the opportunities to maintain current knowledge and skills. Staff members at a Level I trauma center must provide consultation to staff members of other level facilities. For example: Advanced Trauma Life Support (ATLS), Pre Hospital Trauma Life Support (PHTLS), Trauma Nurse Curriculum Course (TNCC), and Flight Nurse Advanced Trauma Course (FNATC) courses can be coordinated by the trauma center. Trauma physicians must provide a formal follow up to referring physicians/designee about specific patients to educate the practitioner for the benefit of further injured patients.

1413.08 Transfer Protocol

Level I trauma centers should work in collaboration with the referral trauma facilities in their region and develop interfacility transfer guidelines. These guidelines must address criteria to identify high-risk trauma patients that could benefit from a higher level of trauma care. All designated facilities will agree to provide services to the trauma victim regardless of his/her ability to pay.

When a patient in need of trauma services is transferred to a receiving facility capable of providing the needed care, from a transferring facility which cannot provide an adequate level of care, the following shall apply: When a determination is made by appropriate medical personnel of the receiving facility that a patient transferred from the transferring facility has been stabilized, no longer has an emergency medical condition or no longer requires the specialty services provided at the receiving facility, but the patient still requires further acute care, the transferring facility, with the consent of the patient and the patient's physician, agrees to readmit the transferred patient for appropriate acute care within 24 to 48 hours of such a determination. The patient's physician, the chief of the medical staff or other authorized representative of the transferring facility shall facilitate the identification of the patient's physician or his/her designee to accept the patient and transfer the patient back to the transferring facility.

Transfer protocols must be written for specialty referral centers such as pediatrics, burns or spinal cord injury when these services are not available to the trauma center. The transfer protocols must include a feedback loop so that the primary provider has a good understanding of the patient outcome. Every effort should be made to repatriate the trauma patient to his/her local community hospital or provider hospital if appropriate.

1413.09 Performance Improvement/Evaluation

A key element in trauma system planning is evaluation. All licensed hospitals which have organized emergency services or departments will be required to participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since these data relate to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential as provided in Miss. Code Ann.§41-59-77. Level I trauma facilities may be responsible for direct assistance to all other levels of referring facilities in providing data for inclusion in the registry.

Each trauma center must develop an internal trauma specific Performance Improvement (PI) plan that minimally addresses the following key components and is fully integrated into the hospital wide program:

a. An organizational structure that facilitates performance improvement (Multidisciplinary Trauma Committee).

b. Clearly defined authority and accountability for the program.

c. Clearly stated goals and objectives one of which should be reduction of inappropriate variations in care.

d. Development of expectations (criteria) from evidenced based guidelines, pathways and protocols. These should be appropriate, objectively defined standards to determine quality of care.

e. Explicit definitions of outcomes derived from institutional standards.

f. Documentation system to monitor performance, corrective action and the result of the actions taken.

g. A process to delineate credentialing of all trauma service physicians.

h. An informed peer review process utilizing a multidisciplinary method.

i. A method for comparing patient outcomes with computed survival probability.

j. Autopsy information on all deaths when available.

k. Review of prehospital care.

l. Review of times and reasons for trauma bypass.

m. Review of times and reasons for trauma transfers.

n. Audit of trauma deaths.

o. Morbidity and Mortality review.

Representatives from the Level I trauma center shall participate in the Regional Trauma Advisory Committees and the statewide performance improvement process.

1413.10 <u>Trauma Registry</u>

All licensed hospitals which have organized emergency services or departments must participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since this data relates to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential and will be governed by the Miss. Code Ann.§41-59-77.

Compliance with the above will be evidenced by:

a. Documentation of utilization of the Trauma Registry data in the trauma performance improvement process

b. Timely submission of Trauma Registry Data to the Bureau of EMS and the appropriate Region at least monthly.

1413.11 <u>Education</u>

Level I trauma centers must have medical education programs including educational training in trauma for physicians, nurses and prehospital providers. The Level I trauma

centers must take a leadership role in providing educational activities. Education can be accomplished via many mechanisms (i.e. classic CME, preceptorships, fellowships, clinical rotations, telecommunications or providing locum tenens etc).

The Level I trauma center is expected to support a surgical residency program. Additionally there should be a senior resident rotation in at least one of the following disciplines: emergency medicine, general surgery, orthopedic surgery, neurosurgery or support a trauma fellowship consistent with the educational requirements of the American Association for the Surgery of Trauma (AAST). The Level I should provide ATLS courses for the region.

1413.12 Research

A trauma research program must be designed to produce new knowledge applicable to the care of the injured patient. The research may be conducted in a number of ways including traditional laboratory and clinical research, reviews of clinical series, and epidemiological or other studies. Publication of articles in peer-review journals as well as presentations of results at local, regional and national meetings and ongoing studies approved by human and animal research review boards are expected from productive programs. The program should have an organized structure that fosters and monitors ongoing productivity.

The research program must be balanced to reflect a number of different interests. There must be a research committee, and identifiable Institutional Review Board process, active research protocols, surgeons involved in extramural educational presentations and adequate number of peer reviewed scientific publications. Publications should appear in peer-reviewed journals. In a three-year cycle, the suggested minimum activity is ten publications (per review cycle) from the physicians representing any of the four following specialties: emergency medicine, general surgery, orthopedic surgery, and neurosurgery.

804.02 Essential and Desirable Chart for Level 1 Trauma Center

		Level I
1	Institutional Organization	
2	Trauma Program	E
3	Trauma Service	E
4	Trauma Team	E
5	Trauma Program Medical Director	E
6	Trauma Multidisciplinary Committee	E
7	Trauma Program Manager	E
8	Hospital Departments/Divisions/Sections	
9	Surgery	E
10	Neurological Surgery	E
11	Neurosurgical Trauma Liaison	E
12	Orthopaedic Surgery	E
13	Orthopaedic Trauma Liaison	E
14	Emergency Medicine	E
15	Anesthesia	E

16	Clinical Capabilities	
17	(Specialty Immediately Available 24 hours/day)	
18	Published on-call schedule	E
19	General Surgery	E
20	Published back-up schedule	E
21	Dedicated to single hospital when on-call *11	E
22	Anesthesia	E
23	Emergency Medicine	E
24	On-call and promptly available 24 hours/day	
25	Cardiac Surgery	E
26	Hand Surgery	E
27	Microvascular/replant Surgery	E
28	Neurological Surgery	E
29	Dedicated to one hospital or back-up call	E
30	Obstetrics/Gynecologic Surgery	E
31	Ophthalmic Surgery	E
32	Oral/Maxillofacial Surgery	E
33	Orthopaedic Surgery	E
34	Plastic Surgery	E
35	Critical Care Medicine	E
36	Radiology	E
37	Thoracic Surgery	E
38	Clinical Qualifications	
39	General/Trauma Surgeon:	
40	Current Board Certification	E *(1)
41	16 Hours CME/Year (7)	E
42	ATLS Completion *(2) (10)	E
43	Peer Review Committeeliaison Attendance ≥ 50%	E
44	Multidisciplinary Committee liaison Attendance	E
45	Emergency Medicine:	
46	Board Certification	E *(6)
47	16 Hours CME/Year (7)	E
48	ATLS Completion *(2) (10)	E
49	Peer Review Committee liaison Attendance ≥ 50%	E
50	Multidisciplinary Committee liaison Attendance	E
51	Neurosurgery:	
52	Current Board Certification	E
53	16 Hours CME/Year (7)	E
54	ATLS Completion *(2) (10)	D

55	Peer Review Committee liaison Attendance ≥ 50%	E
56	Multidisciplinary Committee liaison Attendance	E
57	Orthopaedic Surgery:	
58	Current Board Certification	E
59	16 Hours CME In Trauma/Year (7)	E
60	ATLS Completion *(2) (10)	D
61	Peer Review Committee liaison Attendance ≥ 50%	E
62	Multidisciplinary Committee liaison Attendance	E
63	Facilities/Resources/Capabilities	
64	Volume Performance	
65	Trauma Admissions: 1,200/year	--
66	Patients with ISS > 15 (240 total or 35 patients/surgeon)	--
67	Presence of Surgeon at resuscitation	E
68	Presence of Surgeon at Operative Procedures	E
69	Emergency Department	
70	Personnel	
71	Designated physician director	E
72	RN in-house and available	E *(4)
73	Equipment for Resuscitation for Patients of all ages	
74	Airway control and ventilation equipment	E
75	Pulse Oximetry	E
76	Suction Devices	E
77	Electrocardiograph-Oscilloscope-Defibrillator	E
78	Internal Paddles	E
79	CVP Monitoring Equipment	E
80	Standard IV Fluids and Administration Sets	E
81	Large bore intravenous catheters	E
82	Sterile Surgical Sets for:	
83	Airway control/cricothyrotomy	E
84	Thoracostomy	E
85	Venous cut-down	E
86	Central line insertion	E
87	Thoracotomy	E
88	Peritoneal lavage	E
89	Arterial catheters	E
90	Ultrasound	E
91	Drugs necessary for emergency care *(5)	E

92	X Ray availability 24 hours/day	E
93	Cervical spine stabilization devices	E
94	Broselow tape	E
95	Thermal control equipment:	
96	For Patient	E
97	For fluids and blood	E
98	Rapid Infuser system *(8)	E
99	Qualitative end-tidal CO2 determination	E
100	Communication with EMS vehicles	E
101	Operating Room	
102	Immediately available 24 hours/day	E
103	Personnel	
104	In-house 24 hours/day	E
105	Available 24 hours/day	--
106	Age-specific equipment	
107	Cardiopulmonary bypass	E
108	Operating microscope	E
109	Thermal control equipment	
110	For patient	E
111	For blood/fluids	E
112	X Ray capability, including c-arm image intensifier	E
113	Endoscopes, bronchoscope	E
114	Craniotomy instruments	E
115	Equipment for long bone and pelvic fixation	E
116	Rapid infuser system * (9)	E
117	Pulse oximetry	E
118	Qualitative end-tidal CO2 determination	E
119	Postanesthetic Recovery Room (SICU acceptable)	
120	Registered nurses available 24 hours/day	E
121	Equipment for monitoring and resuscitation	E
122	Intercranial pressure monitoring equipment	E
123	Pulse oximetry	E
124	Thermal control	E
125	Intensive or Critical Care Unit for Injured Patients	
126	Registered nurses with trauma education* (9)	E
127	Designated surgical director or surgical co-director	E
128	Surgical ICU service physician in-house 24 hours/day	E
129	Surgically directed and staffed ICU service	E
130	Equipment for monitoring and resuscitation	E
131	Intracranial monitoring equipment	E
132	Pulmonary artery monitoring equipment	E

133	Respiratory Therapy Services	
134	Available in-house 24 hours/day	E
135	On call 24 hours/day	--
136	Radiological Services (Available 24 hours/day)	
137	In-house radiology technologist	E
138	Angiography	E
139	Sonography	E
140	Computed Tomography	E
141	In-house CT technician	E
142	Magnetic resonance imaging	E
143	Clinical Laboratory Services (Available 24 hours/day)	
144	Standard analysis of blood, urine and other body fluids, including microsampling when appropriate	E
145	Blood typing and cross-matching	E
146	Coagulation studies	E
147	Comprehensive blood bank or access to a community central blood bank and adequate storage facilities	E
148	Blood gases and pH determinations	E
149	Microbiology	E
150	Acute Hemodialysis	
151	In-house	E
152	Transfer agreement	--
153	Burn Care - Organized	
154	In-house or transfer agreement with Burn Center	E
155	Rehabilitation Services	
156	Transfer agreement to an approved rehab facility	E
157	Physical Therapy	E
158	Occupational Therapy	E
159	Speech Therapy	E
160	Social Services	E
161	Performance Improvement	
162	Performance improvement programs	E
163	Trauma Registry	
164	In-house	E
165	Participation in state, local, or regional registry	E
166	Orthopaedic database	D

167	Audit of all trauma deaths	E
168	Morbidity and mortality review	E
169	Multidisciplinary trauma committee	E
170		
171	Review of prehospital trauma care	E
172	Review of times/reasons for trauma-related bypass	E
173	Review of times/reasons for transfer of injured patients	E
174		~~E~~
175	Participate in regional review of prehospital trauma care, times/reasons for trauma-related bypass, times/treasons for transfer of injured patient	E
176	PI process established to monitor response times for all on-call personnel	E
194	Trauma registry PI activities	E
177	Continuing Education/Outreach	
177	General surgery residency program	D
178	ATLS provide/participate	E
179	Programs provided by hospital for:	
180	Staff/Community physicians (CME)	E
181	Nurses	E
182	Allied health personnel	E
183	Prehospital personnel provision/participation	E
184	Prevention	
185	Injury control studies	E
186	Collaboration with other institutions	E
187	Monitor progress/effect of prevention programs	E
188	Designated prevention coordinator/spokesperson	E
189	Outreach activities	E
190	Information resources for public	E
191	Collaboration with existing programs	E
192	Coordination and/or participation in community prevention activities	E
193	Research	
195	Research committee	E
196	Identifiable IRB process	E
197	Extramural education presentations	E
199	Number of scientific publications	E

200	* (1) Mississippi standards will require at least one general surgeon to be board certified. Alternated criteria may be substituted for other staff.
201	* (2) Mississippi standards will require a current ATLS completion card. Physicians have up to one (1) year after hiring to obtain ATLS certification.
202	* (3) Some mechanisms for “grandfathering” in non-board certified neurosurgeons and orthopedic surgeons will be developed by hospital policy.
203	* (4) The RN in-house and available in the ED must b a current provider of TNCC.
204	* (5) Drugs necessary for emergency care will be defined by the prehospital drug list set forth by the Bureau of Emergency Medical Services.
205	* (6) Board certified or alternative criteria as established by hospital policy.
206	* (7) Can be accompanied with 48 hours of trauma education over three (3) years.
207	* (8) Simple pressure bag.
208	* (9) Ongoing critical care education bi-annually.
209	*(10) ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.
210	*(11) If neurosurgery is not dedicated to one hospital while on-call a published back-up call schedule must be available.

Chapter 09 LEVEL II TRAUMA CENTERS

A Level II trauma center is an acute care facility with the commitment, resources and specialty training necessary to provide sophisticated trauma care.

1414 HOSPITAL ORGANIZATION

1414.01 Trauma Program

There must be a written commitment on behalf of the entire facility to the organization of trauma care. The written commitment shall be in the form of a resolution passed by an appropriate quorum of the members of the governing authority. Should the business organization be other than a corporation, a letter explaining such together with a written commitment of the hospital's chief executive officer to the establishment of a trauma care program may be sufficient. The trauma program must be established and recognized by the medical staff and hospital administration. The trauma program must come under the direction of a board-certified surgeon with special interest in trauma care. An identified hospital administrative leader must work closely with the trauma medical director to establish and maintain the components of the trauma program including appropriate financial support. The trauma program location in the organizational structure of the hospital must be placed so that it may interact effectively with at least equal authority with other departments providing patient care. An administrative structure should minimally include an administrator, medical director, trauma program manager (TPM), trauma registrar and the appropriate support staff. Administrative support includes human resources, educational activities, community outreach activities, and research. The trauma program must be multidisciplinary in nature and the performance improvement evaluation of this care should extend to all the involved departments.

Compliance with the above will be evidenced by but not limited to:

1. Governing authority and medical staff letter of commitment in the form of a resolution
2. Written policies and procedures and guidelines for care of the trauma patient
3. Defined trauma team and written roles and responsibilities
4. Appointed Trauma Medical Director with a written job description
5. Appointed Trauma Program Manager with a written job description
6. A written Trauma Performance Improvement plan
7. Documentation of trauma center representative attendance at the regional trauma advisory committee meetings

1414.02 Trauma Service

The trauma service must established and recognized by the medical staff and be responsible for the overall coordination and management of the system of care rendered to the injured patient. The trauma service will vary in each organization depending on the needs of the patient and the resources available. The trauma service must come under the organization and direction of a surgeon who is board certified with special interest in trauma care. All patients with multiple system trauma or major injury must be evaluated by the trauma service. The surgeon responsible for the overall care of the patient must be identified.

1414.03 Trauma Team

The team approach is optimal in the care of the multiple injured patient. There must be identified members of the trauma team. Policies should be in place describing the respective role of all personnel on the trauma team. The composition of the trauma team in any hospital will depend on the characteristics of that hospital and it's staff. In some instances a tiered response may be appropriate. If a tiered response is employed written policy must be in place and the system monitored by the PI process. The team leader must be a qualified general surgeon. All physicians on the trauma team responsible for directing the initial resuscitation of the trauma patients must be currently certified in The American College of Surgeons Advanced Trauma Life Support (ATLS). Suggested composition of the trauma team for a severely injured patient may include:

a. Anesthesiologist

b. Pediatricians

c. Emergency Physicians

d. Physician Specialist

e. Laboratory Technicians as dictated by clinical needs

f. Mental Health/Social Services/ Radiology Technicians

g. Pastoral Care

h. Respiratory Therapists

i. Nurses: ED, OR, ICU, etc.

j. General/Trauma Surgeon

11. Security Officers

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

1414.04 Medical Director

Level II Trauma Centers must have a physician director of the trauma program. The trauma program medical director plays an important administrative role. The medical director must be a board-certified surgeon with special interest in trauma care. The medical director will be responsible for developing a performance improvement process and will have overall accountability and administrative authority for the trauma program. The medical director must be given administrative support to implement the requirements specified by the State trauma plan. The director is responsible for working with the credentialing process of the hospital, and, in consultation with the appropriate service chiefs, recommending appointment and removal of physicians from the trauma team. He should cooperate with nursing administration to support the nursing needs of the trauma patient and develop treatment protocols for the trauma patients. The director in collaboration with the trauma program manager/TPM should coordinate the budgetary process for the trauma program. The director must be currently certified in Advanced Trauma Life Support (ATLS), maintain personal involvement in care of the injured, maintain education in trauma care, and maintain involvement in professional organizations. The trauma director must be actively involved with the trauma system development at the community, regional and state level.

1414.05 Multidisciplinary Trauma Committee

The purpose of the committee is to provide oversight and leadership to the entire trauma program. The exact format will be hospital specific and may be accomplished by collaboration with another designated trauma center in the region. Each trauma center may choose to have one or more committee to accomplish the tasks necessary. One committee should be multidisciplinary and focus on program oversight and leadership. The major focus will be on PI activities, policy development, communication among all team members, establishment of standards of care, education and outreach programs, and injury prevention. The committee has administrative and systematic control and oversees implementation of all program related services, meets regularly, takes attendance, maintains minutes and works to correct overall program deficiencies to optimize patient care. Suggested membership for the committee includes representatives from:

a. Administration

b. Operating Room

c. Anesthesia

d. Orthopedics

e. Emergency Department

f. Pediatrics

g. General Surgery

h. Prehospital Care Providers

i. Intensive Care

j. Radiology

k. Laboratory

l. Rehabilitation

m. Neurosurgery

n. Respiratory Therapy

o. Nursing

p. Trauma Program Manager/TPM

q. The clinical managers (or designees) of the departments involved with trauma care should play an active role with the committee.

The trauma center may wish to accomplish performance improvement activities at this same committee or develop a separate peer review committee. This committee should handle peer review independent from department based review. This committee must be multidisciplinary, meet regularly, and maintain attendance and minutes. This committee must report findings to the overall hospital performance improvement program.

1414.06 Trauma Program Manager/TPM

Level II trauma centers must have a registered nurse working full time in the role of Trauma Program Manager/TPM. Working in conjunction with the medical director, the Trauma Program Manager/TPM is responsible for organization of the program and all systems necessary for the multidisciplinary approach throughout the continuum of trauma care. The Trauma Program Manager/TPM is responsible for working with the trauma team to assure optimal patient care. There are many requirements for data coordination and performance improvement, education and prevention activities incumbent upon this position.

The Trauma Program Manager/TPM or his/hers designee should offer or coordinate services for trauma education. The Trauma Program Manager/TPM should liaison with local EMS personnel, the Department, Regional Trauma Advisory Committee and other trauma centers.

1414.07 Hospital Departments/Divisions/Sections

The Level II trauma center must have the following departments, divisions, or sections:

a. General Surgery

b. Neurological Surgery

c. Orthopedic Surgery

d. Emergency Medicine

e. Anesthesia

1415. CLINICAL COMPONENTS

Level II trauma centers must maintain published call schedules and have the following specialists immediately available 24 hours/day:

a. Emergency Medicine (In-house 24 hours/day)

b. Trauma/General Surgery

Note: The trauma surgeon on-call must be unencumbered and immediately available to respond to the trauma patient. The general surgeon is expected to be in the emergency department upon arrival of the seriously injured patient. Hospital policy must be established to define conditions requiring the trauma surgeon's presence with the clear requirement on the part of the hospital and surgeon that the surgeon will participate in the early care of the patient. The trauma surgeon's participation in major therapeutic decisions, presence in the emergency department for major resuscitation and presence at operative procedures is mandatory. There must be a back-up surgeon schedule published. It is desirable that the surgeon on-call be dedicated to the trauma center and not on-call to any other hospital while on trauma call. A system must be developed to assure early notification of the on-call to any other hospital while on trauma call. A system must be developed to assure notification of the on-call surgeon and compliance with these criteria and their appropriateness must be documented and monitored by the PI process.

c. Orthopedic Surgery

Note: A mechanism may be established to "grandfather" non-board certified orthopedists as determined by hospital policy. Orthopedic Surgeons must demonstrate evidence of participation in the internal trauma education plan. The orthopedic liaison to the Trauma Service must attend 50% of the peer review committees annually and participate with the Multidisciplinary Trauma Committee. It is desirable to have the orthopedists dedicated to the trauma center solely while on-call or a back up schedule should be available.

d. Neurologic Surgery

Note: A mechanism may be established to "grandfather" non-board certified neurosurgeons as determined by hospital policy. Neurosurgeons must demonstrate evidence of participation in the internal trauma education plan. The neurosurgeon liaison to the trauma service must attend 50% of the peer review committees annually and participate in the Multidisciplinary Trauma Committee. It is desirable to have the neurosurgeon dedicated to the trauma center solely while on-call or a back up schedule should be available.

e. Anesthesia

Note: Anesthesia must be promptly available with a mechanism established to ensure early notification of the on-call anesthesiologist. Anesthesia must be available 24 hours/day. Anesthesia chief residents or Certified Nurse Anesthetist (CRNAs) may fill this requirement. When residents or CRNAs are utilized, the staff anesthesiologist on-call will be advised, promptly available, and present for all operations. Hospital policy must be established to determine when the anesthesiologist must be immediately available for airway control and assisting with resuscitation. The availability of the anesthesiologist and the absence of delays in airway control or operative anesthesia must be documented and monitored by the PI process.

The following specialists should be on-call and promptly available 24 hours/day:

f. Critical Care Medicine

g. Hand Surgery

h. Microvascular Surgery

i. Obstetrics/Gynecologic Surgery

j. Ophthalmic Surgery

k. Oral/Maxillofacial

l. Plastic Surgery

m. Radiology

n. Thoracic Surgery

Recognizing that early rehabilitation is imperative for trauma patients, a physical medicine and rehabilitation specialist should be available for the trauma program.

A trauma surgeon is presumed to be qualified and have privileges to provide emergency thoracic surgical care to patients with thoracic injuries. If this is not the case, the facility should have a board certified thoracic surgeon immediately available.

Policies and procedures should exist to notify the patient's primary physician of the patient's condition.

1415.02 <u>Qualifications of Physicians on the Trauma Team</u>

Basic to qualification for trauma care for any surgeon is Board Certification in a surgical specialty recognized by the American Board of Medical Specialties, the Advisory Board for Osteopathic Specialties, the American Dental Association, the Royal College of Physicians and Surgeons of Canada or other appropriate foreign board. Many boards require a practice period. Such an individual may be included when recognition by major professional organizations has been received in their specialty. The board certification criteria apply to the general surgeons, orthopedic surgeons, and neurosurgeons.

a. Alternate criteria in lieu of board certification are as follows:

a. A Non-board certified general surgeon must have completed a surgical residency program.

b. He/she must be licensed to practice medicine.

c. Approved by the hospital's credentialing committee for surgical privileges.

d. The surgeon must meet all criteria established by the trauma director to serve on the trauma team.

e. The surgeon's experience in caring for the trauma patient must be tracked by the PI program.

b. The trauma director must attest to the surgeon's experience and quality as part of the recurring granting of trauma team privileges.

c. The trauma director using the trauma PI program is responsible for determining each general surgeon's ability to participate on the trauma team.

The surgeon is expected to serve as the captain of the resuscitating team and is expected to be in the emergency department upon arrival of the seriously injured patient to make key decisions about the management of the trauma patient's care. The surgeon will coordinate all aspects of treatment, including resuscitation, operation, critical care, recuperation and rehabilitation (as appropriate in a Level II facility) and determine if the patient needs transport to a higher lever of care. If transport is required he/she is accountable for coordination of the process with the receiving physician at the receiving facility. If the patient is to be admitted to the Level II trauma center, the surgeon is the admitting physician and will coordinate the patient care while hospitalized. Guidelines should be written at the local level to determine which types of patients should be admitted to the Level II trauma center or which patients should be considered for transfer to a higher level of care.

The general surgery liaison and emergency physician liaison must participate in a multidisciplinary trauma committee and the PI process. Peer review committee attendance must be greater than fifty percent over a year's period of time. General Surgery and Emergency physicians must be currently certified in ATLS. General surgeons and emergency physicians must demonstrate evidence of participation in the internal trauma education plan.

NOTE: ATLS requirement may take up to five years to obtain. Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements are waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

For those physicians providing emergency medicine coverage, board certification in Emergency Medicine is desirable. However, career emergency medicine physicians who are board certified in a specialty recognized by the American Board of Medical Specialties, a Canadian Board or other equivalent foreign board meets the requirements.

Alternative criteria for the non-boarded physician working in the Emergency Department are as follows:

a. He/she must be licensed to practice medicine

b. Approved by the hospital's credentialing committee for emergency medicine privileges.

c. The physician must meet all criteria established by the trauma and emergency medical director to serve on the trauma team.

d. The physician's experience in caring for the trauma patient must be tracked by the PI program.

e. The trauma and emergency medical director must attest to the physician's experience and quality as part of the recurring granting of trauma team privileges.

f. Residency in Emergency Medicine is desirable.

1416. FACILITY STANDARDS

1416.01 Emergency Department

The facility must have an emergency department, division, service, or section staffed so trauma patients are assured immediate and appropriate initial care. The emergency physician must be in-house 24 hours/day and immediately available at all times. The emergency department medical director must meet the recommended requirements related to commitment, experience, continuing education, ongoing credentialing, and board certification in emergency medicine.

The director of the emergency department, along with the trauma director, will establish trauma-specific credentials that should exceed those that are required for general hospital privileges. Examples of credentialing requirements would include skill proficiency, training requirements, conference attendance, education requirements, ATLS verification and specialty board certification.

The emergency physicians who are members of the trauma team must maintain 48 hours of trauma related CME over 3 years. Over a three-year period, at least one half (24 hours) should be obtained outside the physicians own institution. These physicians must maintain a current ATLS certification.

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

The emergency medicine physician or designee will be responsible for activating the trauma team based on predetermined response protocols. He will provide team leadership and care for the trauma patient until the arrival of the surgeon in the resuscitation area. The emergency department must have established standards and procedures to ensure immediate and appropriate care for the adult and pediatric trauma patient. The emergency department medical director, or his/her designee, must act as a

liaison and participate with the Multidisciplinary Trauma Committee and the trauma PI process.

Basic to qualification for trauma care for any physician is board certification in a specialty recognized by the American Board of Medical Specialties, the Advisory Board for Osteopathic Specialties, the Royal College of Physicians and Surgeons of Canada, or other appropriate foreign board.

Alternate criteria in lieu of board certification are as follows:

a. A non-board certified physician must have completed an approved residency program.

b. He/she must be licensed to practice medicine.

c. Approved for emergency medicine by the hospital's credentialing committee.

d. The physician must meet all criteria established by the trauma director and emergency medical director to serve on the trauma team.

e. The physician's experience in caring for the trauma patient must be tracked by the PI program.

f. The trauma director and emergency medicine director must attest to the physicians' experience and quality as part of the recurring granting of trauma team privileges.

g. Must have at least 12 months experience caring for the trauma patient tracked by the PI program.

There should be an adequate number of RN's staffed for the trauma resuscitation area in-house 24 hours/day. Emergency nurses staffing the trauma resuscitation area must be a current provider of Trauma Nurse Core Curriculum (TNCC) and participate in the ongoing PI process of the trauma program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

NOTE: ER nurses must obtain TNCC within 18 months.

There is a complete list of required equipment necessary for the ED found in Section 904.01.

1416.02 <u>Surgical Suites/Anesthesia</u>

It is recommended that the OR be staffed and available in-house 24 hours/day. If the staff is not in-house, Hospital policy must be written to assure notification and prompt response. The PI process must document and monitor the ongoing availability of OR crews and absence of delay.

The OR nurses should participate in the care of the trauma patient and be competent in the surgical stabilization of the major trauma patient.

The surgical nurses are an integral member of the trauma team and must participate in the ongoing PI process of the trauma program and must be represented on the Multidisciplinary Trauma Committee.

The OR supervisor must be able to demonstrate a prioritization scheme to assure the availability of an operating room for the emergent trauma patient during a busy operative schedule. There must be an on-call system for additional personnel for multiple patient admissions.

A complete list of required equipment necessary for the Surgery can be found in Section 904.01.

The anesthesia department in a Level II trauma center should be ideally organized and run by an anesthesiologist who is experienced and devoted to the care of the injured patient. If this is not, the director, an anesthesiologist liaison with the same qualifications should be identified. Anesthesiologists on the trauma team must have successfully completed an anesthesia residency program approved by the Accreditation Council for Graduate Medical Education, the American Board of Osteopathic Specialties, or the American Osteopathic Board and should have board certification in anesthesia. One anesthesiologist should maintain commitment to education in trauma related anesthesia. Anesthesiologists must demonstrate evidence of participation in the internal trauma education plan.

Anesthesia must be available 24 hours/day with a mechanism established to ensure notification of the on-call anesthesiologist. Anesthesia requirements may be fulfilled by anesthesia chief residents or Certified Registered Nurse Anesthetists (CRNAs) who are capable of assessing emergent situations in trauma patients and of providing an indicated treatment, including initiation of surgical anesthesia. When the CRNA or chief resident is used to meet this requirement, the staff Anesthesiologist will be advised and promptly available at all times and present for operations. Trauma centers must document conditions when the anesthesiologist must be immediately available for airway emergencies and operative management of the trauma patient. The availability of the anesthesiologist and the absence of delays in operative anesthesia must be documented and monitored by the PI process. The anesthesiologist participating on the trauma team should have the necessary educational background in the care of the trauma patient; participate in the Multidisciplinary Trauma Committee and the trauma PI process.

1416.03 Post Anesthesia Care Unit (PACU)

It is essential to have a PACU staffed 24 hours/day and available to the postoperative trauma patient. If the staff is not in-house, Hospital policy must be written to assure early notification and prompt response. The PI process must document and monitor the ongoing availability of OR crews and absence of delay. Frequently it is advantageous to bypass the PACU and directly admit to the ICU. In this instance, the ICU may meet these requirements.

PACU nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

PACU staffing should be in sufficient numbers to meet the critical needs of the trauma patient. A complete list of required equipment necessary for the PACU is found in Section 904.01.

1416.04 Intensive Care Unit

Level II trauma centers must have an Intensive Care Unit (ICU) that meets the needs of the adult trauma patient.

Surgical Director

The surgical director for the ICU – which houses trauma patients - must have obtained critical care training during residency or fellowship and must have expertise in the preoperative and post injury care of the injured patient. This is best demonstrated by a certificate of added qualification in surgical critical care from the American Board of Surgery and may also be fulfilled by documentation of active participation during the preceding 12 months in trauma patients' ICU care and ICU administration and critical care-related continuing medical education. The director is responsible for the quality of care and administration of the ICU and will set policy and establish standards of care to meet the unique needs of the trauma patient.

Physician Coverage

The trauma service assumes and maintains responsibility for the care of the multiple injured patient. A surgically directed ICU physician team is desirable. The team will provide in-house physician coverage for all ICU trauma patients at all times. This service can be staffed by appropriately trained physicians from different specialties, but must be led by a qualified surgeon as determined by critical care credentials consistent with the medical staff privileging process of the institution.

There should be physician coverage for the ICU at all times. A physician credentialed by the facility for critical care should be promptly available to the trauma patient in the ICU 24 hours/day. This coverage is for emergencies only and is not intended to replace the primary surgeon but rather is intended to ensure that the patient's immediate needs are met while the surgeon is contacted.

The trauma service should maintain the responsibility for the care of the patient as long as the patient remains critically ill. The trauma service must remain in charge of the patient and coordinate all therapeutic decisions. The responsible trauma surgeon or designee should write all orders. The trauma surgeon should maintain control over all aspects of care, including but not limited to respiratory care and management of mechanical ventilation; placement and use of pulmonary catheters; management of fluid and electrolytes, antimicrobials, and enteral and parenteral nutrition.

Nursing Personnel

Level II trauma centers must provide staffing in sufficient numbers to meet the critical needs of the trauma patient. Critical care nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing critical care education. ICU nurses are an integral part of the trauma team and

as such, should be represented on the Multidisciplinary Trauma Committee and participate in the PI process of the trauma program.

There is a complete list of necessary equipment for the ICU in Section 904.01.

1417. CLINICAL SUPPORT SERVICES

1417.01 Respiratory Therapy Service

The service should be staffed with qualified personnel in-house 24 hours/day to provide the necessary treatments for the injured patient.

1417.02 Radiological Service

A radiological service must have a certified radiological technician in-house 24 hours/day and immediately available at all times for general radiological procedures. It is desirable to have a technician in-house and immediately available for computerized tomography (CT) for both head and body. If the technician is not in-house 24 hours/day for special procedures the performance improvement process must document and monitor that the procedure is promptly available. Sonography and Angiography must be available to the trauma team. It is desirable that MRI services be available to the trauma team. Specialty procedures such as angiography and sonography may be covered with a technician on-call.

A board-certified radiologist should administer the department and participate actively in the trauma education and PI process. A staff radiologist must be promptly available, when requested, for the interpretation of radiographs, performance of complex imaging studies or interventional procedures. The radiologist must insure the preliminary interpretations are promptly reported to the trauma team and the PI program must monitor all changes in interpretation.

Written policy should exist delineating the prioritization/availability of the CT scanner for trauma patients. The PI process must endure that trauma patients are accompanied by appropriately trained licensed providers and that the appropriate resuscitation and monitoring are provided during transportation to and while in the radiology department.

The radiologist must ensure the preliminary interpretations are promptly reported to the trauma team and the PI Program must monitor all changes in interpretation.

1417.03 Clinical Laboratory Service

A clinical laboratory service must have the following services available in-house 24 hours/day:

a. Access to a blood bank and adequate storage facilities. Sufficient quantities of blood and blood products should be maintained at all times. Blood typing and cross-match capabilities must be readily available.

b. Standard analysis of blood, urine, and other body fluids including microsampling when appropriate.

c. Blood gas and pH determinations (this function may be performed by services other than the clinical laboratory service, when applicable).

d. Alcohol screening is required and drug screening is highly recommended.

e. Coagulation studies

f. Microbiology

Sufficient numbers of clinical laboratory technologists shall be in-house 24 hours/day and promptly available at all times. It is anticipated that facilities may cross-train personnel for other roles. This is acceptable as long as there is no response delay.

1417.04 Acute Hemodialysis

There must be a written transfer agreement with a facility that provides this service if this service if it is not available at the Level II trauma center.

1417.05 Burn Care

There must be a written transfer agreement to a Burn Center. Policies and procedures should be in place to assure the appropriate care is rendered during the initial resuscitation and transfer of the patient.

1417.06 Rehabilitation/Social Services:

The rehabilitation of the trauma patient and the continued support of the family members are an important part of the trauma system. Each facility will be required to address a plan for integration of rehabilitation into the acute and primary care of the trauma patient, at the earliest stage possible after admission to the trauma center. Hospitals will be required to identify a mechanism to initiate rehabilitation services and/or consultation in a timely manner as well as policies regarding coordination of the Multidisciplinary Rehabilitation Team. Policies must be in place to address the coordination of transfers between acute care facilities and approved rehabilitation facilities. There must be a written transfer agreement with a facility that provides this service if this service is not available at the Level II trauma center. Transfer agreements should include a feedback mechanism for the acute care facilities to update the health care team on the patient's progress and outcome for inclusion in the trauma registry. The rehabilitation services must minimally include Occupational Therapy, Physical Therapy, and Speech Pathology.

The nature of traumatic injury requires that the psychological needs of the patient and family are considered and addressed in the acute stages of injury and throughout the continuum of recovery. Adequate numbers of trained personnel should be readily available to the trauma patients and family. Programs must be available to meet the unique needs of the trauma patient.

1417.07 Prevention/Public Outreach

Level II trauma centers will be responsible for participating with appropriate agencies, professional groups and hospitals in their region to develop a strategic plan for public

awareness. This plan must take into consideration public awareness of the trauma system, access to the system, public support for the system, as well as specific prevention strategies. Prevention programs must be specific to the needs of the region. The trauma registry data should be utilized to identify injury trends and focus prevention needs.

Outreach is the act of providing resources to individuals and institutions that do not have the opportunities to maintain current knowledge and skills. Staff members at the Level II trauma center should provide consultation to staff members at other facilities in the region. Advanced Trauma Life Support (ATLS), Pre Hospital Trauma Life Support (PHTLS), Trauma Nurse Curriculum Course (TNCC), and Flight Nurse Advanced Trauma Course (FNATC) courses for example can be coordinated by the trauma center. Trauma physicians should provide a formal follow up to referring physicians/designee about specific patients to educate he practitioner for the benefit of further injured patients.

1417.08 Transfer Protocol

Level II trauma centers should work in collaboration with the referral trauma facilities in their region and develop interfacility transfer guidelines. These guidelines must address criteria to identify high-risk trauma patients that could benefit from a higher level of trauma care. All designated facilities will agree to provide services to the trauma victim regardless of his/her ability to pay.

When a patient in need of trauma services is transferred to a receiving facility capable of providing the needed care, from a transferring facility which cannot provide an adequate level of care, the following shall apply: When a determination is made by appropriate medical personnel of the receiving facility that a patient transferred from the transferring facility has been stabilized, no longer has an emergency medical condition or no longer requires the specialty services provided at the receiving facility, but the patient still requires further acute care, the transferring facility, with the consent of the patient and the patient's physician, agrees to readmit the transferred patient for appropriate acute care within 24 to 48 hours of such a determination. The patient's physician, the chief of the medical staff or other authorized representative of the transferring facility shall facilitate the identification of the patient's physician or his/her designee to accept the patient and transfer the patient back to the transferring facility.

Transfer protocols must be written for specialty referral centers such as pediatrics, burn or spinal cord injury when these services are not available at the trauma center. The transfer protocols must include a feedback loop so that the primary provider has a good understanding of the patient outcome. Every effort should be made to repatriate the trauma patient to his/her local community hospital or provider hospital if appropriate.

1417.09 Performance Improvement/Evaluation

A key element in trauma system planning is evaluation. All licensed hospitals which have organized emergency services or departments will be required to participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since these data relate to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential as provided in Miss. Code Ann.§41-59-77. Level II

trauma facilities may be responsible for direct assistance to all other levels of referring facilities in providing data for inclusion in the registry.

Each trauma center must develop an internal Performance Improvement plan that minimally addresses the following key components and is fully integrated into the hospital wide program:

a. An organizational structure that facilitates performance improvement (Multidisciplinary Trauma Committee).

b. Clearly defined authority and accountability for the program.

c. Clearly stated goals and objectives one of which should be reduction of inappropriate variations in care.

d. Development of expectations (criteria) from evidenced based guidelines, pathways and protocols. These should be appropriate, objectively defined standards to determine quality of care.

e. Explicit definitions of outcomes derived from institutional standards

f. Documentation system to monitor performance, corrective action and the result of the actions taken.

g. A process to delineate privileges credentialing all trauma service physicians.

h. An informed peer review process utilizing a multidisciplinary method.

i. A method for comparing patient outcomes with computed survival probability.

j. Autopsy information on all deaths when available.

k. Review of prehospital care.

l. Review of times and reasons for trauma bypass.

m. Review of times and reasons for trauma transfers.

n. Audit all trauma deaths.

o. Morbidity and Mortality review.

Representatives from the Level II trauma center shall participate in the Regional Trauma Advisory Councils and the statewide performance improvement process.

1417.10 <u>Trauma Registry</u>

All licensed hospitals which have organized emergency services or departments must participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since this data relates to specific trauma patients and are used to evaluate and improve the

quality of health care services, this data is confidential and will be governed by the Miss. Code Ann.§41-59-77.

Compliance with the above will be evidenced by:

a. Documentation of utilization of the Trauma Registry data in the trauma performance improvement process

b. Timely submission of Trauma Registry Data to the Bureau of EMS and the appropriate Region at least monthly.

1417.11 Education

Level II trauma centers must have medical education programs including educational training in trauma for physicians, nurses and prehospital providers. The Level II trauma centers assist and cooperate with the Level I trauma center in providing educational activities. Education may be accomplished via many mechanisms (i.e. classic CME, preceptorships, fellowships, clinical rotations, telecommunications or providing locum tenens, etc.)

904.01 Essential and Desirable Chart for Level II Trauma Centers

		Level II
1	Institutional Organization	
2	Trauma Program	E
3	Trauma Service	E
4	Trauma Team	E
5	Trauma Program Medical Director	E
6	Trauma Multidisciplinary Committee	E
7	Trauma Program Manager	E
8	Hospital Departments/Divisions/Sections	
9	Surgery	E
10	Neurological Surgery	E
11	Neurosurgical Trauma Liaison	E
12	Orthopaedic Surgery	E
13	Orthopaedic Trauma Liaison	E
14	Emergency Medicine	E
15	Anesthesia	E
16	Clinical Capabilities	
17	(Specialty Immediately Available 24 hours/day)	
18	Published on-call schedule	E
19	General Surgery	E
20	Published back-up schedule	E
21	Dedicated to single hospital when on-call	D
22	Anesthesia	E
23	Emergency Medicine	E
24	On-call and promptly available 24 hours/day	

25	Cardiac Surgery	D
26	Hand Surgery	D
27	Microvascular/replant Surgery	D
28	Neurological Surgery	E
29	Dedicated to one hospital or back-up call	E*(11)
30	Obstetrics/Gynecologic Surgery	D
31	Ophthalmic Surgery	D
32	Oral/Maxillofacial Surgery	D
33	Orthopaedic Surgery	E
34	Plastic Surgery	D
35	Critical Care Medicine	D
36	Radiology	D
37	Thoracic Surgery	D
38	Clinical Qualifications	
39	General/Trauma Surgeon:	
40	Current Board Certification	E *(1)
41	16 Hours CME/Year (7)	E
42	ATLS Completion *(2) (10)	E
43	Peer Review Committee liaison Attendance ≥ 50%	E
44	Multidisciplinary Committee liaison Attendance	E
45	Emergency Medicine:	
46	Board Certification	E *(6)
47	16 Hours CME/Year (7)	E
48	ATLS Completion *(2) (10)	E
49	Peer Review Committee liaison Attendance ≥ 50%	E
50	Multidisciplinary Committee liaison Attendance	E
51	Neurosurgery:	
52	Current Board Certification	E
53	16 Hours CME/Year (7)	E
54	ATLS Completion *(2) (10)	D
55	Peer Review Committee liaison Attendance ≥ 50%	E
56	Multidisciplinary Committee liaison Attendance	E
57	Orthopaedic Surgery:	
58	Current Board Certification	E
59	16 Hours CME In Trauma/Year (7)	E
60	ATLS Completion *(2) (10)	D
61	Peer Review Committee liaison Attendance ≥ 50%	E
62	Multidisciplinary Committee liaison	E

	Attendance	
63	Facilities/Resources/Capabilities	
64	Volume Performance	
65	Trauma Admissions: 1,200/year	--
66	Patients with ISS > 15 (240 total or 35 patients/surgeon)	--
67	Presence of Surgeon at resuscitation	E
68	Presence of Surgeon at Operative Procedures	E
69	Emergency Department	
70	Personnel	
71	Designated physician director	E
72	RN in-house and available	E *(4)
73	Equipment for Resuscitation for Patients of all ages	
74	Airway control and ventilation equipment	E
75	Pulse Oximetry	E
76	Suction Devices	E
77	Electrocardiograph-Oscilloscope-Defibrillator	E
78	Internal Paddles	E
79	CVP Monitoring Equipment	E
80	Standard IV Fluids and Administration Sets	E
81	Large bore intravenous catheters	E
82	Sterile Surgical Sets for:	
83	Airway control/cricothyrotomy	E
84	Thoracostomy	E
85	Venous cut-down	E
86	Central line insertion	E
87	Thoracotomy	E
88	Peritoneal lavage	E
89	Arterial catheters	D
90	Ultrasound	D
91	Drugs necessary for emergency care	E *(5)
92	X Ray availability 24 hours/day	E
93	Cervical spine stabilization devices	E
94	Broselow tape	E
95	Thermal control equipment:	
96	For Patient	E
97	For fluids and blood	E
98	Rapid Infuser system	E *(8)
99	Qualitative end-tidal CO2 determination	E
100	Communication with EMS vehicles	E
101	Operating Room	
102	Immediately available 24 hours/day	D

103	Personnel	
104	In-house 24 hours/day	D
105	Available 24 hours/day	E
106	Age-specific equipment	
107	Cardiopulmonary bypass	D
108	Operating microscope	D
109	Thermal control equipment	
110	For patient	E
111	For blood/fluids	E
112	X Ray capability, including c-arm image intensifier	E
113	Endoscopes, bronchoscope	E
114	Craniotomy instruments	E
115	Equipment for long bone and pelvic fixation	E
116	Rapid infuser system	E *(9)
117	Pulse oximetry	E
118	Qualitative end-tidal CO2 determination	E
119	Postanesthetic Recovery Room (SICU acceptable)	
120	Registered nurses available 24 hours/day	E
121	Equipment for monitoring and resuscitation	E
122	Intercranial pressure monitoring equipment	E
123	Pulse oximetry	E
124	Thermal control	E
125	Intensive or Critical Care Unit for Injured Patients	
126	Registered nurses with trauma education	E *(9)
127	Designated surgical director or surgical co-director	E
128	Surgical ICU service physician in-house 24 hours/day	D
129	Surgically directed and staffed ICU service	D
130	Equipment for monitoring and resuscitation	E
131	Intracranial monitoring equipment	E
132	Pulmonary artery monitoring equipment	E
133	Respiratory Therapy Services	
134	Available in-house 24 hours/day	E
135	On call 24 hours/day	--
136	Radiological Services (Available 24 hours/day)	
137	In-house radiology technologist	E
138	Angiography	E
139	Sonography	E
140	Computed Tomography	E
141	In-house CT technician	D
142	Magnetic resonance imaging	D

143	Clinical Laboratory Services (Available 24 hours/day)	
144	Standard analysis of blood, urine and other body fluids, including microsampling when appropriate	E
145	Blood typing and cross-matching	E
146	Coagulation studies	E
147	Comprehensive blood bank or access to a community central blood bank and adequate storage facilities	E
148	Blood gases and pH determinations	E
149	Microbiology	E
150	Acute Hemodialysis	
151	In-house	E
152	Transfer agreement	E
153	Burn Care - Organized	
154	In-house or transfer agreement with Burn Center	E
155	Rehabilitation Services	
156	Transfer agreement to an approved rehab facility	E
157	Physical Therapy	E
158	Occupational Therapy	E
159	Speech Therapy	E
160	Social Services	E
161	Performance Improvement	
162	Performance improvement programs	E
163	Trauma Registry	
164	In-house	E
165	Participation in state, local, or regional registry	E
166	Orthopaedic database	D
167	Audit of all trauma deaths	E
168	Morbidity and mortality review	E
169	Multidisciplinary trauma committee	E
170		
171	Review of prehospital trauma care	E
172	Review of times/reasons for trauma-related bypass	E
173	Review of times/reasons for transfer of injured patients	E
174		
	Participate in regional review of prehospital trauma care,	

175	times/reasons for trauma-related bypass, times/treasons for transfer of injured patient	E
176	PI process established to monitor response times for all on-call personnel	E
194	Trauma registry PI activities	E
177	Continuing Education/Outreach	
177	General surgery residency program	D
178	ATLS provide/participate	D
179	Programs provided by hospital for:	
180	Staff/Community physicians (CME)	E
181	Nurses	E
182	Allied health personnel	E
183	Prehospital personnel provision/participation	E
184	Prevention	
185	Injury control studies	D
186	Collaboration with other institutions	D
187	Monitor progress/effect of prevention programs	D
188	Designated prevention coordinator/spokesperson	E
189	Outreach activities	E
190	Information resources for public	E
191	Collaboration with existing programs	E
192	Coordination and/or participation in community prevention activities	E
193	Research	
195	Research committee	D
196	Identifiable IRB process	D
197	Extramural education presentations	D
199	Number of scientific publications	D

200	* (1) Mississippi standards will require at least one general surgeon to be board certified. Alternated criteria may be substituted for other staff.
201	* (2) Mississippi standards will require a current ATLS completion card. Physicians have up to one (1) year after hiring to obtain ATLS certification.
202	* (3) Some mechanisms for “grandfathering” in non-board certified neurosurgeons and orthopedic surgeons will be developed by hospital policy.
203	* (4) The RN in-house and available in the ED must be a current provider of TNCC.
204	* (5) Drugs necessary for emergency care will be defined by the prehospital drug list set forth by the Bureau of Emergency Medical Services.
205	* (6) Board certified or alternative criteria as established by hospital policy.
206	* (7) Can be accompanied with 48 hours of trauma education over three (3) years.

207	* (8) Simple pressure bag.
208	* (9) Ongoing critical care education bi-annually.
209	*(10) ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.
210	*(11) If neurosurgery is not dedicated to one hospital while on-call a published back-up call schedule must be available.

Chapter 10 LEVEL III TRAUMA CENTERS

It is important to incorporate all facilities in trauma planning. A Level III trauma center is an acute care facility with the commitment, medical staff, personnel and specialty training necessary to provide initial resuscitation of the trauma patient. Generally, a Level III trauma center is expected to provide initial resuscitation of the trauma patient and immediate operative intervention to control hemorrhage and to assure maximal stabilization prior to referral to a higher level of care. In many instances, patients will remain in the Level III trauma center unless the medical needs of the patient require secondary transfer. The decision to transfer a patient rests with the physician attending the trauma patient. All Level III trauma centers will work collaboratively with other trauma facilities to develop transfer protocols and a well-defined transfer sequence.

1418 HOSPITAL ORGANIZATION

1418.01 Trauma Program

There must be a written commitment on behalf of the entire facility to the organization of trauma care. The written commitment shall be in the form of a resolution passed by an appropriate quorum of the members of the governing authority. Should the business organization be other than a corporation, a letter explaining such together with a written commitment of the hospital's chief executive officer to the establishment of a trauma care program may be sufficient. The trauma program must be established and recognized by the medical staff and hospital administration. The trauma program must come under the direction of a board-certified surgeon with special interest in trauma care. An administrative structure should ideally include an administrator, medical director, trauma program manager, trauma registrar and other appropriate staff. At minimum, an identified hospital administrative leader should work closely with the trauma medical director to establish and maintain the components of the trauma program including appropriate financial support. The trauma program location in the organizational structure of the hospital should be placed so that it may interact effectively with at least equal authority with other departments providing patient care. The trauma program should be multidisciplinary in nature and the performance improvement evaluation of this care must extend to all the involved departments.

Compliance with the above will be evidenced by but not limited to:

1. Governing authority and medical staff letter of commitment in the form of a resolution

2. Written policies and procedures and guidelines for care of the trauma patient

3. Defined trauma team and written roles and responsibilities

4. Appointed Trauma Medical Director with a written job description

5. Appointed Trauma Program Manager with a written job description

6. A written Trauma Performance Improvement plan

7. Documentation of trauma center representative attendance at the regional trauma advisory committee meetings

1418.02 Trauma Service

A trauma service is an organized structure of care for the patient. The Trauma Service must be established and recognized by the medical staff. The service includes personnel and resources necessary to ensure the appropriate efficient care delivery. The composition of the service will vary depending on the nature of the medical center, available resources and personnel and patient clinical need. The trauma service must come under the organization and direction of a surgeon who is board certified with special interest in trauma care. All patients with multiple system trauma or major injury must be evaluated by the trauma service. Injured patients may be admitted to individual surgeons.

1418.03 Trauma Team

The team approach is optimal in the care of the multiple injured patients. There must be identified members of the trauma team. Policies should be in place describing the roles of all personnel on the trauma team. The composition of the trauma team in any hospital will depend on the characteristics of that hospital and its resources. In some instances, a tiered response may be appropriate. If a tiered response is employed written policy must be in place and the system monitored by the PI process. The team leader must be a qualified general surgeon. All physicians on the trauma team responsible for directing any phase of the resuscitation (emergency physician and general surgeons) must be currently certified in ATLS.

Suggested composition of the trauma team for severely injured patients may include:

a. Physicians

b. Specialists

c. Laboratory Technicians as dictated by clinical needs

d. Nursing: ED, OR, ICU, etc.

e. Auxiliary Support Staff

f. Respiratory Therapists

g. Security Officers

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

1418.04 Medical Director

Level III Trauma Centers must have a physician director of the trauma program. The medical director plays an important administrative role. The medical director must be a board-certified surgeon with special interest in trauma care. The medical director will be responsible for developing a performance improvement process and, through this process, will have overall accountability for all trauma patients and administrative authority for the hospital's trauma program. The medical director must be given administrative support to implement the requirements specified by the State trauma plan. The director is responsible for working with the credentialing process of the hospital and, in consultation with the appropriate service chiefs, recommending appointment and removal of physicians from the trauma team. He should cooperate with nursing administration to support the nursing needs of the trauma patient and develop treatment protocols for the trauma patients. The director in collaboration with the Trauma Program Manager/TPM should coordinate the budgetary process for the trauma program

The director must be currently certified by the American College of Surgeons Advanced Trauma Life Support (ATLS), maintain personal involvement in care of the injured, maintain education in trauma care, and maintain involvement in professional organizations. The trauma director, or his designee, must be actively involved with the trauma system development at the community, regional and state level.

1418.05 Multidisciplinary Trauma Committee

The purpose of the committee is to provide oversight and leadership to the entire trauma program. The exact format will be hospital specific and may be accomplished by collaboration with another designated trauma center in the region. The major focus will be on PI activities, policy development, communication among all team members, development of standards of care, education and outreach programs, and injury prevention. The committee has administrative and systematic control and oversees the implementation of the process which includes all program related services, meets regularly, takes attendance, maintains minutes and works to correct overall program deficiencies to optimize patient care. Suggested membership for the committee includes representatives (if available in the community) from:

a. Administration

b. Orthopedics

c. Anesthesia

d. Pediatrics

e. Emergency Department

f. Prehospital Care Providers

g. General Surgery

h. Radiology

i. Intensive Care

j. Rehabilitation

k. Laboratory

l. Respiratory Therapy

m. Nursing

n. Trauma Program Manager/TPM

o. Operating Room

The clinical managers (or designees) of the departments involved with trauma care should play an active role with the committee.

The trauma center may wish to accomplish performance improvement activities in this committee or develop a separate peer review committee. This committee should handle peer review independent from department based review. The committee must meet regularly and maintain attendance and minutes. This committee must report findings to the overall hospital performance improvement program.

1418.06 Trauma Program Manager/TPM

Level III trauma centers must have a registered nurse working in the role of Trauma Program Manager/TPM. Working in conjunction with the medical director, the Trauma Program Manager/TPM is responsible for organization of the program and all systems necessary for the multidisciplinary approach throughout the continuum of trauma care. The Trauma Program Manager/TPM is responsible for working with the trauma team to assure optimal patient care. There are many requirements for data coordination and performance improvement, education and prevention activities incumbent upon this position.

The Trauma Program Manager/TPM or his/hers designee should offer or coordinate services for trauma education. The Trauma Program Manager/TPM should liaison with local EMS personnel, the Department, Regional Trauma Advisory Committee and other trauma centers.

1000.07 Hospital Departments, Divisions, Sections

The Level III trauma center must have the following departments, divisions or sections:

a. General Surgery

b. Orthopedic Surgery

c. Emergency Medicine

d. Anesthesia

1419. CLINICAL CAPABILITIES

Level III trauma centers must have published on-call schedules and have the following medical specialists immediately available 24 hours/day to the injured patient:

a. Trauma/General Surgery

Note: It is desirable that a back up surgeon schedule is published. It is desirable that the surgeon on-call is dedicated to the trauma center and not on-call to any other hospital while on trauma call. A system should be developed to assure notification of the on-call surgeon and compliance with these criteria and their appropriateness must be documented and monitored by the PI process.

b. Anesthesia

Note: Anesthesia must be promptly available with a mechanism established to ensure early notification of the on-call anesthesiologist. Anesthesia must be available 24 hours/day. Anesthesia chief residents or Certified Nurse Anesthetist (CRNAs) may fill this requirement. When residents or CRNAs are utilized, the staff anesthesiologist on-call will be advised, promptly available, and present for all operations. Hospital policy must be established to determine when the anesthesiologist must be immediately available for airway control and assisting with resuscitation. The availability of the anesthesiologist and the absence of delays in airway control or operative anesthesia must be documented and monitored by the PI process.

c. Emergency Medicine (in-house 24 hours/day)

The following specialist must be on-call and promptly available:

d. Orthopedic Surgery

e. Radiology

It is desirable (although not required) to have the following specialist available to a Level III trauma center:

f. Hand Surgery

g. Obstetrics/Gynecology Surgery

h. Ophthalmic Surgery

i. Oral/Maxillofacial Surgery

j. Plastic Surgery

k. Critical Care Medicine

l. Thoracic Surgery

The staff specialist on-call will be notified at the discretion of the trauma surgeon and will be promptly available. The PI program will continuously monitor this availability.

Policies and procedures should exist to notify the patient's primary physician of the patient's condition at an appropriate time.

1419.02 Qualifications of Physicians on the Trauma Team

Basic to qualification for trauma care for any surgeon is Board Certification in a surgical specialty recognized by the American Board of Medical Specialties, the Advisory Board for Osteopathic Specialties, the American Dental Association, the Royal College of Physicians and Surgeons of Canada, or other appropriate foreign board. Many boards require a practice period. Such an individual may be included when recognition by major professional organizations has been received in their specialty. The board certification criteria apply to the general surgeons, orthopedic surgeons, and neurosurgeons.

1. Alternate criteria in lieu of board certification are as follows:

a. Non-board certified general surgeon must have completed a surgical residency program.

b. He/she must be licensed to practice medicine.

c. Approved by the hospital's credentialing committee for surgical privileges.

d. The surgeon must meet all criteria established by the trauma director to serve on the trauma team.

e. The surgeon's experience in caring for the trauma patient must be tracked by the PI program.

2. The trauma director must attest to the surgeons' experience and quality as part of the recurring granting of trauma team privileges.

3. The trauma director, using the trauma PI program is responsible for determining each general surgeon’s ability to participate on the trauma team.

The surgeon is expected to serve as the captain of the resuscitating team and is expected to be in the emergency department upon arrival of the seriously injured patient to make key decisions about the management of the trauma patient's care. The surgeon will coordinate all aspects of treatment, including resuscitation, operation, critical care, recuperation and rehabilitation (as appropriate in a Level III facility) and determine if the patient needs transport to a higher lever of care. If transport is required he/she is accountable for coordination of the process with the receiving physician at the receiving facility. If the patient is to be admitted to the Level III trauma center, the surgeon is the admitting physician and will coordinate the patient care while hospitalized. Guidelines should be written at the local level to determine which types of patients should be admitted to the Level III trauma center or which patients should be considered for transfer to a higher level of care.

The general surgeons and emergency physicians must participate in a multidisciplinary trauma committee and the PI process. Peer review committee attendance must be greater than fifty percent over a year's period of time. These physicians must be

currently certified in ATLS, and it is desirable that they be involved in at least forty eight (48) hours of trauma related continuing education (CME) every 3 years.

NOTE: Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements are waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

For those physicians providing emergency medicine coverage, board certification in Emergency Medicine is desirable. However, career emergency medicine physicians who are board certified in a specialty recognized by the American Board of Medical Specialties, a Canadian Board or other equivalent foreign board meets the requirements.

Alternative criteria for the non-boarded physician working in the Emergency Department are as follows:

a. He/she must be licensed to practice medicine

b. Approved by the hospital's credentialing committee for emergency medicine privileges.

c. The physician must meet all criteria established by the trauma and emergency medical director to serve on the trauma team.

d. The physician's experience in caring for the trauma patient must be tracked by the PI program.

e. The trauma and emergency medical director must attest to the physician's experience and quality as part of the recurring granting of trauma team privileges.

f. Residency in Emergency Medicine is desirable.

1420. FACILITY STANDARDS

1420.01 Emergency Department

The facility must have an emergency department, division, service or section staffed so those trauma patients are assured immediate and appropriate initial care. The emergency physician must be in-house 24 hours/day, immediately available at all times, and capable of evaluating trauma patients and providing initial resuscitation. The emergency medicine physician will provide team leadership and care for the trauma patient until the arrival of the surgeon in the resuscitation area. The emergency department must have established standards and procedures to ensure immediate and appropriate care for the adult and pediatric trauma patient. The medical director for the department, or his designee, must participate with the Multidisciplinary Trauma Committee and the trauma PI process.

The director of the emergency department, along with the trauma director, may establish trauma-specific credentials that should exceed those that are required for general hospital privileges. (i.e. ATLS verification)

There should be an adequate number of RN's staffed for the trauma resuscitation area in-house 24 hours/day. Emergency nurses staffing the trauma resuscitation area must be a current provider of TNCC and participate in the ongoing PI process of the trauma program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

NOTE: ER nurses must obtain TNCC within 18 months.

There is a complete list of required equipment necessary for the ED found in Section 1004.01.

1420.02 Surgical Suites

The surgical team must be on-call with a well-defined mechanism for notification to expedite transfer to the operating room if the patient's condition warrants. The process should be monitored by trauma PI program.

The OR nurses should participate in the care of the trauma patient and be competent in the surgical stabilization of the major trauma patient.

The surgical nurses are integral members of the trauma team and must participate in the ongoing PI process of the trauma program and must be represented on the Multidisciplinary Trauma Committee.

The OR supervisor must be able to demonstrate a prioritization scheme to assure the availability of an operating room for the emergent trauma patient during a busy operative schedule.

There is a complete list of necessary equipment for the surgical suites found in Section 1004.01.

Anesthesia must be promptly available with a mechanism established to ensure notification of the on-call anesthesiologist. The Level III trauma center must document conditions when the anesthesiologist must be immediately available for airway emergencies and operative management of the trauma patient.

Anesthesiologists on the trauma team must have successfully completed an anesthesia residency program approved by the Accreditation Council for Graduate Medical Education, the American Board of Osteopathic Specialties, or the American Osteopathic Board and should have board certification in anesthesia.

Anesthesia requirements may be fulfilled by Certified Registered Nurse Anesthetists (CRNAs) and/or anesthesia residents who are capable of assessing emergent situations in trauma patients and of providing an indicated treatment, including initiation of surgical anesthesia. When the CRNA is used to meet this requirement, the staff Anesthesiologist will be advised and promptly available at all times and present for operations. Trauma centers must document conditions when the anesthesiologist must be immediately available for airway emergencies and operative management of the trauma patient. The availability of the anesthesiologist and the absence of delays in operative anesthesia must be documented and monitored by the PI process. The anesthesiologist participating on the trauma team should have the necessary educational

background in the care of the trauma patient; participate in the Multidisciplinary Trauma Committee and the trauma PI process.

1420.03 Post Anesthesia Care Unit (PACU)

A Level III trauma center must have a PACU available 24 hours/day to the postoperative trauma patient. Hospital policy must be written to assure early notification and prompt response. Frequently, it is advantageous to bypass the PACU and directly admit to the ICU. In this instance, the ICU may meet these requirements.

PACU nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing critical care education. PACU staffing should be in sufficient numbers to meet the critical need of the trauma patient.

There is a complete list of necessary equipment for the PACU in Section 1004.01.

1420.04 Intensive Care Unit

1. Surgical Director/Physician Coverage

The ICU must have a surgical director or surgical co-director who is responsible to set policy and administration and establish standards of care to meet the unique needs of the trauma patient. He/she is responsible for the quality of care and administration of the ICU. The trauma medical director must work to assure trauma patients admitted to the ICU will be admitted under the care of a general surgeon or appropriate surgical subspecialists. In addition to overall responsibility for patient care by the primary surgeon, it is desirable to have in-house physician coverage for the ICU at all times. This may be provided by a hospitalist or emergency physician.

2. Nursing Personnel

Level III trauma center should provide staffing in sufficient numbers to meet the needs of the trauma patient. There must be a written plan ensuring nurses maintain ongoing critical care education. ICU nurses are an integral part of the trauma team and as such, should be represented on the Multidisciplinary Trauma Committee and participate in the PI process of the trauma program.

ICU nurses must show evidence of completion of a structured in-service program. There must be a written plan ensuring nurses maintain ongoing trauma specific education.

There is a complete list of necessary equipment for the ICU in Section 1004.01.

1421. CLINICAL SUPPORT SERVICES

1421.01 Respiratory Therapy Service

The service must be staffed with qualified personnel on-call 24 hours/day to provide the necessary treatments for the injured patient.

1421.02 Radiological Services

A board-certified radiologist should administer the department and participate actively in the trauma PI process. The radiologist is a key member of the trauma team and should be represented on the Multidisciplinary Trauma Committee. A certified radiological technician must be available in-house 24 hours/day to meet the immediate needs of the trauma patient for general radiological procedures. Sonography should be available to the trauma team. If the radiology technician and the specialty technician are on-call from home, a mechanism must be in place to assure the technicians are available. The performance improvement process must verify that radiological services are promptly available. Written policy should exist delineating the prioritization/availability of the CT scanner for trauma patients. The use of teleradiology is acceptable. It is anticipated that facilities may cross-train personnel for other roles. This is acceptable as long as there is no response delay.

The PI process must ensure that trauma patients are accompanied by appropriately trained licensed providers and that the appropriate resuscitation and monitoring are provided during transportation to and while in the radiology department.

The radiologist must ensure the preliminary interpretations are promptly reported to the trauma team and the PI Program must monitor all changes in interpretation.

1421.03 Clinical Laboratory Services

The clinical laboratory service shall have the following services available in-house 24 hours/day:

a. Access to a community central blood bank and adequate storage facilities. Sufficient quantities of blood and blood products should be maintained at all times. Blood typing and cross-match capabilities must be readily available.

b. Standard analysis of blood, urine, and other body fluids includes microsampling when appropriate.

c. Blood gas and Ph determinations (this function may be performed by services other than the clinical laboratory service, when applicable).

d. Alcohol screening is required and drug screening is highly recommended.

e. Coagulation studies.

f. Microbiology

Sufficient numbers of clinical laboratory technologists shall be in-house 24 hours/day and promptly available at all times. It is anticipated that facilities may cross-train personnel for other roles. This is acceptable as long as there is no response delay.

1421.04 Acute Hemodialysis

There must be a written transfer agreement with a facility that provides this service if this service if it is not available at the Level III trauma center.

1421.05 Burn Care

There must be a written transfer agreement to a Burn Center. Policies and procedures should be in place to assure the appropriate care is rendered during the initial resuscitation and transfer of the patient.

1421.06 Rehabilitation/Social Services

The rehabilitation of the trauma patient and the continued support of the family members are important parts of the trauma system. Each facility will be required to address a plan for integration of rehabilitation into the acute and primary care of the trauma patient at the earliest stage possible after admission to the trauma center. Level III hospitals will be required to identify a mechanism to initiate rehabilitation services and/or consultation in a timely manner, as well as to develop policies regarding coordination of the Multidisciplinary Rehabilitation Team. Policies must be in place to address the coordination of transfers between acute care facilities and approved rehabilitation facilities. There must be a written transfer agreement with a facility that provides this service if this service is not available at the Level III trauma center. Transfer agreements should include a feedback mechanism for the Rehab/Skilled Nursing facilities to update the health care team on the patient's progress and outcome for inclusion in the trauma registry. The rehabilitation services must include Physical Therapy and Social Service. It is desirable to have Occupational and Speech Therapy.

The nature of traumatic injury requires that the psychological needs of the patient and family are considered and addressed in the acute stages of injury and throughout recovery. A Level III trauma center may utilize community resources as appropriate to meet the needs of the trauma patient.

1421.07 Prevention/Public Outreach

Level III trauma centers must work cooperatively with referral facilities to develop and implement an outreach program for trauma care in the region. The Level III trauma center will work to plan, facilitate and provide professional education programs for the prehospital care providers, nurses and physicians, from referral facilities in their region. Prevention programs should be specific to the needs of the region. The trauma registry data should be utilized to identify injury trends and focus prevention needs.

Outreach is the act of providing resources to individuals and institutions that do not have the opportunities to maintain current knowledge and skills.

The Level III trauma center is responsible for working with the other centers to develop education and prevention programs for the public and professional staff. The plan must include implementation strategies to assure information dissemination to all residents in the region.

1421.08 Transfer Protocols

The Level III trauma center will have transfer protocols in place with Level I and Level II trauma centers, as well as all specialty referral centers (such as burn, pediatrics, spinal cord injury and rehabilitation) when these services are not available at the trauma center. Level III trauma centers should work in collaboration with the referral trauma

facilities in their region and develop interfacility transfer guidelines. These guidelines must address criteria to identify high-risk trauma patients that could benefit from a higher level of trauma care. All designated facilities will agree to provide services to the trauma victim regardless of his/her ability to pay.

When a patient in need of trauma services is transferred to a receiving facility capable of providing the needed care, from a transferring facility which cannot provide an adequate level of care, the following shall apply: When a determination is made by appropriate medical personnel of the receiving facility that a patient transferred from the transferring facility has been stabilized, no longer has an emergency medical condition or no longer requires the specialty services provided at the receiving facility, but the patient still requires further acute care, the transferring facility, with the consent of the patient and the patient's physician, agrees to readmit the transferred patient for appropriate acute care within 24 to 48 hours of such a determination. The patient's physician, the chief of the medical staff or other authorized representative of the transferring facility shall facilitate the identification of the patient's physician or his/her designee to accept the patient and transfer the patient back to the transferring facility.

Additionally, transfer protocols must be written with all referral facilities in the immediate service area. All facilities will work together to develop transfer guidelines indicating which patients should be considered for transfer and procedures to assure the most expedient, safe transfer of the patient. The transfer protocols must include a feedback loop so the primary provider has a good understanding of patient outcome and assures this information becomes part of the trauma registry. Every effort should be made to repatriate the trauma patient to his/her local community hospital or provider hospital as appropriate.

1421.09 <u>Performance Improvement/Evaluation</u>

A key element in trauma system planning is evaluation. All licensed hospitals which have organized emergency services or departments will be required to participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since these data relate to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential as provided in Miss. Code Ann.§41-59-77. Level I and II trauma facilities may be responsible for direct assistance to Level III, referring facilities in providing data for inclusion in the registry.

Each trauma center must develop an internal Performance Improvement plan that minimally addresses the following key components:

a. An organizational structure that facilitates performance improvement (Multidisciplinary Trauma Committee).

b. Clearly defined authority and accountability for the program.

c. Clearly stated goals and objectives one of which should be reduction of inappropriate variations in care.

d. Development of expectations (criteria) from evidenced based guidelines, pathways and protocols. These should be appropriate, objectively defined standards to determine quality of care.

e. Explicit definitions of outcomes derived from institutional standards.

f. Documentation system to monitor performance, corrective action and the result of the actions taken.

g. A process to delineate privileges credentialing all trauma service physicians.

h. An informed peer review process utilizing a multidisciplinary method.

i. A method for comparing patient outcomes with computed survival probability.

j. Autopsy information on all deaths when available.

k. Review of prehospital care.

l. Review of times and reasons for trauma bypass.

m. Review of times and reasons for trauma transfers.

n. Audit of all trauma deaths.

o. Morbidity and Mortality review.

Representatives from the Level III trauma center shall participate in the RTACs and the statewide performance review process.

1421.10 <u>Trauma Registry</u>

All licensed hospitals which have organized emergency services or departments must participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since this data relates to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential and will be governed by the Miss. Code Ann.§41-59-77.

Compliance with the above will be evidenced by:

a. Documentation of utilization of the Trauma Registry data in the trauma performance improvement process

b. Timely submission of Trauma Registry Data to the Bureau of EMS and the appropriate Region at least monthly.

1004.01 Essentials and Desirables for Level III Trauma Centers

		Level III
1	Institutional Organization	
2	Trauma Program	E
3	Trauma Service	E
4	Trauma Team	E
5	Trauma Program Medical Director	E
6	Trauma Multidisciplinary Committee	E
7	Trauma Program Manager	E
8	Hospital Departments/Divisions/Sections	
9	Surgery	E
10	Neurological Surgery	--
11	Neurosurgical Trauma Liaison	--
12	Orthopaedic Surgery	D
13	Orthopaedic Trauma Liaison	D
14	Emergency Medicine	E
15	Anesthesia	E
16	Clinical Capabilities	
17	(Specialty Immediately Available 24 hours/day)	
18	Published on-call schedule	E
19	General Surgery	E
20	Published back-up schedule	D
21	Dedicated to single hospital when on-call	D
22	Anesthesia	E
23	Emergency Medicine	E
24	On-call and promptly available 24 hours/day	
25	Cardiac Surgery	--
26	Hand Surgery	D
27	Microvascular/replant Surgery	--
28	Neurological Surgery	---
29	Dedicated to one hospital or back-up call	--
30	Obstetrics/Gynecologic Surgery	D
31	Ophthalmic Surgery	D
32	Oral/Maxillofacial Surgery	D
33	Orthopaedic Surgery	E
34	Plastic Surgery	D
35	Critical Care Medicine	D
36	Radiology	E
37	Thoracic Surgery	D
38	Clinical Qualifications	
39	General/Trauma Surgeon:	
40	Current Board Certification	E *(1)
41	16 Hours CME/Year (7)	D
42	ATLS Completion *(2) (10)	E

43	Peer Review Committee liaison Attendance ≥ 50%	E
44	Multidisciplinary Committee liaison Attendance	E
45	Emergency Medicine:	
46	Board Certification	E *(6)
47	16 Hours CME/Year (7)	D
48	ATLS Completion *(2) (10)	E
49	Peer Review Committee liaison Attendance ≥ 50%	E
50	Multidisciplinary Committee liaison Attendance	E
51	Neurosurgery:	
52	Current Board Certification	--
53	16 Hours CME/Year (7)	--
54	ATLS Completion *(2) (10)	--
55	Peer Review Committee liaison Attendance ≥ 50%	--
56	Multidisciplinary Committee liaison Attendance	--
57	Orthopaedic Surgery:	
58	Current Board Certification	E
59	16 Hours CME In Trauma/Year (7)	D
60	ATLS Completion *(2) (10)	D
61	Peer Review Committee liaison Attendance ≥ 50%	E
62	Multidisciplinary Committee liaison Attendance	E
63	Facilities/Resources/Capabilities	
64	Volume Performance	
65	Trauma Admissions: 1,200/year	--
66	Patients with ISS > 15 (240 total or 35 patients/surgeon)	--
67	Presence of Surgeon at resuscitation	E
68	Presence of Surgeon at Operative Procedures	E
69	Emergency Department	
70	Personnel	
71	Designated physician director	E
72	RN in-house and available	E *(4)
73	Equipment for Resuscitation for Patients of all ages	
74	Airway control and ventilation equipment	E
75	Pulse Oximetry	E

76	Suction Devices	E
77	Electrocardiograph-Oscilloscope-Defibrillator	E
78	Internal Paddles	E
79	CVP Monitoring Equipment	E
80	Standard IV Fluids and Administration Sets	E
81	Large bore intravenous catheters	E
82	Sterile Surgical Sets for:	
83	Airway control/cricothyrotomy	E
84	Thoracostomy	E
85	Venous cut-down	E
86	Central line insertion	E
87	Thoracotomy	E
88	Peritoneal lavage	E
89	Arterial catheters	D
90	Ultrasound	D
91	Drugs necessary for emergency care *(5)	E
92	X Ray availability 24 hours/day	E
93	Cervical spine stabilization devices	E
94	Broselow tape	E
95	Thermal control equipment:	
96	For Patient	E
97	For fluids and blood	E
98	Rapid Infuser system *(8)	E
99	Qualitative end-tidal CO2 determination	E
100	Communication with EMS vehicles	E
101	Operating Room	
102	Immediately available 24 hours/day	D
103	Personnel	
104	In-house 24 hours/day	D
105	Available 24 hours/day	E
106	Age-specific equipment	
107	Cardiopulmonary bypass	--
108	Operating microscope	D
109	Thermal control equipment	
110	For patient	E
111	For blood/fluids	E
112	X Ray capability, including c-arm image intensifier	E
113	Endoscopes, bronchoscope	E
114	Craniotomy instruments	D
115	Equipment for long bone and pelvic fixation	D
116	Rapid infuser system * (9)	E
117	Pulse oximetry	E
118	Qualitative end-tidal CO2 determination	E
119	Postanesthetic Recovery Room (SICU	

	acceptable)	
120	Registered nurses available 24 hours/day	E
121	Equipment for monitoring and resuscitation	E
122	Intercranial pressure monitoring equipment	D
123	Pulse oximetry	E
124	Thermal control	E
125	Intensive or Critical Care Unit for Injured Patients	
126	Registered nurses with trauma education* (9)	E
127	Designated surgical director or surgical co-director	E
128	Surgical ICU service physician in-house 24 hours/day	D
129	Surgically directed and staffed ICU service	D
130	Equipment for monitoring and resuscitation	E
131	Intracranial monitoring equipment	D
132	Pulmonary artery monitoring equipment	E
133	Respiratory Therapy Services	
134	Available in-house 24 hours/day	E
135	On call 24 hours/day	-
136	Radiological Services (Available 24 hours/day)	
137	In-house radiology technologist	E
138	Angiography	D
139	Sonography	E
140	Computed Tomography	E
141	In-house CT technician	--
142	Magnetic resonance imaging	D
143	Clinical Laboratory Services (Available 24 hours/day)	
144	Standard analysis of blood, urine and other body fluids, including microsampling when appropriate	E
145	Blood typing and cross-matching	E
146	Coagulation studies	E
147	Comprehensive blood bank or access to a community central blood bank and adequate storage facilities	E
148	Blood gases and pH determinations	E
149	Microbiology	E
150	Acute Hemodialysis	
151	In-house	D
152	Transfer agreement	E
153	Burn Care - Organized	

154	In-house or transfer agreement with Burn Center	E
155	Rehabilitation Services	
156	Transfer agreement to an approved rehab facility	E
157	Physical Therapy	E
158	Occupational Therapy	D
159	Speech Therapy	D
160	Social Services	E
161	Performance Improvement	
162	Performance improvement programs	E
163	Trauma Registry	
164	In-house	E
165	Participation in state, local, or regional registry	E
166	Orthopaedic database	--
167	Audit of all trauma deaths	E
168	Morbidity and mortality review	E
169	Multidisciplinary trauma committee	E
170		
171	Review of prehospital trauma care	E
172	Review of times/reasons for trauma-related bypass	E
173	Review of times/reasons for transfer of injured patients	E
174		
175	Participate in regional review of prehospital trauma care, times/reasons for trauma-related bypass, times/treasons for transfer of injured patient	E
176	PI process established to monitor response times for all on-call personnel	E
194	Trauma registry PI activities	E
177	Continuing Education/Outreach	
177	General surgery residency program	--
178	ATLS provide/participate	D
179	Programs provided by hospital for:	
180	Staff/Community physicians (CME)	D
181	Nurses	E
182	Allied health personnel	E
183	Prehospital personnel provision/participation	E
184	Prevention	
185	Injury control studies	--

186	Collaboration with other institutions	D
187	Monitor progress/effect of prevention programs	D
188	Designated prevention coordinator/spokesperson	D
189	Outreach activities	D
190	Information resources for public	D
191	Collaboration with existing programs	D
192	Coordination and/or participation in community prevention activities	E
193	Research	
195	Research committee	--
196	Identifiable IRB process	--
197	Extramural education presentations	D
199	Number of scientific publications	--

200	* (1) Mississippi standards will require at least one general surgeon to be board certified. Alternated criteria may be substituted for other staff.
201	* (2) Mississippi standards will require a current ATLS completion card. Physicians have up to one (1) year after hiring to obtain ATLS certification.
202	* (3) Some mechanisms for “grandfathering” in non-board certified neurosurgeons and orthopedic surgeons will be developed by hospital policy.
203	* (4) The RN in-house and available in the ED must be a current provider in TNCC.
204	* (5) Drugs necessary for emergency care will be defined by the prehospital drug list set forth by the Bureau of Emergency Medical Services.
205	* (6) Board certified or alternative criteria as established by hospital policy.
206	* (7) Can be accompanied with 48 hours of trauma education over three (3) years.
207	* (8) Simple pressure bag.
208	* (9) Ongoing critical care education bi-annually.
209	*(10) ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

Chapter 11 LEVEL IV TRAUMA CENTERS

Level IV trauma centers are generally licensed, small, rural facilities with a commitment to the resuscitation of the trauma patient and written transfer protocols in place to assure those patients who require a higher level of care are appropriately transferred. These facilities may be staffed by a physician, or a licensed midlevel practitioner (i.e. advanced practice nurse) or Registered Nurse. The major trauma patient will be resuscitated and transferred. This categorization does not contemplate that Level IV hospitals will have resources available for emergency surgery for the trauma patient.

Level IV trauma centers may meet the following standards in their own facility through a formal affiliation with another trauma center.

1422 HOSPITAL ORGANIZATION

1422.01 Trauma Program/Service

There must be a written commitment letter from the Board of Directors and the medical staff on behalf of the entire facility which states the facility's commitment to compliance with the Mississippi Trauma Care Regulations. The written commitment shall be in the form of a resolution passed by an appropriate quorum of the members of the governing authority. Should the business organization be other than a corporation, a letter explaining such together with a written commitment of the hospital's chief executive officer to the establishment of a trauma care program may be sufficient. A trauma program must be established and recognized by the organization.

Compliance with the above will be evidenced by:

a. Board of Director's and medical staff letter of commitment

b. Written policies, procedures and guidelines for care of the trauma patient

c. A defined Trauma Team with written roles and responsibilities

d. Appointed Trauma Medical Director with a written job description

e. A written Trauma Performance Improvement Plan

f. Appointed Trauma Program Manager with a written job description

g. Documentation of trauma center representative's attendance at the Regional Trauma Advisory Committee meetings

1422.02 Trauma Team

The team approach is optimal in the care of the multiple injured patients. The trauma center must have a written policy for notification and mobilization of an organized trauma team to the extent that one is available. The Trauma Team may vary in size and composition when responding to the trauma activation. The physician leader or licensed advance practice nurse on the trauma team is responsible for directing all

phases of the resuscitation in compliance with ATLS protocol. Suggested composition of the trauma team includes, if available:

a. Physicians or licensed advance practice nurse

b. Laboratory Technicians

c. Nursing

d. Ancillary Support Staff

Compliance with the above will be evidenced by:

a. A written resuscitation protocol which adheres to the principles of ATLS

b. A written trauma team activation criteria policy which includes physiologic, anatomic and mechanism of injury criteria

1422.03 Medical Director

The Level IV trauma center must have a physician director of the trauma program. In this instance the physician is responsible for working with all members of the trauma team, and overseeing the implementation of a trauma specific performance improvement process for the facility. Through this process, he/she should have overall responsibility for the quality of trauma care rendered at the facility. The director must be given administrative support to implement the requirements specified by the Mississippi Trauma Plan. The director should assist in the development of standards of care and assure appropriate policies and procedures are in place for the safe resuscitation and transfer of trauma patients. The physician director must have current verification in ATLS.

NOTE: ATLS requirement may take up to five years to obtain. Physicians must obtain ATLS within one year. This ATLS verification must be recognized by the American Board of Medical Specialties. ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

Compliance with the above will be evidenced by:

a. Chairing and participating in the committee where trauma performance improvement is presented

b. Documentation of current ATLS verification

c. Administrative support can be documented in the organizational chart which depicts the reporting relationship between the trauma program medical director and administration

d. Trauma specific policies, procedures and guidelines approved by the Trauma Medical Director

1422.04 Multidisciplinary Trauma Committee

The purpose of the committee is to provide oversight and leadership to the entire trauma program. The exact format will be hospital specific and may be accomplished by collaboration with another designated trauma center in the region. The major focus will be on PI activities, policy development, communication among all team members, development of standards of care, education and outreach programs, and injury prevention. The committee oversees the implementation of the process which includes all program related services, meets regularly, takes attendance, maintains minutes and works to correct overall program deficiencies to optimize patient care. Suggested membership for the committee includes representatives (if available in the community) from:

a. Administration

b. Emergency Department

c. Prehospital Care Providers

d. Radiology

e. Rehabilitation

f. Laboratory

g. Respiratory Therapy

h. Nursing

i. Trauma Program Manager/TPM

The clinical managers (or designees) of the departments involved with trauma care should play an active role with the committee.

The trauma center may wish to accomplish performance improvement activities in this committee or develop a separate peer review committee. This committee should handle peer review independent from department based review. The committee must meet regularly and maintain attendance and minutes. This committee must report findings to the overall hospital performance improvement program.

1422.05 <u>Trauma Program Manager/TPM</u>

The trauma center must have a person to act as a liaison to the regional evaluation process to conduct many of the administrative functions required by the trauma program. It is not anticipated that this would be a full-time role. Specifically, this person is responsible, with the medical director, for coordinating optimal patient care for all injured victims. This position will ideally serve as liaison with local EMS personnel, the Regional Trauma Advisory Council (RTAC) and the Department as well as other trauma centers.

Compliance with the above will be evidenced by:

a. Attendance at and participation in the committee where trauma performance improvement is presented

b. A written job description of roles and responsibilities to the trauma program which include: management of the trauma program, monitoring of clinical activities on trauma patients, providing staff with trauma related education, implementation of trauma specific performance improvement and supervision of the trauma registry

c. Documentation of collaboration with Trauma Program Medical Director in the development and implementation of trauma specific policies, procedures and guidelines.

1423. CLINICAL CAPABILITIES

The trauma center must maintain published on-call schedules for physicians or licensed advance practice nurses on-call to the facility.

1423.01 Emergency Department

The facility must have an emergency department staffed so trauma patients are assured immediate and appropriate initial care. There must be a designated physician director. It is not anticipated that a physician will be available on-call to an emergency department in a Level IV trauma center; however it is a desirable characteristic of a Level IV. The on-call practitioner must respond to the emergency department based on local written criteria. A system must be developed to assure early notification of the on-call practitioner. Compliance with this criterion must be documented and monitored by the Trauma Performance Improvement process.

Emergency nurses staffing the trauma resuscitation area must be a current provider in TNCC. Adequate numbers of nurses must be available in-house 24 hours/day, to meet the need of the trauma patient. The nurse may perform other patient care activities within the hospital when not needed in the emergency department.

NOTE: ER nurses must obtain TNCC within 18 months.

A complete list of required equipment necessary for the Emergency Department can be found in Section 1103.01.

Compliance with the above will be evidenced by:

a. Written trauma specific education plan for nurses

b. Published on-call list of practitioners to the Emergency Department

c. Documentation of nursing staffing patterns to assure 24-hour coverage

1424. CLINICAL SUPPORT SERVICES

It is not anticipated that Level IV trauma centers have any of the following services available:

a. Respiratory Therapy Services

b. Radiology Services

c. Clinical Laboratory Services

d. Acute Hemodialysis

Should any of these services be available, the facility should make them available to the trauma patient as necessary and within the capabilities of the facility.

1424.02 Burn Care

There must be a written transfer agreement to a Burn Center. Policies and Procedures should be in place to assure the appropriate care is rendered during the initial resuscitation and transfer of the patient.

1424.03 Outreach/Prevention/Public Education

The Level IV trauma center is responsible for working with other trauma centers and the trauma care region to develop education and prevention programs for the public and professional staff.

Compliance with the above will be evidenced by documentation of collaborative efforts of trauma specific education and injury prevention programs with other trauma centers and/or the trauma care region

1424.04 Transfer Agreements

There must be written transfer agreements with other trauma facilities in the region. A policy must be in place to facilitate and expedite the transfer sequence to assure the most appropriate care is rendered. Agreements must be in place for higher level of care and specialty referral for pediatrics, burns, acute hemodialysis, head or spinal cord injury and rehabilitation. All facilities will work together to develop transfer guidelines indicating which patients should be considered for transfer and procedures to ensure the most expedient, safe transfer of the patient. The transfer guidelines need to make certain that feedback is provided to the facilities and assure that this information becomes part of the trauma registry. All designated facilities will agree to provide service to the trauma patient regardless of their ability to pay.

When a patient in need of trauma services is transferred to a receiving facility capable of providing the needed care, from a transferring facility which cannot provide an adequate level of care, the following shall apply: When a determination is made by appropriate medical personnel of the receiving facility that a patient transferred from the transferring facility has been stabilized, no longer has an emergency medical condition or no longer requires the specialty services provided at the receiving facility, but the patient still requires further acute care, the transferring facility, with the consent of the patient and the patient's physician, agrees to readmit the transferred patient for appropriate acute care within 24 to 48 hours of such a determination. The patient's

physician, the chief of the medical staff or other authorized representative of the transferring facility shall facilitate the identification of the patient's physician or his/her designee to accept the patient and transfer the patient back to the transferring facility.

Compliance with the above will be evidenced by documentation of Transfer Agreements with higher levels of care and specialty facilities.

1102.05 Performance Improvement/Evaluation

The trauma center must develop and implement a trauma specific performance improvement plan. Key elements in trauma system planning are evaluation, measurement and improvement of performance. The goal is to decrease variation in care and improve patient outcomes.

Compliance with the above will be evidenced by:

a. Review of compliance with Regional EMS Triage Guidelines and Protocols which must be reported to the Regional Performance Improvement Committee

b. Compliance with written Trauma Team Activation Criteria

c. Compliance with the principles of ATLS

d. Peer Review of all trauma deaths to determine timeliness and appropriateness of care and preventability of death

e. Review of trauma related morbidities for appropriateness of care and preventability

f. Nursing Audit (Clinical review of nursing documentation and quality of care rendered to trauma patients)

g. Review of timeliness and appropriateness of all Transfers Out

h. Review of prehospital trauma care.

i. Review of times/reasons for trauma-related bypass.

j. Review of time/reasons for transfer of injured patients

This information must be documented and reported at a trauma specific meeting or in conjunction with other ongoing committees in the facility.

1102.06 Trauma Registry

All licensed hospitals which have organized emergency services or departments must participate in the statewide trauma registry for the purpose of supporting peer review and performance improvement activities at the local, regional and state levels. Since this data relates to specific trauma patients and are used to evaluate and improve the

quality of health care services, this data is confidential and will be governed by the Miss. Code Ann.§41-59-77.

Compliance with the above will be evidenced by:

b. Documentation of utilization of the Trauma Registry data in the trauma performance improvement process

c. Timely submission of Trauma Registry Data to the Bureau of EMS and the appropriate Region at least monthly.

1104.01 <u>Essentials and Desirable Chart for Level IV Trauma Centers</u>

		Level IV
1	Institutional Organization	
2	Trauma Program	E
3	Trauma Service	--
4	Trauma Team	E
5	Trauma Program Medical Director	E
6	Trauma Multidisciplinary Committee	E
7	Trauma Program Manager	E
8	Hospital Departments/Divisions/Sections	
9	Surgery	--
10	Neurological Surgery	--
11	Neurosurgical Trauma Liaison	--
12	Orthopaedic Surgery	--
13	Orthopaedic Trauma Liaison	--
14	Emergency Medicine	--
15	Anesthesia	--
16	Clinical Capabilities	
17	(Specialty Immediately Available 24 hours/day)	
18	Published on-call schedule	--
19	General Surgery	--
20	Published back-up schedule	--
21	Dedicated to single hospital when on-call	--
22	Anesthesia	--
23	Emergency Medicine	--
24	On-call and promptly available 24 hours/day	
25	Cardiac Surgery	--
26	Hand Surgery	--
27	Microvascular/replant Surgery	--
28	Neurological Surgery	--
29	Dedicated to one hospital or back-up call	--
30	Obstetrics/Gynecologic Surgery	--
31	Ophthalmic Surgery	--
32	Oral/Maxillofacial Surgery	--

33	Orthopaedic Surgery	--
34	Plastic Surgery	--
35	Critical Care Medicine	--
36	Radiology	--
37	Thoracic Surgery	--
38	Clinical Qualifications	
39	General/Trauma Surgeon:	
40	Current Board Certification	--
41	16 Hours CME/Year (7)	--
42	ATLS Completion *(2) (10)	E
43	Peer Review Committee liaison Attendance ≥ 50%	--
44	Multidisciplinary Committee liaison Attendance	--
45	Emergency Medicine:	
46	Board Certification	--
47	16 Hours CME/Year (7)	--
48	ATLS Completion *(2) (10)	E
49	Peer Review Committee liaison Attendance ≥ 50%	--
50	Multidisciplinary Committee liaison Attendance	--
51	Neurosurgery:	
52	Current Board Certification	--
53	16 Hours CME/Year (7)	--
54	ATLS Completion *(2) (10)	--
55	Peer Review Committee liaison Attendance ≥ 50%	--
56	Multidisciplinary Committee liaison Attendance	--
57	Orthopaedic Surgery:	
58	Current Board Certification	--
59	16 Hours CME In Trauma/Year (7)	--
60	ATLS Completion *(2) (10)	--
61	Peer Review Committee liaison Attendance ≥ 50%	--
62	Multidisciplinary Committee liaison Attendance	--
63	Facilities/Resources/Capabilities	
64	Volume Performance	
65	Trauma Admissions: 1,200/year	--
66	Patients with ISS > 15 (240 total or 35 patients/surgeon)	--
67	Presence of Surgeon at resuscitation	

68	Presence of Surgeon at Operative Procedures	
69	Emergency Department	
70	Personnel	
71	Designated physician director	E
72	RN in-house and available	D
73	Equipment for Resuscitation for Patients of all ages	
74	Airway control and ventilation equipment	E
75	Pulse Oximetry	E
76	Suction Devices	E
77	Electrocardiograph-Oscilloscope-Defibrillator	E
78	Internal Paddles	--
79	CVP Monitoring Equipment	--
80	Standard IV Fluids and Administration Sets	E
81	Large bore intravenous catheters	E
82	Sterile Surgical Sets for:	
83	Airway control/cricothyrotomy	
84	Thoracostomy	D
85	Venous cut-down	
86	Central line insertion	--
87	Thoracotomy	--
88	Peritoneal lavage	
89	Arterial catheters	
90	Ultrasound	
91	Drugs necessary for emergency care *(5)	E
92	X Ray availability 24 hours/day	D
93	Cervical spine stabilization devices	D
94	Broselow tape	E
95	Thermal control equipment:	
96	For Patient	
97	For fluids and blood	
98	Rapid Infuser system *(8)	D
99	Qualitative end-tidal CO2 determination	E
100	Communication with EMS vehicles	E
101	Operating Room	
102	Immediately available 24 hours/day	--
103	Personnel	
104	In-house 24 hours/day	--
105	Available 24 hours/day	--
106	Age-specific equipment	
107	Cardiopulmonary bypass	--
108	Operating microscope	--
109	Thermal control equipment	
110	For patient	--

111	For blood/fluids	--
112	X Ray capability, including c-arm image intensifier	--
113	Endoscopes, bronchoscope	--
114	Craniotomy instruments	--
115	Equipment for long bone and pelvic fixation	--
116	Rapid infuser system * (9)	--
117	Pulse oximetry	--
118	Qualitative end-tidal CO2 determination	--
119	Postanesthetic Recovery Room (SICU acceptable)	
120	Registered nurses available 24 hours/day	--
121	Equipment for monitoring and resuscitation	--
122	Intercranial pressure monitoring equipment	--
123	Pulse oximetry	--
124	Thermal control	--
125	Intensive or Critical Care Unit for Injured Patients	
126	Registered nurses with trauma education* (9)	--
127	Designated surgical director or surgical co-director	--
128	Surgical ICU service physician in-house 24 hours/day	--
129	Surgically directed and staffed ICU service	--
130	Equipment for monitoring and resuscitation	--
131	Intracranial monitoring equipment	--
132	Pulmonary artery monitoring equipment	--
133	Respiratory Therapy Services	
134	Available in-house 24 hours/day	--
135	On call 24 hours/day	D
136	Radiological Services (Available 24 hours/day)	
137	In-house radiology technologist	D
138	Angiography	--
139	Sonography	D
140	Computed Tomography	D
141	In-house CT technician	--
142	Magnetic resonance imaging	--
143	Clinical Laboratory Services (Available 24 hours/day)	
144	Standard analysis of blood, urine and other body fluids, including microsampling when appropriate	--
145	Blood typing and cross-matching	--
146	Coagulation studies	--

147	Comprehensive blood bank or access to a community central blood bank and adequate storage facilities	--
148	Blood gases and pH determinations	--
149	Microbiology	--
150	Acute Hemodialysis	
151	In-house	--
152	Transfer agreement	E
153	Burn Care - Organized	
154	In-house or transfer agreement with Burn Center	E
155	Rehabilitation Services	
156	Transfer agreement to an approved rehab facility	E
157	Physical Therapy	D
158	Occupational Therapy	D
159	Speech Therapy	--
160	Social Services	D
161	Performance Improvement	
162	Performance improvement programs	E
163	Trauma Registry	
164	In-house	E
165	Participation in state, local, or regional registry	E
166	Orthopaedic database	--
167	Audit of all trauma deaths	E
168	Morbidity and mortality review	E
169	Multidisciplinary trauma committee	E
170		
171	Review of prehospital trauma care	E
172	Review of times/reasons for trauma-related bypass	E
173	Review of times/reasons for transfer of injured patients	E
174		
175	Participate in regional review of prehospital trauma care, times/reasons for trauma-related bypass, times/treasons for transfer of injured patient	E
176	PI process established to monitor response times for all on-call personnel	E
194	Trauma registry PI activities	--
177	Continuing Education/Outreach	

177	General surgery residency program	–
178	ATLS provide/participate	D
179	Programs provided by hospital for:	
180	Staff/Community physicians (CME)	D
181	Nurses	D
182	Allied health personnel	--
183	Prehospital personnel provision/participation	D
184	Prevention	
185	Injury control studies	--
186	Collaboration with other institutions	E
187	Monitor progress/effect of prevention programs	D
188	Designated prevention coordinator/spokesperson	--
189	Outreach activities	D
190	Information resources for public	--
191	Collaboration with existing programs	--
192	Coordination and/or participation in community prevention activities	E
193	Research	
195	Research committee	--
196	Identifiable IRB process	--
197	Extramural education presentations	--
199	Number of scientific publications	--

200	* (1) Mississippi standards will require at least one general surgeon to be board certified. Alternated criteria may be substituted for other staff.
201	* (2) Mississippi standards will require a current ATLS completion card. Physicians have up to one (1) year after hiring to obtain ATLS certification.
202	* (3) Some mechanisms for “grandfathering” in non-board certified neurosurgeons and orthopedic surgeons will be developed by hospital policy.
203	* (4) The RN in-house and available in the ED must be current provider of TNCC.
204	* (5) Drugs necessary for emergency care will be defined by the prehospital drug list set forth by the Bureau of Emergency Medical Services.
205	* (6) Board certified or alternative criteria as established by hospital policy.
206	* (7) Can be accompanied with 48 hours of trauma education over three (3) years.
207	* (8) Simple pressure bag.
208	* (9) Ongoing critical care education bi-annually.
209	*(10) ATLS requirements is waived for Board Certified Emergency Medicine and Board Certified General Surgery Physicians.

Chapter 12 STATE DESIGNATION OF TRAUMA CENTERS

1425 DESIGNATION PROCESS

1425.01 Trauma Center Application Process

All/any Mississippi licensed hospitals with a functioning emergency room will apply for trauma center designation. An applicant hospital does not have to be within an active trauma care region to obtain designation; however, the department may prioritize the designation process for hospitals located within and participating as a member of a designated trauma care region.

Note: State funding for trauma care is available only to designated trauma center hospitals which are actively participating in a designated trauma care region.

To receive state designation as a Trauma Center, any applicant hospital and its medical staff shall set forth such intention in a letter to the department accompanied by two completed copies of the department's "Application for Trauma Center Designation".

Within 30 days of receipt of the application, the Department shall provide written notification to the applicant hospital of the following:

a. that the application has been received by the Department;

b. whether the Department accepts or rejects the application;

c. if accepted, the date scheduled for hospital inspection;

d. if rejected, the reasons for rejection and a deadline for submission of the corrected "Application for Trauma Center Designation" to the Department.

1425.02 Trauma Center Inspection Process

The Department shall provide for the inspection of the applicant hospital, provided that its application has been formally approved by the Department, on the date scheduled and indicated in the Department's acceptance letter to the applicant hospital, unless:

a. the Department provides written notification with justification of change to the applicant hospital 14 days prior to the inspection date; or

b. the applicant hospital provides written request with justification for a change to the Department 30 days prior to the inspection date;

c. the Level IV hospital applicant does not require an on-site inspection.

An applicant hospital may request an initial "Consultative Review" of its facilities. Such a review is used to assist the applicant hospital in preparation for a Trauma Center inspection.

Results of Trauma Center Consultative Reviews will be provided by the Department in writing to each applicant hospital. These results will be held in confidence by the Department. The Department will work with and provide assistance to the applicant hospital to correct any deficiencies noted during the Consultative Review.

If an applicant hospital requests a Trauma Center inspection without having first received a Consultative Review and said hospital fails to meet designation criteria the inspection shall be deemed a Consultative Review.

A Consultative Review, regardless of outcome, confers no designation status upon said applicant hospital.

A hospital, having completed a Consultative review, may apply for a Trauma Center inspection at any time after receiving the Report of Survey from the Consultative Review.

Results of Trauma Center inspections will be provided by the Department in writing to each applicant hospital. Details related to hospital's inspection will be considered confidential and will not be released.

1425.03 <u>Trauma Center Inspection Teams</u>

The Department shall provide multidisciplinary teams for all Trauma Center inspections.

Trauma Center Inspection Teams shall consist of disciplines as follows:

a. **Level I and II Trauma Centers**

As a minimum, teams shall consist of the following representative disciplines: trauma surgeon, emergency physician and trauma nurse. (The Department may add additional team members as it deems necessary.) All members of teams for Levels I and II shall reside and practice outside the State of Mississippi.

b. **Level III Trauma Centers**

As a minimum, teams shall consist of the following representative disciplines: trauma surgeon and trauma nurse. One member of each team for Level III must reside and practice out of the State of Mississippi. The remaining two members may reside and practice in Mississippi; however, they may not practice or reside in any hospital or area of the trauma care region in which the applicant hospital is located.

c. **Level IV Trauma Centers**

The Level IV trauma center inspection process shall consist of a review of the completed trauma center application, compliance with all of the "Essential" elements listed in the Mississippi Trauma Care Regulations' Essential and Desirables Chart, and satisfactory review of specific trauma registry data reports as identified in the trauma center application.

These documents shall be reviewed off-site by the OEPR Trauma System Development staff. If the information contained in the completed application and the trauma registry data reports do not demonstrate compliance with the Mississippi Trauma Care Regulations, there will be a request for additional information and an opportunity to supply supplementary data/information for review. If this additional information does not demonstrate compliance with the Mississippi Trauma Care Regulations, an on-site survey inspection will be scheduled. At a minimum, the on-site team shall consist of one member of the Trauma System Development staff and one of the following representative disciplines: a physician or trauma nurse. The member of the inspection team that is not Trauma System Development staff may reside and practice in Mississippi, however; they may not practice or reside in any hospital or area of the trauma care region in which the applicant hospital is located.

1425.04 Categories of Trauma Center Designation

a. **Complete Designation**

The hospital has completed all of the requirements for designation at their application level. This is a three (3) year designation subject to periodic compliance audits.

b. **Complete Designation with Conditions**

The hospital has completed all of the requirements for Complete Designation at their application level with the exception of minor (no patient or Regional operations impact) condition(s). This designation category may be used for initial designations or an interim change in status from Complete Designation due to a temporary loss of a capacity or capability.

Any hospital receiving written notification of Complete Designation with Conditions must immediately notify the Trauma Care Region and submit to the Department within thirty (30) working days from the receipt of notification a written plan of correction and an interim operations plan including time lines. The Department, upon receipt, shall either approve or disapprove the plan within thirty (30) working days. The hospital is responsible for contacting the Department to request a "Focused Survey" at any time prior to the end of the recognized timeline. Upon such a request the Department shall assemble a survey team to review the hospitals' "Plan of Correction" for complete implementation. If the Focused Survey team deems the "Plan of Correction" fully implemented the hospital will receive complete trauma Center designation.

c. **Suspended Designation**

The hospital has completed the requirements for Complete Designation at their application level. However, upon receipt of information and verification by the Department of regulation violations and a determination by the Department that

it is in the best interest of patient care or Regional operations, the Department may temporarily suspend the Trauma Center Designation for said hospital.

Any hospital receiving notice of Suspension of their Trauma Center Designation shall immediately notify the Trauma Care Region and all prehospital providers who routinely transport trauma patients to said hospital of the suspension of their Trauma Center designation. Any hospital receiving notice of suspension of their Trauma Center Designation shall no longer be permitted to act as nor be permitted to hold itself out as a Designated Trauma Center.

Further, the hospital shall, within ten (10) working days of notification of said suspension shall submit a written plan of correction, including correction time lines to the Department. Upon receipt of said plan the Department shall either approve or disapprove the plan within ten (10) working days.

Upon completion of the Plan of Correction, the hospital shall notify the Department and request a verification visit. The Department shall conduct a focused survey of the hospital to verify completion of the Plan of Correction and compliance with regulations. The Department may, subsequently, reinstate the hospital to its original Trauma Center status.

In addition, the appropriate fee associated with the unmet level commensurate with the facilities level as determined by its license resources shall be made payable to the Mississippi TCTF.

d. **Non-Designated Trauma Centers**

Any hospital that has not completed the Trauma Center Application process or has had its Trauma Center Designation revoked by the Department will be considered a Non-Designated Trauma Center. Such facilities shall not advertise nor hold itself out to the public as a Designated Trauma Center.

Hospitals that have been designated as Trauma Centers may have their designation status revoked for any of the following reasons:

e. By the State Health Officer for reasons of serious threat or jeopardy to patients health or welfare;

f. Refusal to satisfactorily complete the reinstatement process, described above, for hospitals having had their Trauma Center Designation Suspended.

g. Failure to adhere to laws or regulations.

h. Hospitals having their Trauma Center Designation status revoked may reapply for trauma center designation after resolution of all issues related to the revocation and completion of a complete new trauma center designation process.

Should a trauma center's status be changed or revoked, the facility is responsible for paying the fees as set forth in the Pay or Play section of these regulations.

1200.05 Plan of Correction

Each applicant hospital, which receives Complete Designation with Conditions as a Trauma Center, shall submit to the Department a "Plan of Correction" within thirty (30) days. The Plan shall address each of the conditions noted by the inspection team and outline a corrective process and timeline for completion. During this period of time the Department will work with and provide assistance to the hospital in the implementation of their "Plan of Correction"

The hospital is responsible for contacting the Department to request a "Focused Survey" at any time prior to the end of the recognized timeline. Upon such a request the Department shall assemble a survey team to review the hospitals' "Plan of Correction" for complete implementation. If the Focused Survey team deems the "Plan of Correction" fully implemented the hospital will receive complete trauma Center designation. Failure to pass the "Focused Survey" does not extend the time period.

Failure to fully complete and implement the "Plan of Correction" within the recognized time period shall result in the automatic lapse of the Designation and the hospital will automatically return to its' original non-designated status. If the Designation status lapses the hospital shall not be eligible for any allocated trauma funds and will be required to pay according to Section 400.05, 7, E.

The facility must report to the Bureau of Emergency Medical Services (BEMS) any loss of 24-hour specialty physician coverage that is required within the Trauma Care Regulations. The facility must provide a plan of corrections that details how the facility will become compliant. The hospital must submit to the BEMS evidence of recruiting efforts. Such evidence must be determined appropriate by the Mississippi Trauma Advisory Committee (MTAC). In the event a hospital is unable to fulfill their physician requirement, the hospital will submit a letter to BEMS requesting its' Trauma Center Level status reduced to the next lowest, most appropriate, level. Such evidence must be determined appropriate by the MTAC.

No inspection or designation process provided by any other agency, organization or group maybe substituted in lieu of the Department's.

1200.10 Length of Trauma Center Designation

The department shall designate Trauma Centers for a period not to exceed three (3) years. Complete designations shall remain active for three years provided no substantive changes or variances have occurred and that the designated Trauma Center continues to comply with all rules and regulations of the Department after receipt of the Trauma Center designation by the department. The Department may perform periodic trauma center audit/reviews at each designated Trauma Center.

1200.11 Trauma Center Designation Renewals (re-designation)

Designated Trauma Centers regarding re-designation (6 months prior to the designation expiration date) of its intent to seek or not seek re-designation or designation at a level different from its original designation level. The Department will acknowledge receipt of such notification in writing within 30 days to the applicant hospital and begin the application process as provided in 1200.1 and subsequent sections. All applications for

re-designation must be received no later than sixty (60) days prior to expiration of designation.

1200.12 Process of Appeal for Failing Trauma Center Inspection

If a hospital fails a trauma center inspection, the hospital shall have 30 days from the date of notification of the failure to appeal the decision in writing to the Department. The Department shall make a determination within three months of receipt of the appeal. The Department will provide the hospital with a written report of its decision. If the decision of the Department is unfavorable to the hospital, the hospital may request to be inspected for trauma center designation at another level but must pay all cost associated with the request. In addition, the appropriate fee associated with the unmet level commensurate with the facilities level as determined by its license resources shall be made payable to the Mississippi TCTF.

1200.13 Change of Trauma Center Designation

1. Trauma Centers will be permitted to change their designation if the following conditions are met in their entirety:

g) The Trauma Center has been inspected and designated by the Department, the designation is current, and the Trauma Center is in full compliance with Department and Region rules, regulations, policies, procedures, and protocols.
h) The request to change designation has been approved by the applicable Trauma Care Region.
i) The Department's Trauma Consultant has reviewed the request and determines that there is no adverse impact to the Region or Trauma Care System.
j) The Mississippi Trauma Advisory Council (MTAC) has recommended approval of the request.
k) The Department Trauma System Administrator (TSA) concurs with the request.
l) The State Health Officer (SHO) or designee issues the new designation.

9. A Trauma Center may make a request to change its designation by sending a letter of intent to the appropriate Trauma Care Region.

10. The Trauma Center will submit an application for the new designation level in accordance with Section 1200.01. (Note: If the Trauma Center has a current application and inspection report on file with the Department, for a level equal to or higher than the requested level, they will not be required to submit another application.)
11. The Board of Directors of the Trauma Care Region will review the request, and will recommend approval/disapproval to the Department, along with any conditions. Specifically, the Board will determine if a non-participation fee, in accordance with Section 400.05, is required.

12. The Department will forward the Region's letter, application package, and inspection report (if applicable) to the Trauma Consultant for review. The consultant will prepare a written report which will include any anticipated positive/negative impacts

to the Region and/or Trauma Care System as a result of this action. The Trauma Consultant will also determine if a new inspection is required to substantiate this request, or will prepare a report of inspection compliance based on the file inspection report.

13. The TSA will consolidate all documentation and include the request on the agenda for the next MTAC meeting. The TSA will also include the Department's concurrence or non-concurrence with justification. A representative(s) of the Trauma Center and the Region will be invited to present the request to the MTAC. If a representative of the requesting Trauma Center is not present at the MTAC, the request will be tabled to the next meeting. If the Trauma Center representative does not appear at two consecutive MTAC meetings, the request will be dismissed without action.

14. If the MTAC approves the request, the TSA will forward a letter to the SHO requesting designation of the Trauma Center to the new level. If a non-participation fee is required for the new designation, an invoice will be prepared and sent to the Trauma Center. Designation will only occur after receipt of the non-participation fee.

15. If the MTAC does not approve the request, the TSA will return the application package to the Trauma Center and the Region via certified mail. The Trauma Center will have twenty (20) days after receipt of the returned application to file an appeal with the Director, Bureau of EMS, in accordance with Section 400.06.

Chapter 13 PEDIATRIC TRAUMA CENTERS

1426 REQUIREMENTS

1426.01 Hospital Requirements

The hospital resources for adult trauma centers are described in Sections 800, 900, 1000, and 1100. The traumatized pediatric patient has special requirements that go beyond the resources required for an adult trauma center. Those components that must be present in a trauma center designated to care for pediatric patients are represented in Table 1.

TABLE 1

Requirements	Tertiary	Secondary	Primary
Trauma Surgeons credentialed by the hospital for pediatric trauma care	E	E	D
6 hours of pediatric CME per year, per surgeon	D	D	D
Pediatric emergency department area	E	D	D
Pediatric resuscitation equipment in all patient care areas	E	E	E
Micro-sampling	E	E	E
Pediatric-specific performance improvement program	E	E	E
Pediatric ICU	E	D	D

All adult trauma centers in Mississippi are required to function at one of the three levels of pediatric trauma care. An adult hospital does not have to function at the same or similar level but must function at some level of pediatric trauma care. The three levels of pediatric trauma care include: tertiary, secondary, and primary. For the adult trauma center wishing to provide pediatric trauma care at the tertiary level all the requirements stated in Table I are essential. At the secondary and primary levels certain requirements remain essential while other requirements become desirable.

At tertiary and secondary levels it is essential that the trauma center credential its trauma surgeons to do pediatric trauma care. It is desirable that the primary level trauma center credential its trauma surgeons to do pediatric trauma care. The multi-specialty concept is important in obtaining the best results when caring for traumatized children. This may include pediatric and other medical specialists. If there is a board-certified surgeon identified as the adult trauma program medical director, then this same individual can and often will assume supervision of the pediatric program.

The necessary pediatric resuscitation equipment that should be included in each Pediatric Trauma Center emergency department is listed in Table 2.

1426.02 Pediatric Resuscitation Equipment

TABLE 2 PEDIATRIC RESUSCITATION EQUIPMENT
Infant and pediatric laryngoscope blades, one of each (Miller, 0,1,2 and MacIntosh 0,1,2)
Infant and pediatric blood pressure cuffs
Pediatric defibrillation paddles
Volumetric IV sets
Angiocaths – sizes 22 gauge and 24 gauge
Broslow tape
Intra-Osseous needles
Infant and pediatric cervical collars
Pediatric immobilization devices
Pediatric oral airways
Pediatric endotracheal tube, one of each (uncuffed and cuffed), sizes 2.5 mm – 6.0 mm

1426.03 Performance Improvement

Performance improvement for pediatric patients should be measured at all levels of the system. Pediatric process and outcome measures are also necessary for participation as a designated trauma center in a trauma care region and are therefore requirements for indigent care reimbursement.

1426.04 Regional Care of the injured child

The primary pediatric trauma center must have transfer protocols in place with tertiary and/or secondary pediatric trauma centers. Additionally, transfer protocols must be written with all referral facilities in the region. All facilities will work together to develop transfer guidelines indicating which pediatric patients should be considered for transfer and procedures to assure the most expedient, safe transfer of the pediatric patient. These guidelines must address criteria to identify high-risk pediatric trauma patients that could benefit from a higher level of pediatric trauma care. Transfer protocols shall include a feedback loop so that the primary provider has a good

understanding of the patient's outcome. All designated facilities must agree to provide services to the pediatric trauma victim regardless of his/her ability to pay.

Trauma centers caring for injured pediatric patients should establish and aggressively pursue a leadership role in injury prevention. Injury prevention needs to become an integral component of the trauma center at all levels. Prevention programs should be specific to the needs of the region. The trauma registry should be utilized to identify injury trends and focus on prevention needs.

Chapter 14 MISSISSIPPI BURN CARE SYSTEM

A burn care system is a coordinated multidisciplinary component of an emergency medical services system that encompasses one or more burn centers and features communication links to and triage-transfer protocols between health care facilities, pre-hospital personnel, and transportation services.

1400. HOSPITAL ORGANIZATION

1400.01 Organizational Structure

The burn center must be an acute care facility licensed in Mississippi. The burn center must have a medical and an administrative commitment to the care or patients with burns. There must be a written commitment on behalf of the entire facility to the organization of burn care. The written commitment shall be in the form of a resolution passed by an appropriate quorum of the members of the governing authority. The burn center must have written guidelines for the triage, treatment, and transfer of burned patients from other facilities. The burn center must maintain an organizational chart relating personnel within the burn center and the hospital. The burn center must maintain current accreditation by the Joint Commission (TJC) or other recognized accrediting organization(s).

1400.02 Burn Program

The burn center hospital must formally establish and maintain an organized burn program that is responsible for coordinating the care of burned patients. Compliance will be evidenced by, but not limited to:

h. Governing authority and medical staff letter of commitment in the form of a resolution

i. Written policies and procedures and guidelines for care of the burn patient

j. Defined burn team and written roles and responsibilities

k. Appointed Burn Center Medical Director with a written job description

l. Appointed Burn Center Program Manager with a written job description

m. A written Burn Center Performance Improvement plan

n. Documentation of burn center representative attendance at the regional trauma care meetings

1400.03 Burn Team

The team approach is optimal in the care of the multiple injured patient. There must be identified members of the burn team. Policies should be in place describing the respective role of all personnel on the team. The composition of the team in any hospital will depend on the characteristics of the hospital and its staff. In some instances a tiered response may be appropriate. If a tiered response is employed, written policy must be in place and the system

monitored by the PI process. Suggested composition of the burn team for an injured patient may include:

a. Anesthesiologist

b. Emergency Physicians

c. Physician Specialist(s)

d. Laboratory Technicians as dictated by clinical needs

e. Mental Health/Social Services/Radiology Technicians

f. Pastoral Care

g. Respiratory Therapist

h. Nurses: ED, OR, ICU, etc.

i. General/Trauma Surgeon

j. Security officers

1400.04 Multidisciplinary Burn Care Committee

The purpose of the committee is to provide oversight and leadership to the entire burn program. The exact format will be hospital specific and may be accomplished by collaboration with another designated burn center. Each burn center may choose to have one or more committees as needed to accomplish the task. One committee should be multidisciplinary and focus on program oversight and leadership. The major focus will be on PI activities, policy development, communication among all team members, and establishment of standards of care, and education and outreach programs for injury prevention. The committee has administrative and systematic control and oversees implementation of all program related services, meets regularly, takes attendance, maintains minutes and works to correct overall program deficiencies to optimize patient care. Suggested membership for the committee includes representatives from:

r. Administration

s. Operating Room

t. Anesthesia

u. Plastic Surgery

v. Orthopedics

w. Emergency Medicine

x. General Surgery

y. Pre-hospital providers

z. Intensive Care

aa. Radiology

bb. Laboratory

cc. Rehabilitation

dd. Neurosurgery

ee. Respiratory Therapy

ff. Nursing

gg. Burn Program Manager/BPM

hh. The clinical managers (or designees) of the departments involved with burn care should play an active role with the committee.

The burn center may wish to accomplish performance improvement activities in this committee or develop a separate peer review committee. This committee should handle peer review independent from department based review. The committee must meet regularly and maintain attendance and minutes. This committee must report findings to the overall hospital performance improvement program.

1400.05 Burn Center Director

The burn center director must be a surgeon with board certification by American Board of Surgery or American Board of Plastic Surgery; certification of special qualifications in surgical critical care is desirable. The burn center director must have completed a 1-year fellowship in burn treatment or must have experience in the care of patients with acute burn injuries for 2 or more years during the previous 5 years. The burn center director must participate in continuing medical education in burn treatment (48 hours of burn/trauma related CME in a 3 year period) and must demonstrate ongoing involvement in burn-related research and community education in burn care and/or prevention.

Responsibilities of the burn center director must include, but not be limited to, the following:

i. Creation of policies and procedures within the burn center that specify the care of burned patients

j. Creation of policies and protocols for use throughout the burn care system for referral care, triage, and transport of burn patients

k. Cooperation with the trauma care region in all aspects of patient treatment

l. Communications on a regular basis with physicians and other authorities about patients who have been refused

m. Direction of the burn center administrative functions, including approval of medical staff credentialing.

n. Direction and active participation in the burn center performance improvement program

o. Liaison with adjacent and regional burn centers

p. Development and participation in internal and external continuing medical education programs in the care and prevention of burn injuries.

1400.06 Policies and Procedures

The burn center must maintain an appropriate policy and procedure manual that is reviewed annually by the burn center director and the nurse manager. The policy and procedure manual must contain, at a minimum, the following policies addressing the following:

h. Administration of the burn center

i. Staffing of the burn center

j. Criteria for admission to the burn center by the burn service

k. Use of burn center beds by other medical or surgical services

l. Criteria for discharge and follow-up care

m. Availability of beds and the transfer of burn patients to other medical or surgical units within the hospital

n. Care of patients with burns in areas of the burn center hospital other than the burn center.

1400.07 Personnel

The burn center must be granted the necessary authority to direct and coordinate all services for patients admitted to the burn service. The burn center director must make sure that medical care conforms to the burn center protocols. Privileges for physicians participating in the burn service must be determined by the medical staff credentialing process and approved by the burn center director. Qualifications for surgeons who are responsible for the care of burned patients must conform to criteria documenting appropriate training, patient care experience, continuing medical education, and commitment to teaching and research in the care of burned patients.

1400.08 Burn Service Coverage

The burn service must maintain an on-call schedule for attending staff surgeons who are assigned to the burn service. The staff surgeons must be promptly available on a 24-hour basis.

1400.09 Burn Center Program Manager (Nurse Manager)

Burn Centers must have a registered nurse, with two (2) or more years of experience as a nurse in a burn center, working full time in the role of Burn Program Manager/BPM, who is

administratively responsible for the burn center. The Burn Program Manager/BPM must have at least two (2) years or more of experience in acute burn care and six (6) months or more managerial experience. Working in conjunction with the medical director, the Burn Program Manager/BPM is responsible for organization of the program and all systems necessary for the multidisciplinary approach throughout the continuum of burn care. The Burn Program Manager/BPM is responsible for working with the burn team to assure optimal patient care. There are many requirements for data coordination and performance improvement, education and prevention activities incumbent upon this position.

The Burn Program Manager/BPM or his/hers designee should offer or coordinate services for burn education. The Burn Program Manager/BPM should liaison with local EMS personnel, the Department, Regional Trauma Care committee(s), trauma centers, and other burn centers.

The Burn Program Manager/BPM must participate in 16 or more hours of burn-related education (can be met by attendance at the annual meetings of the American Association for the Surgery of Trauma, ABA, or any ABA-endorsed meetings or continuing education programs, such as ABLS or ABLS Now) each year or 48 hours in a three year period.

There must be an organizational chart relating the nurse manager to the burn service and other members of the burn team.

1401. CLINICAL COMPONENTS

Patients with burns and trauma must be evaluated and/or stabilized at a trauma center before transfer to a burn center. Physician judgment will be necessary in such situations and should be in concert with the regional medical control plan and triage protocols.

1401.01 Burn Center Referral Criteria

Burn injuries that should be referred to a burn center include, but are not limited to the following:

i. Partial-thickness burns of greater than 10% of the total body surface area

j. Burns that involve the face, hands, feet, genitalia, perineum, or major joints

k. Third-degree burns

l. Electrical burns, including lightning injury

m. Chemical burns

n. Inhalation injury

o. Burn injury in patients with pre-existing medical disorders that could complicate management, prolonged recovery, or affect mortality

p. Burn injury in patients who will require special social, emotional, or rehabilitative intervention

1401.02 Qualifications of Attending Staff Surgeons

The director must appoint qualified attending staff surgeons to participate in the care of patients on the burn service. Attending staff surgeons must be board-certified or board eligible with current Advanced Burn Life Support (ABLS). Certification of special qualifications in critical care is desirable. The attending staff surgeon must have demonstrated expertise in burn treatment. Attending staff surgeons must participate in continuing medical education in burn treatment. Other attending surgeons must demonstrate participation in an internal education plan.

1401.03 Specialty Services

The following specialists must be available for consultation:

v. General surgery

w. Cardiothoracic surgery

x. Neurological surgery

y. Obstetrics/gynecology

z. Ophthalmology

aa. Anesthesiology

bb. Pediatrics

cc. Orthopedic surgery

dd. Otolaryngology

ee. Plastic surgery

ff. Urology

gg. Pulmonary

hh. Radiology

ii. Nephrology

jj. Psychiatry

kk. Cardiology

ll. Gastroenterology

mm. Hematology

nn. Neurology

oo. Pathology

pp. Infectious disease

1402. FACILITY STANDARDS

1402.01 Nursing Staff

There must be a patient care system in effect that is used to determine nurse staffing for each patient in the burn center. This system must be used to determine daily staffing needs. There must be a burn center orientation program that documents nursing competencies specific to the care and treatment of burn patients, including critical care, wound care, and rehabilitation. Burn center nursing staff must be provided with a minimum of two (2) burn-related continuing education opportunities annually.

1402.02 Operating Suites

The burn center hospital must have operating rooms available 24 hours a day.

1402.03 Emergency Services

The emergency department must have written protocols mutually developed with the burn service for the care of acutely burned patients.

1402.04 Allograft Use

The burn center hospital's policies and procedures for the use of allograft tissues must be in compliance with all federal, state, and the Joint Commission/other recognized accrediting organizations' requirements, and with standards of the American Association of Tissue Banks.

1403. CLINICAL SUPPORT SERVICES

1403.01 Pre-hospital Care

The burn center must have a written multiple-casualty plan for the triage and treatment of patients burned in a multiple casualty incident occurring within its service area. The multiple casualty plan must be reviewed and updated as needed, and on an annual basis by EMS representatives and the burn center director.

1403.02 Trauma Registry

All facilities designated as burn centers in Mississippi must participate in the statewide Trauma Registry for the purpose of supporting peer review and performance improvement activities at the local, regional, and state levels. Since this data relates to specific trauma patients and are used to evaluate and improve the quality of health care services, this data is confidential and will be governed by the Miss. Code Ann. §41-59-77

This database must include all patients who are admitted to the burn center hospital for acute burn care treatment. Compliance with the above will be evidenced by:

c. Documentation of utilization of the Trauma Registry data in the trauma/burn performance improvement process.

d. Timely submission of Trauma Registry Data to the Department and the appropriate Trauma Region.

1403.03 Education

The burn center must be actively engaged in promoting Advanced Burn Life Support (ABLS) courses in its region. It is desirable for the director to be an ABLS instructor and essential that the director is current in ABLS. The unit should have one or more employees who are ABLS instructors.

The burn center must offer education on the current concepts in emergency and inpatient burn care treatment to pre-hospital and hospital care providers within its service area.

The burn center must have an internal burn education plan for the staff.

1403.04 Rehabilitation Personnel

There must be a rehabilitation program designed for burned patients that identifies specific goals.

The primary burn care therapist must have annual participation in 16 hours or more of burn-related education (can be met by attendance at the annual meetings of the American Association for the Surgery of Trauma, American Burn Association (ABA), or any ABA-endorsed meetings or continuing education programs, such as ABLA or ABLS Now) each year or 48 hours over a three (3) year period.

1403.05 Physician Extenders

Appropriate credentialed physician extenders may be used as members of the burn team. These individuals may include, but are not limited to, physician assistants, surgical assistants, or nurse practitioners. They may augment but do not replace the physician member of the team.

1403.06 Social Services

Social service consultation must be available to the burn service. Members must participate in an internal education plan.

1403.07 Nutritional Support

A dietician must be available on a daily basis for consultation. Members must participate in an internal education plan.

1403.08 Pharmacy

A pharmacist who has at least six (6) months of experience in critical care and the pharmacokenetics implications for patients with acute burn injuries must be available on a 24-hour basis. Members must participate in an internal education plan.

1403.09 Respiratory Care

Respiratory therapists must be available for the assessment and management of patients on the burn service on a 24-hour basis. Members must participate in an internal education plan.

1403.10 Clinical Psychiatry

A psychiatrist or clinical psychologist should be available for consultation by the burn service on a 24-hour basis. Members must participate in an internal education plan.

1403.11 Performance Improvement

The burn program must have a performance improvement program that is multidisciplinary. The burn center director must be responsible for the performance improvement program. The burn center multi-disciplinary committee, which oversees the performance improvement program, must meet at least quarterly. Sufficient documentation must be maintained to verify problems, identify opportunities for improvement, take corrective actions, and resolve problems. Morbidity and mortality conferences must be held at least monthly with physicians other than the immediate burn care team to ensure objective review of the presentations. Attendees at this conference must include specialist staff members other than those practicing in the burn center. All significant complications and deaths must be discussed. Actions recommended must also be documented, and there must be documentation of loop closure. Records of this conference must be kept.

The burn center must develop an internal, specific Performance Improvement (PI) plan that minimally addresses the following key components and is fully integrated into the hospital wide program:

q. An organizational structure that facilitates performance improvement (Multidisciplinary Committee).

r. Clearly defined authority and accountability for the program.

s. Clearly stated goals and objectives one of which should be reduction of inappropriate variations in care.

t. Development of expectations (criteria) from evidenced based guidelines, pathways and protocols. These should be appropriate, objectively defined standards to determine quality of care.

u. Explicit definitions of outcomes derived from institutional standards.

v. Documentation system to monitor performance, corrective action and the result of the actions taken.

w. A process to delineate credentialing of all burn service physicians.

x. An informed peer review process utilizing a multidisciplinary method.

y. A method for comparing patient outcomes with computed survival probability.

z. Autopsy information on all deaths when available.

aa. Review of pre-hospital care.

bb. Review of times and reasons for burn bypass.

cc. Review of times and reasons for burn transfers.

dd. Audit of burn deaths.

ee. Morbidity and Mortality review.

ff. Feedback process with the referring hospital/physician.

Representatives from the burn center shall participate in the Trauma Region committees and the statewide performance improvement process.

1403.12 Weekly Patient Care Conferences

Patient care conferences must be held at least weekly to review and evaluate the status of each patient admitted to the burn center. Each clinical discipline should be represented to appropriately contribute to the treatment plan for each patient. Patient care conferences must be documented in the progress notes of each patient and/or in minutes of the conference.

1403.13 Infection Control Program

The burn center must have effective means of isolation that are consistent with principles of universal precautions and barrier techniques to decrease the risk of cross-infection and cross-contamination. The burn center hospital must provide ongoing review and analysis of nosocomial infection data and risk factors that relate to infection prevention and control for burn patients. These data must be available to the burn team to assess infection risk factors that relate to infection prevention and control for burn patients.

1403.14 Continuity of Care Program

The burn center must provide the following services:

h. Patient and family education in rehabilitation programs

i. Support for family members or other significant persons

j. Coordinated discharge planning

k. Follow-up after hospital discharge

l. Access to community resources

m. Evaluation of the patient's physical., psychological, developmental, and vocational status

n. Planning for future rehabilitative and reconstructive needs

1403.15 Burn Prevention Program

The burn center will be responsible for taking a lead role in coordination of appropriate agencies, professional groups and hospitals in their region to develop a strategic plan for public awareness. This plan must take into consideration public awareness of the burn system, access to the system, public support for the system, as well as specific prevention strategies. Prevention programs must be specific to the needs of the region. The trauma registry data must be utilized to identify injury trends and focus prevention needs.

1403.16 Research Program

The burn center must participate in basic, clinical, and health sciences research. The medical director must demonstrate ongoing involvement in burn-related research.

1403.17 Other Services

Renal dialysis, radiological services (including computed tomography scanning), and clinical laboratory services must be available 24 hours per day.

1404. Essential and Desirable Chart for Burn Centers (Reserved)

APPENDIX A – MISSISSIPPI TRAUMA ADVISORY COMMITTEE

William T. Avara, III, M.D., Chairman

Singing River Hospital

2525 Telephone Road

Pascagoula, MS 39567

Expires: 7/01/2010

Coastal Trauma Care Region

Rodney Frothingham, M.D.

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Expires: 6/30/2010

MS State Med. Association

H.S. McMillan

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Jackson, MS 39215-1698

Expires: 6/30/2010

Dept of Rehabilitation Services

John Nelson, M.D.

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Hattiesburg

39402-8341

Expires: 6/30/2010

MS Chapter, ACEP

G. Douglas Higginbotham, Exec. Dir.

South Central Regional Medical Center

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MS Hospital Association

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Southwest Trauma Care Region

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Delta Trauma Care Region

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Southeast Trauma Care Region

K.C. Hamp, Sheriff

Tunica County

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County/Municipal Government

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Expires: 6/30/2010

MS Emergency Nurses Assoc.

Jonathan Wilson, RN

University of Mississippi Medical Center

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Expires: 7/1/2009

Mississippi Nurses Association

Josh Wenzel, NREMT-P

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North Trauma Care Region

JoAnne Coates, M.D.

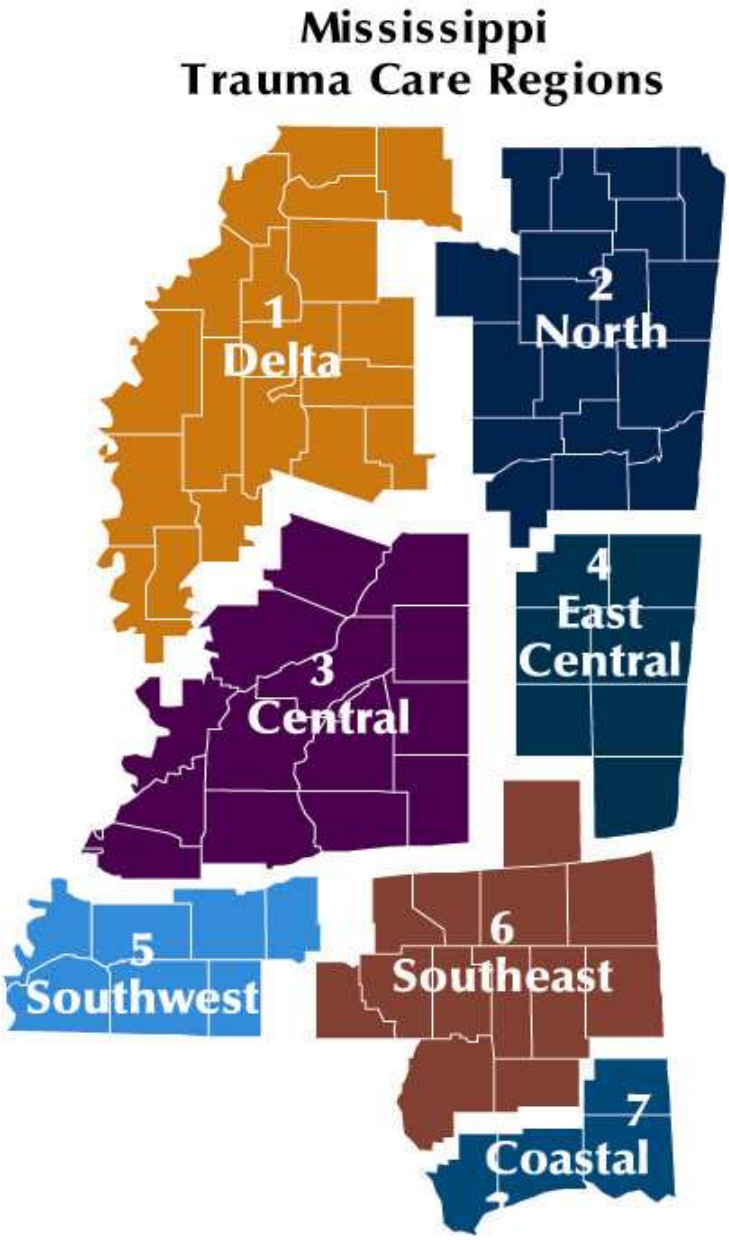
P.O. Box 6254

Philadelphia, MS 39350

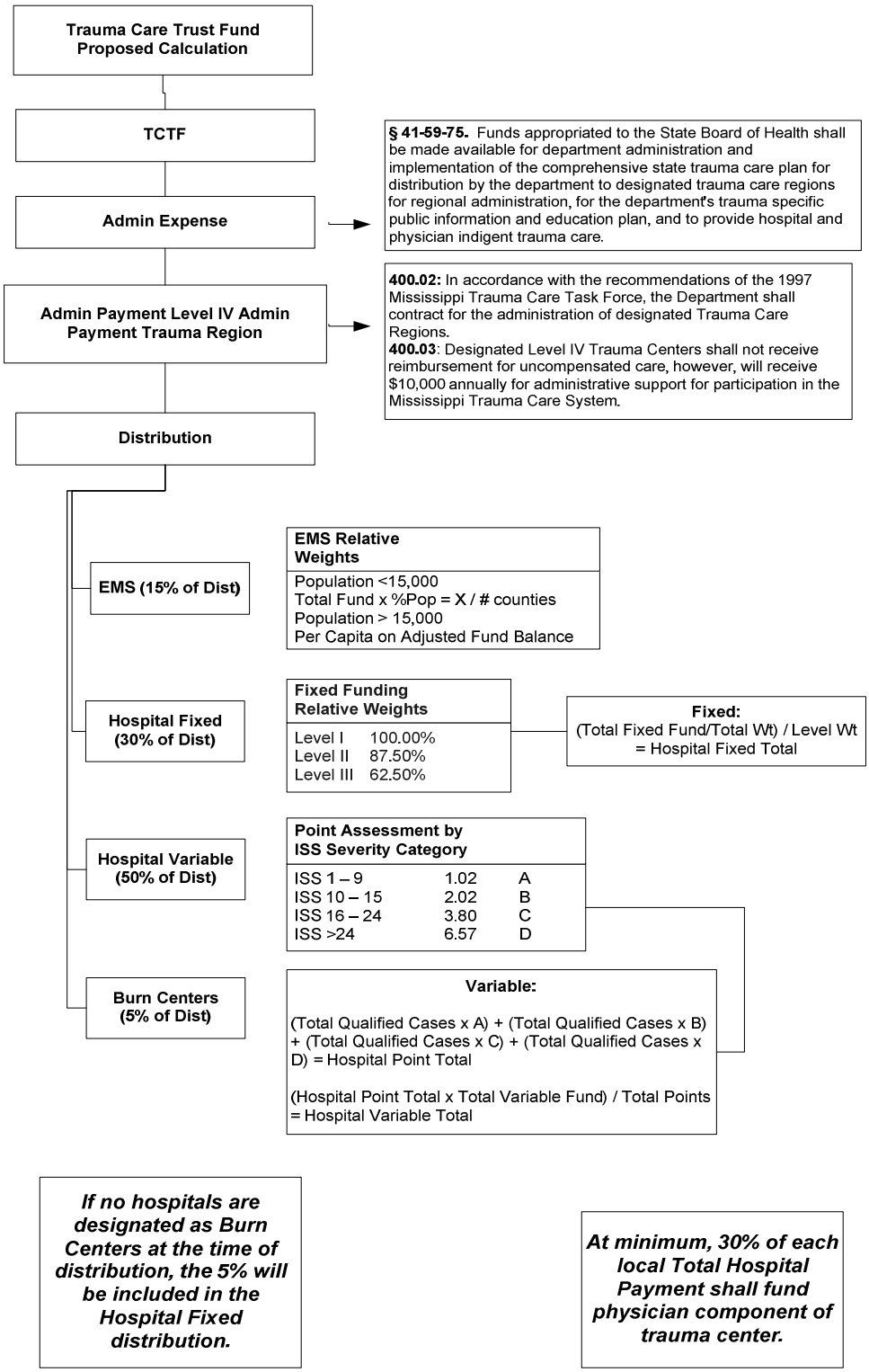
Expires: 7/1/2009

East Central Trauma Care Region

APPENDIX B – TRAUMA CARE REGIONS MAP



Appendix D – Trauma Care Trust Fund Distribution Model



CERTIFICATION OF REGULATION

This is to certify that the above **The Mississippi Trauma Care System Regulations** was adopted by the Mississippi State Board of Health on October 13, 2010 to become effective November 19, 2010.

M. Currier, MD, MPH
Secretary and Executive Officer