ARKANSAS STATE BOARD OF HEALTH

~~Section of Emergency Medical Services~~
~~And Trauma Systems~~
Arkansas Department of Health
Injury Prevention and Control Branch
Trauma Section

~~RULES AND REGULATIONS~~

~~FOR~~

~~TRAUMA SYSTEMS~~
ARKANSAS TRAUMA SYSTEM

RULES AND REGULATIONS

Promulgated Under the Authority of Act 559 of 1993
and Act 393 of 2009

Effective ~~December 5, 2002~~
~~This (Revision) Effective March 1, 2009~~
By the Arkansas State Board of Health
Arkansas Department of Health
Little Rock, Arkansas
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AUTHORITY

The following Arkansas Trauma System Rules and Regulations (hereafter referred to as the Rules) pertaining to the comprehensive, statewide trauma system are duly adopted and promulgated by the Arkansas State Board of Health pursuant to the authority expressly conferred by Act 559 of 1993, Ark. Code Ann. § 20-13-801 et seq. (The Trauma System Act), Act 393 of 2009, Ark. Code Ann. § 20-13-801 et seq. (An Act to Amend the Trauma System Act), and the laws of the State of Arkansas. including, without limitation, Act 96 of 1913. (Arkansas Statutes, 1947, Section 82-110).

SECTION I: DEFINITIONS /ACRONYMS

For the purpose of these regulationsRules, the following terms are defined:

NOTE: All definitions refer to the "adult trauma patient" unless otherwise identified.

AACN: American Association of Critical Care Nurses

AANN: American Association of Neuroscience Nurses

Abbreviated Injury Scale: An anatomic injury severity scoring system.

ABEM: American Board of Emergency Medicine

ABMS: American Board of Medical Specialties

ABP: American Board of Pediatrics

ABS: American Board of Surgery

ACEP: American College of Emergency Physicians

ACGME: Accreditation Council for Graduate Medical Education

ACLS: Advanced Cardiac Life Support

ACLS-certified: Individuals certified by the American Heart Association in Advanced Cardiac Life Support.

ACS COT: American College of Surgeons Committee on Trauma
ACS: American College of Surgeons

ACOS: American College of Osteopathic Surgeons

ACS: American College of Surgeons

ACS COT: American College of Surgeons' Committee on Trauma

~~**Act**: Act 559, The Trauma System Act of 1993~~

~~**Adult**: Age classification 18 years old and above~~

ADH: Arkansas Department of Health (used interchangeably with "Department" as described in Ark. Code Ann. § 20-13-803)

Advanced Life Support:
    Three Components
- *Advanced life support (ALS) assessment* is an assessment performed by an ALS crew as part of an emergency response that was necessary because the patient's reported condition at the time of dispatch was such that only an ALS crew was qualified to perform the assessment. An ALS assessment does not necessarily result in a determination that the patient requires an ALS level of service.
- *Advanced life support (ALS) intervention* means a procedure that is, in accordance with state and local laws, beyond the scope of authority of an Emergency Medical Technician (EMT).
- *Advanced life support (ALS) personnel* means an individual trained to the level of the Advanced Emergency Medical Technician (Advanced EMT) or Paramedic. The Advanced EMT is defined as an individual who is qualified, in accordance with state and local laws, as an EMT and who is also qualified in accordance with state and local laws to perform essential advanced techniques and to administer a limited number of medications. The Paramedic is defined as possessing the qualifications of the Advanced EMT and also, in accordance with state and local laws, as having enhanced skills that include being able to administer additional interventions and medications.

Advanced Pediatric Life Support Course: Jointly developed and sponsored by the American College of Emergency Physicians and American Academy of Pediatrics.

Advanced Trauma Life Support Course: A course certified through the ACS with a four year certification.

AIS: Abbreviated Injury Scale~~: An anatomic severity scoring system~~

Alcohol screening and intervention: A method to screen trauma patients for risky alcohol use or abuse and a plan to assist patients with positive screens. Screening can be in the form of a consumption questionnaire or biological measurements. Assistance can be a provision of appropriate referrals or in-house intervention such as brief motivational interviewing.

Alpha: Dashboard status in which trauma services are provided at a trauma center and open to EMS and transfers. This status only needs updating upon any changes to the system.

ALS: Advanced Life Support, including techniques of resuscitation, such as intubation, intravenous access, and cardiac monitoring

Alternate Criteria: Those criteria for inclusion in the trauma service, which are offered as an alternative to Board Certification. The non-board-certified surgeon must have completed an approved surgical residency program. The surgeon must be licensed to practice medicine and approved for surgical privileges by the hospital's credentialing committee. The surgeon must meet all criteria established by the trauma director to serve on the trauma team. The surgeon must have experience in caring for trauma patients which must be tracked by the performance improvement (PI) program. The Trauma director must attest to the surgeon's experience and quality of patient care as part of the recurring granting of trauma team privileges consistent with the hospital's policy. This individual is expected to meet all other qualifications for members of the trauma team.

Alternate pathway: Criteria that shall be satisfied by a provider to be a member of a facility's trauma team in a specialty for which he/she does not hold Board certification. The alternate pathway is determined by the ADH and is specific to specialties. Facilities that wish to be designated with physicians who qualify for participation under the alternate pathway shall notify the ADH Trauma Section at least three months prior to the designation visit.

AMA: American Medical Association

AOA: American Osteopathic Association

AOBEM: American Osteopathic Board of Emergency Medicine

APLS: Advanced Pediatric Life Support – covers the knowledge and skills necessary for the initial management of pediatric emergencies, including trauma.

Arkansas Health Data Initiative: Established by Act 1035 of 2003 (Ark. Code Ann. § 20-8-401 et seq.), this initiative is designed to "serve as an access point for studies concerning state and federal health information, to inform and support Arkansas health policy officials." Act 1035 authorizes the Director of the Arkansas Center for Health Improvement to establish and maintain this program.

Arkansas Trauma Communications Center: The Arkansas Trauma System's patient transport coordination center for both prehospital emergencies and for interfacility transfers. Staffed with both Paramedics and RNs, it uses the AWIN network and dashboard to coordinate the transport of trauma patients to the closest, most appropriate trauma center or, if appropriate, the closest hospital (used interchangeably with "call center" as described in Ark. Code Ann. § 20-13-817).

Asystole: Absence of spontaneous cardiac activity.

ATCN: Advanced Trauma Care Nursing

ATLS Course: Advanced Trauma Life Support Course of the American College of Surgeons

ATCC: Arkansas Trauma Communications Center

Audit filters: State audit filters are tools that assist with monitoring the process of care relative to standards of care.

AWIN: Arkansas Wireless Information Network

Backfill agreement: A formal, signed agreement between EMS providers with cross-jurisdictional (adjoining county) provision of emergency services from one service to another when existing resources are, or may be, inadequate or depleted.

BLS: Basic Life Support techniques of resuscitation, including simple airway maneuvers and administration of oxygen.
Basic (Level IV) Facility: Medical facility that provides screening and definitive care or stabilization and transfer of severely injured patients in remote areas where no alternative care is available, or stabilization while arranging for transfer to a Level I, Level II, or Level III facility that can provide further definitive surgical care. **Basic Life Support:** Transportation by ground ambulance vehicle, provision of medically necessary supplies and service, and the provision of BLS ambulance services.

- ***Basic life support (BLS) personnel*** means that the ambulance shall be staffed by an individual who is qualified in accordance with state and local laws as an Emergency Medical Technician (EMT). These laws may vary from state to state. For example, only in some states is an EMT permitted to operate limited equipment on board the vehicle, assist more qualified personnel in performing assessments and interventions, and establish a peripheral intravenous (IV) line.

BLS: Basic Life Support

Board: The Arkansas State Board of Health as provided for in Ark. Code Ann. §20-7-102.

Board-certified: Physicians certified by appropriate specialty Boards recognized by the American Board of Medical Specialties ABMS.
Burn patient referral: In general, patients for referral are so-called "major burns," described as burns involving 20 percent or greater body surface area (BSA) in an adult, or 10 percent or greater BSA in a child; additionally, burns of lesser BSA in patients with concomitant serious disease—for example, cirrhosis, diabetes, and cardiac disease—should be considered for transfer, as should special problems, such as inhalational injuries and burns involving hands, feet, face, and genitalia.
Board-eligible: The time a candidate has from the end of training to successfully complete a certifying examination. This period is defined by the specialty Board.

Bravo: Dashboard status in which the particular trauma service is provided but the trauma

center is at capacity – delay is possible. This status reverts to Alpha every two hours and shall be updated by the trauma center if necessary. This represents a capacity rather than a capability issue.

Bypass (Divert Status): Transport of an EMS patient past a normally used EMS receiving facility for the purpose of accessing more readily available or appropriate medical care.
Bypass: Transport of a trauma patient past a receiving trauma center normally used by the EMS provider for the purpose of accessing more readily available or appropriate medical care.

CCRN: Critical Care Registered Nurse certification from the American Association of Critical Care Nurses.

CD: Compact disc

CDC: Centers for Disease Control and Prevention in Atlanta, GA—a Federal agency committed to epidemiological surveillance, control of disease processes, particularly those secondary to infection or trauma, and prevention.

CE: Continuing education

Centers for Disease Control and Prevention: A federal agency committed to epidemiological surveillance and control of disease processes, particularly those secondary to infection or trauma, and prevention.
Certificate of Special Competency or Added Qualifications: Recognition of specialized education in selected areas of care and acknowledged by the American Board of Medical Specialties.

Child: Age class from one year old through 17 years of age

CEO: Chief Executive Officer

Charlie: Dashboard status in which the particular trauma service is never provided at the trauma center. This is a capability rather than a capacity issue. This status never needs updating unless the center begins offering the service.

Charlie Temp: Dashboard status in which the particular trauma service is normally provided at the trauma center but is temporarily unavailable. This status shall be updated by the trauma center when capability returns to normal. This represents diversion and is characterized by a change in capability rather than capacity.

CME: Continuing medical education

CMS: Centers for Medicare and Medicaid Services

Closed: Dashboard status in which a trauma center has a major internal emergency

(structural damage, environmental or utility problems, etc.) and cannot accept any patients including self-referrals or by private vehicle.

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

Comorbidity: Significant cardiac, respiratory, or metabolic diseases that stimulate the triage of injured patients to trauma centers. An underlying process present prior to the injury that contributes to the morbidity of the injury and may affect triage decisions. Examples are significant cardiac, respiratory, or metabolic diseases that stimulate the triage of injured patients to trauma centers.

Comprehensive (Level I) Facility: Regional resource trauma center that has the capability of providing leadership and total care for every aspect of injury from prevention through rehabilitation.

Continuing Medical Education: (CME): Defined educational activities for practicing physicians, often resulting in approved credit hours from the AMA, state medical society, a medical school, or a hospital.

COO: Chief Operating Officer

Core Surgeon: On-call panel of surgeons taking greater than 60% of current trauma calls within their specialty. Responsible for all credentialing requirements within their specialty, including at least 50% attendance at Trauma Peer Review Committee meetings.

Credentialing: Approval of a physician as a member of the trauma team, based on a review of the individual's training and experience by the trauma service director TMD and the appropriate service chief.

CRNA: Certified Registered Nurse Anesthetist

CT: Computed Tomography or CT Scan

Dashboard: An up-to-date, live computer screen depiction at the ATCC of the capability and capacity to deliver trauma services of:
- every designated trauma center in the Arkansas Trauma System and,
- those hospitals that are "in pursuit of designation."

Delta: Dashboard status in which the particular trauma service is provided but is at capacity and resolution (e.g., return of services availability) is not expected for at least 12 hours. This represents diversion and is a capacity rather than a capability issue.

Demonstrated commitment: Provision of evidence (visible and written) that clearly demonstrates an institution -wide commitment to trauma care.

Department: The Arkansas Department of Health

Designation: The process by which a hospital is identified by the Department ADH as an appropriate facility trauma center to receive traumatically injured patients.

Desirable characteristic: A component of the trauma facility center care standards, whose the presence or availability of which is encouraged but not required for designation.

Disaster: Sudden event with a variable mixture of injury to or sickness of human beings, destruction, or contamination of property, overwhelming demand on local response resources, and/or disruption of organized societal mechanisms.

Diversion: A procedure put into effect by a trauma facility center to insure ensure appropriate patient care when that facility center is unable to provide the level of care demanded by a trauma patient's injuries or when the facility has temporarily exhausted its resources.its usual and expected capability and capacity, either on a permanent or temporary basis.

Early consultation: "As early as the need is recognized"; the expectation is that if the trauma panel member is requested to be at the bedside, he/she will respond to the bedside within 30 minutes.

ECHO: Echocardiogram

ED: Emergency Department

EM: Emergency Medicine

Emergency Medical Services(EMS): The transportation and medical care provided the critically ill or injured patient prior to arrival at an emergency department and within a medical facility subject to the individual approval of the medical staff and governing board of that facility. by a certified emergency medical technician or other health care provider. Continuation of the initial emergency care within a medical facility subject to the approval of the medical staff and governing board of that facility (Ark. Code Ann. § 20-13-202[9]).

Emergency Nurse Pediatric Course: Developed and sponsored by the ENA which covers the knowledge and skills necessary for the initial nursing assessment and management of pediatric patients in the ED.

EMR: Electronic medical record

EMS: Emergency Medical Services

EMS Provider: An individual licensed by the ADH's Section of EMS to include, without limitation, EMT, Advanced EMT, Paramedic, and EMS Instructor.

EMTALA: Emergency Medical Treatment and Active Labor Act (42 U.S.C. §1395dd)

ENA: Emergency Nurses Association

Encounter Form: The patient care record approved by the ADH's Section of EMS that fully describes all prehospital care provided. The encounter form shall be left with the receiving hospital at the time of transfer of care or no more than 24 hours after the transfer of care. This form shall include a patient narrative.

ENPC: Emergency Nurse Pediatric Course ~~developed and sponsored by the ENA which covers the knowledge and skills necessary for the initial nursing assessment and management of pediatric patients in the emergency department.~~

ENT: Ear, nose, and throat

ETT: Endotracheal tubes

~~**Required characteristic:** A component of the trauma care facility standards that is required for designation.~~

Extrication ~~Services~~: The services provided by the use of specialized equipment for the purpose of gaining access to, and ultimately extricating, ~~entry to~~ entrapped patients.

FACS: Fellow of the American College of Surgeons

FAST: Focused Assessment with Sonography for Trauma

Field triage: Classification of patients according to medical need at the scene of a~~n~~ traumatic injury ~~or onset of an illness~~.

FTE: Full-time equivalent

GCS: Glasgow Coma Scale ~~A scoring system that defines eye, motor, and verbal responses in the patient with injury to the brain.~~

~~**General (Level III) Facility:** Hospital that provides assessment, resuscitation, emergency surgery, and definitive care or stabilization while arranging for transfer to a Level I or Level II facility that can provide further definitive surgical care.~~

General Surgery ~~Accredited~~Residency Program: ~~Programs approved by the Accreditation~~

Council for Graduate Medical Education General Surgical postgraduate training approved by the ACGME.

Glasgow Coma Scale: A scoring system that defines eye, motor, and verbal responses in the patient with injury to the brain.

Health Insurance Portability and Accountability Act (45 CFR Parts 160, 162, 164, as amended by the HITECH Act, 78 FR page 5566): Requires that health care organizations standardize patient health, administrative and financial data.

HIPAA: Health Insurance Portability and Accountability Act (see above citation)

Hospital criteria: Essential Required or desirable characteristics that help categorize Level I, II, III, and IV trauma facilities centers.

ICD-9: Current Edition of International Classification of Diseases a standard coding system that includes all injuries and disease processes.

ICP: Intracranial pressure, (often monitored in patients with severe injuries to the brain)

ICU: Intensive Care Unit

Immediately available to the patient: Services provided by a trauma facilitycenter that are in -house 24 hours a day, seven 7 days a week/7.

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

Infant: Age class from birth to one year old.
In-house: Physically present in the hospital

In-pursuit of designation: A hospital's status while it attempts, prior to its designation site survey, to become designated as a trauma center within the Arkansas Trauma System.

Injury: The result of an act that damages, harms, or hurts; unintentional or intentional damage to the body resulting from acute exposure to mechanical, thermal, electrical, or chemical energy or from the absence of such essentials as heat or oxygen (see Trauma).

Injury and Violence Prevention Section: The organization within the ADH responsible for development and promotion of injury prevention programs as set forth in Ark. Code Ann. § 20-13-818.

Injury control: Programs Activities designed to teach potential victims how to avoid injuries

decrease the burden of injury

Injury Severity Score: The sum of the squares of the AIS scores of the three most severely injured body regions.

Interfacility transfer: The transfer of a patient from one facility~~hospital~~ to another ~~hospital~~facility.

International Classification of Diseases: A standard coding system that includes all injuries and disease processes.

ISS: Injury Severity Score ~~— the sum of the squares of the Abbreviated Injury Scale scores of the three most severely injured body regions.~~

IVP: Injury and violence prevention (used interchangeably with "injury prevention programs" as described in Ark. Code Ann. § 20-13-818)

~~**Lead Trauma Facility:** A trauma facility that has made an additional commitment to its trauma service region. This commitment, which usually is offered by the highest Level of trauma facility in a given trauma service region, includes outreach and increased educational activities. The responsibilities may be shared by trauma facilities.~~**Major (Level II) Facility:** ~~Hospital that provides screening and definitive care of the traumatically injured patient regardless of the severity of injury, but does not conduct a trauma research program or a general surgery residency program.~~**Massive transfusion protocol:** A written protocol required for Level I, II, and III trauma centers and desired for Level IV trauma centers. The massive transfusion protocol is used to identify and manage patients with significant blood loss who require ongoing resuscitation with blood components to maintain intravascular volume and hemostasis.

Mechanism of injury: The source of forces that produce mechanical deformations and physiologic responses that causes an anatomic lesion or functional change in humans. The circumstance in which an injury occurs such as sudden deceleration, wounding by a projectile, or crushing by a heavy object.

Medical control-direct: ~~(Direct): Immediate medical direction to prehospital personnel in remote locations provided by a physician or an authorized communications resource person under the direction of a physician.~~ Direction to prehospital personnel provided by a physician or an authorized communications resource person under the direction of a physician.

Medical control-indirect: ~~(Indirect):~~ The establishment and monitoring of all medical components of an EMS system, including protocols, standing orders, education programs, and the quality and delivery of direct control.

Medical oversight: ~~The assistance given to the Trauma Regional Advisory Council (TRAC) and/or regional health care entities in system planning by a physician or group of physicians designated by the TRAC to provide technical assistance~~The assistance given to the TRACs by a physician or group of physicians designated by the TRAC to provide technical assistance in regional system planning

Mid-level practitioner: Physician assistant, RN or an advanced nurse practitioner. Mid-level practitioners may participate in the care of trauma patients. They may initiate trauma resuscitation and perform procedures as long as they are current in ATLS. The supervising physician shall meet the ATLS requirements described within this document. The supervising physician shall be notified of the arrival of trauma patients and be available for assistance. This process and resulting patient outcomes shall be reviewed through the trauma QI program.

Morbidity: The relative incidence of disease

Mortality: ~~The proportion of deaths to population.~~The number of deaths in a defined population in a defined unit of time typically represented as mortality rate.

MRI: Magnetic resonance imaging

~~**Multidisciplinary trauma review committee**: Committee composed of the trauma service director and other physician members of the trauma service that reviews trauma deaths in a system or hospital.~~

Multiple or mass casualty triage: Specialized techniques of triage used when large numbers of injured patients are concentrated in one area.

Non-core surgeon: Not part of surgical trauma coverage, taking less than 40% of trauma call of a given specialty. Not responsible for QI meeting attendance, but is required to maintain CME and all other requirements within his/her specialty.

NSA: Non-surgical admission

Occasional failure to meet standards: A temporary or unforeseen circumstance in which a trauma center cannot meet a standard of care (as set forth in Sections VII and VIII) less than 5% of the time annually. This shall be monitored by the center's QI program.

OGME: Osteopathic Graduate Medical Education

OMFS: Oral and maxillofacial surgery

On-call: Committed for a specific time period to be available and respond within an agreed amount of time to provide care for a patient in the hospital.

OPO: Organ Procurement Organization

OR: Operating room

ORIF: Open reduction internal fixation

~~Over-triage: Directing patients to trauma centers when they do not need such specialized care. Over-triage occurs because of incorrect identification of patients as having severe injuries when retrospective analysis indicates minor injuries.~~

Over-triage (two definitions):
- When the trauma team is activated at a level higher than required by the facility's criteria. Example: the facility's Level I criteria calls for activation for a patient with a GCS of < 9. The patient's condition by EMS report is a GCS of 12, yet the facility activates a Level I response.
- When the trauma team is activated appropriately according to the facility's criteria but the patient's condition does not require such services. Example: a facility activates a Level II for all patients in a rollover motor vehicle crash. This is an internal evaluation of appropriateness of the criteria.

PACU: Post-anesthesia care unit

PALS: Pediatric Advanced Life Support ~~Course developed and sponsored by the American Heart Association and the American Academy of Pediatrics covers the knowledge and skills necessary for the initial management of pediatric emergencies, including trauma.~~

Pediatric Advanced Life Support Course: Developed and sponsored by the American Heart Association and the American Academy of Pediatrics. This course covers the knowledge and skills necessary for the initial management of pediatric emergencies, including trauma.

Pediatric patient: The state defines a pediatric patient as ≤15 years old (cut off at 15 years, 364 days) for the purpose of data collection. Facilities have the discretion to define a pediatric patient differently for the purpose of admission to that facility. The facility is responsible for reporting capability to care for a pediatric patient, as defined by that facility, to the TRAC and to the ATCC. All facilities are required to provide emergency care within their capabilities to all patients regardless of age and shall be compliant with CMS/EMTALA regulations.

Pediatric trauma center: ~~Children's~~ A pediatric hospital fulfilling the criteria for comprehensive trauma care.

Pediatric Trauma Score: An injury scoring system used in some centers caring for pediatric patients.

Pediatric trauma surgeon: Certified pediatric surgeon with a commitment to trauma or certified general surgeon with special training and documented CME relevant to pediatric trauma care.

PET: Positron emission tomography

PGY: Post-graduate year

Post-graduate year(PGY): Classification system for residents in post-graduate training the. The number indicates the year they are in during the post-medical school residency program; for example, PGY 1 is one year after graduation from medical school.

Prehospital care provider: An individual or organization certified by the Section to provide out-of-hospital emergency medical services.
Promptly available to the patient: Services provided by a trauma facility center that are available to the patient within 30 minutes of patient arrival or notification, whichever comes first.

Protocol: A written procedure to ensure standardization of care.

QI: Quality improvement

Regionalization: The identification of available resources within a given geographic area and coordination of services to meet the needs of a specific group of patients.

Rehabilitation: Services that seek to return a trauma patient to the fullest physical, psychological, social, vocational, and educational level of functioning of which heor/she is capable, consistent with physiological or anatomic impairments and environmental limitations.

Required characteristic: A component of trauma center care standards that is required for designation.

Research: Clinical or laboratory studies designed to produce new knowledge applicable to the care of injured patients.

Response time: Interval between notification and arrival of a general surgeon or surgical specialist in the emergency department or operating room ED or OR.

Resuscitation: The phase of trauma or specialty care where emergency life support treatment is provided to sustain vital bodily functions.

RTS: Revised Trauma Score-A prehospital/emergency department scoring system in which

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numerical values are assigned to differing levels of Glasgow Coma Scale, systolic blood pressure, and respiratory rate.

Revised Trauma Score: A physiological scoring system, with high inter-rater reliability and demonstrated accuracy in predicting death. It is scored from the first set of data obtained on the patient, and consists of GCS, systolic blood pressure, and respiratory rate.

RN: Registered Nurse

RTS: Revised Trauma Score

RTTDC: Rural Trauma Team Development Course

Short Form: An abbreviated encounter form that is left at the receiving hospital at the time of transfer of care when a completed encounter form is not available. This form does not replace the requirement to provide a completed encounter form to the receiving hospital within 24 hours after the transfer of care.

Section: The Section of EMS and Trauma Systems; the organization within the Department responsible for the enforcement of EMS and Trauma Systems legislation within the State of Arkansas.

Sensory, Motor, and Circulation (SMC's): Refers to the assessment of the patient's ability to feel and move, and the status of the patient's blood circulation.

State Trauma Registry: A database of information, submitted to the Section by the hospitals, relating to the care of trauma patients as defined in these Rules and Regulations. The information is used to evaluate the quality of care provided.

Staff physician: A physician who is credentialed by a hospital to provide care; he/she may or may not be on the trauma call panel.

TAC: Trauma Advisory Council

TIR: Trauma Image Repository

TJC: The Joint Commission (formerly known as JCAHO)

TMCD: Trauma Medical Co-Director

TMD: Trauma Medical Director

TMR: Trauma Multidisciplinary Review

TPM: Trauma Program Manager

TRAC: Trauma Regional Advisory Council

TRAC Medical Director: Physician appointed to provide medical oversight and technical assistance within a TRAC.

TRAC MD: TRAC Medical Director

Transfer agreement: A formal, written agreement between ~~hospitals~~ trauma centers for the transfer and acceptance of trauma patients. ***Note:*** *This is not a substitute for the ~~Emergency Medical Treatment and Labor Act (~~EMTALA~~)~~ transfer forms*.

Trauma: A term derived from the Greek for "wound,"~~ it refers to any bodily injury (see Injury)~~. For the purpose of these Rules, trauma is strictly defined as a blunt or penetrating injury and certain special considerations such as burns, age, use of anticoagulation medication, and pregnancy > 20 weeks.

Trauma Advisory Council: The body of individuals appointed by the Governor to advise, assist, and make recommendations to the Trauma Section concerning the development and operation of the statewide trauma system (Ark. Code Ann. § 20-13-807).

Trauma band: A wristband applied to trauma patients during transport to the ED or while being treated in the ED. Each band has a unique identifier consisting of an alpha-numeric seven character combination (example: A000001) that will serve as a patient identifier in the EMS and Trauma Registries.

Trauma call ~~roster~~ panel: The listing of surgeons and physicians assigned to provide trauma care, including date of coverage and alternate surgeons.

~~**Trauma Care Systems and Planning Act:** The law that amended the Public Health Service Act to add Title XII Trauma Programs. The purpose of the legislation is 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 care (PL-101-590).~~

Trauma center: ~~(Facility):~~ ~~A specialized hospital facility distinguished by the immediate availability of specialized surgeons, physician specialists, anesthesiologists, nurses, and resuscitation and life support equipment on a 24-hour basis to care for severely injured patients or those at risk for severe injury.~~ A specialized, licensed hospital distinguished by the immediate availability of physicians and equipment on a 24/7 basis to care for severely injured patients or those at risk for severe injury.

Trauma ~~C~~center ~~D~~designation: ~~The process by which the Section of EMS & Trauma Systems identifies and selects facilities to care for severely injured patients within a trauma care system.~~ The process by which the Trauma Section identifies and verifies trauma centers' capability and capacity to care for severely injured patients within a trauma care system.

~~Trauma Coordinator/Trauma Program Manager: A registered nurse with responsibility for monitoring and evaluating nursing care of trauma patients and the coordination of quality improvement and patient safety programs for the trauma center in conjunction with the trauma medical director.~~

~~Trauma fellowship: Formal advanced postresidency training in the care of injured patients.~~

Trauma Image Repository: A centrally located server that stores images received from trauma centers which participate in the Arkansas Trauma System. The purpose is to share electronic images, such as CT scans, MRIs, X-rays, PET scans, ECHOs, and ultrasounds, with trauma centers where the patient is to be transferred for trauma care. The repository is a secure, Web-based program that allows the physicians and hospital staff access to patients' electronic images. The purpose of the repository is to provide instant electronic access to images so that definitive care can be delivered to the patient immediately upon arrival at the higher level trauma center. It also vastly decreases the likelihood that patients will need to be rescanned at the receiving facility.

Trauma liaison: The designated physician representative or their physician designee within a given specialty.

Trauma Medical Co-Director: Physician in a Level III trauma center designated by the institution and medical staff to coordinate trauma care when the TMD is not a surgeon. All qualifications, duties, and responsibilities required of the TMD are applicable to the TMCD.

Trauma Medical Director: Physician designated by the institution and medical staff to coordinate trauma care.

Trauma Multidisciplinary Review Process: An active process, led by the TMD and TPM, with representation from all core surgeons, specialties, and services, who participate on the trauma team at the facility, which is authorized to establish, review, and improve the care of the injured. This process shall consist of two distinct committees:
- Trauma Program Operations Review Committee: composed of the full membership of TMR as stated above, that assesses, addresses, and corrects Trauma Program system issues.
- Trauma Peer Review Committee: composed of the TMD, other physician and non-physician members of the trauma service, and sub-specialist involved in patient care in a case under review, that examines sentinel events, including trauma deaths, in a system or hospital.

Trauma patient: The patient ~~which~~ who presents with acute bodily injuries secondary to an external force requiring immediate intervention~~s~~ deemed necessary to preserve life and limb (see definition of Trauma). For statistical purposes, the definition will apply to the **traumatically injured patient** ~~that~~ who:
- ~~I~~is admitted for observation for a period of time greater than 8 hours~~,~~; or
- ~~I~~is admitted to the hospital~~,~~; or
- ~~I~~is transferred to another trauma ~~system facility,~~ center; or

- ~~E~~expires.

~~**Trauma prevention programs:** Internal institutional and external outreach educational programs designed to increase awareness of methods for prevention and/or avoidance of trauma related injuries.~~

Trauma Peer Review Committee: Composed of the TMD, other physician and non-physician members of the trauma service, and sub-specialist involved in patient care in a case under review, that examines sentinel events, including trauma deaths, in a system or hospital.

Trauma Program: An administrative unit that includes the trauma service and coordinates other trauma- -related activities; for example, IVP~~injury prevention~~, public education, CME activities, etc.

Trauma Program Manager: The RN who is responsible for the successful operation of the Trauma Program, including data abstraction, QI, internal and community education, and IVP efforts on behalf of the trauma center. The TPM may have other personnel resources to perform the above duties, but retains the ultimate responsibility for their success. The TPM may have a different title, depending on the organizational structure of the facility (such as trauma coordinator), but the FTE allocation and responsibilities remain the same.

Trauma Program Operations Review Committee: Composed of the full membership of TMR as stated above, that assesses, addresses, and corrects Trauma Program system issues.

Trauma Regional Advisory Council: (TRAC): The council formed within a trauma ~~service~~ region that develops and oversees the region's trauma system plan, to include, without limitation, QI and IVP activities.

Trauma Registry: ~~The collection and analysis of trauma data from the trauma system~~ A mechanism for the collection and analysis of trauma data from the trauma system. More specifically, a database of information, submitted to the Trauma Registry Section by the trauma centers, relating to the care of trauma patients as defined in these Rules. The information is used to evaluate the quality of care provided.

Trauma/Injury Severity Score: The likelihood of patient survival based on a regression equation that includes patient age, ISS, RTS, and the type of injury (blunt or penetrating).

Trauma Section: The organization within the ADH responsible for implementation of the trauma system per the Trauma System Act (Act 393 of 2009, Ark. Code Ann. § 20-13-801 et seq.).

Trauma service: ~~A clinical service established by the medical staff that has oversight of and responsibility for the care of the trauma patient.~~ The group of providers (physicians, mid-level practitioners such as physician assistants or nurse practitioners, and nurses) who are responsible for the care of the trauma patient and the trauma QI program in the trauma

center. In some centers this includes the general surgeons and liaisons from the various specialties. In larger, tertiary facilities, this may be a separate team that provides only trauma care.

Trauma Service Director: Physician designated by the institution and medical staff to coordinate trauma care.

Trauma Service Region (TSR): A geographic region of the state approved by the Section to implement a comprehensive trauma care system plan.

Trauma system: An integrated network that ensures that acutely injured patients are expeditiously taken to facilities hospitals appropriate for their level of injury and receive the best possible care.

Trauma team: A group of health care professionals organized to provide care to the trauma patient in a coordinated and timely fashion.

Triage: The sorting of patients in terms of priority, treatment, transportation, and destination, so that the patient can be transported to the most appropriate trauma center or, when appropriate, hospital based upon established criteria.

TRISS: Trauma Score/Injury Severity Score the likelihood of patient survival based on a regression equation that includes patient age, ISS, RTS, and the type of injury (blunt or penetrating).

Under-triage: Directing fewer patients to trauma centers than is warranted because of incorrect identification of patients as having minor injuries when retrospective analysis indicates severe injuries.

Under-triage (two definitions):
- When the trauma team is activated at a lower level than required by the facility's criteria. Example: the trauma center's Level I criteria calls for activation for a patient with a GCS of < 9. The patient's condition by EMS report has a GCS of 6, yet the facility activates as Level II response.
- When the trauma team is activated appropriately according to the facility's criteria but the patient's condition does not require such services. Example: a facility activates a Level II for all patients in a rollover motor vehicle crash. This is an internal evaluation of the appropriateness of the criteria.

Words implying the masculine gender may be applied to both males and females.

SECTION II: **ADMINISTRATIVE**

A.   All communications concerning these Rules and Regulations shall be addressed to the Arkansas Department of Health, Section of EMS and Trauma Systems, 5800 West 10th Street, Suite 800, Little Rock, Arkansas 72204-1763.

B.   Purpose

The purpose of these Rules and Regulations is to establish the procedures and standards for the implementation of a statewide comprehensive trauma system in order to decrease morbidity and mortality which results from trauma.

SECTION II: ADMINISTRATIVE

A.   Purpose

The purpose of these Rules is to establish the procedures and standards for a statewide, comprehensive trauma system in order to decrease morbidity and mortality which results from trauma.

B.   The Board may conduct public meetings consistent with the Administrative Procedures Act (Ark. Code Ann. § 25-15-201 et seq.) to modify provisions of these Rules in order to meet state, regional, or community needs regarding trauma care.

C.   All communications concerning these Rules shall be addressed to the Arkansas Department of Health, Trauma Section, 4815 West Markham, Slot 4, Little Rock, Arkansas 72205-3867.

D.   Only providers currently meeting trauma grant deliverables are eligible to:

1.   serve in an official capacity on the TAC, TRAC, or their subcommittees; and,

2.   receive supplemental funding, such as system enhancement, pay for performance, and special project funding.

SECTION III: **PUBLIC INFORMATION AND EDUCATION**

A.   Purpose

Because trauma is a preventable disease, community information and prevention is an important component of the Arkansas Trauma Care System. The Section shall actively promote and encourage trauma system education and injury prevention throughout Arkansas.

B.   Educational Resource Center

The Section shall establish and maintain an Educational Resource Center which will provide information on statewide trauma system components and established injury prevention programs on the local, state, and national level. The Center shall function as a clearinghouse to gather information regarding trauma care continuing education opportunities and make this information available to the trauma system providers.

C.   Trauma Facility Standards for Public Education and Injury Prevention

It shall be the responsibility of all designated trauma facilities to implement public education and injury prevention programs in the approved Trauma Service Region (TSR) as outlined in Section VII.G.

SECTION III: PUBLIC INFORMATION AND EDUCATION

A.   Purpose

Trauma is a preventable disease; therefore, public information and education are important components of the Arkansas Trauma System. The Trauma and IVP Sections shall provide easily accessible public information and actively promote and encourage trauma system and IVP education throughout Arkansas.

B.   Information and Resources

The Trauma and IVP Sections shall utilize the ADH website and other appropriate means to provide public information and resources, post notices, and reference other documents and information relevant to trauma system and IVP providers.

C.   Trauma Center Standards for Public Education and IVP

It shall be the responsibility of all designated trauma centers to implement public information and IVP programs as outlined in Section VII.

D.   No hospital may represent itself as an Arkansas-designated trauma center or advertise its expertise in the care of injured patients without a certificate of trauma center designation from the ADH.

SECTION IV: PREHOSPITAL TRIAGE AND TRANSPORT

A.   Purpose

Emergency care of the traumatically injured patient is best accomplished using an inclusive, multi-level trauma care systems approach. Triage, transport, and transfer protocols have been developed to ensure that trauma patients shall receive prompt and potentially lifesaving treatment.

B.   Trauma Systems Prehospital Trauma Treatment Standard

1. Assessment

Traumatically injured patients will be appropriately assessed using the Prehospital Triage Criteria & Decision Scheme as defined in Section IV.C.

2. Extrication

Extrication of the traumatically injured patient shall be initiated as needed by the prehospital care provider. (Ref. Emergency Medical Services Rules and Regulations).

3. Initiate resuscitation

Basic Life Support interventions (establishment of patient airway, hemorrhage control, spinal immobilization, fracture immobilization, etc.) will be initiated by the prehospital care provider following established local protocols. Advanced life support protocols shall be kept on file with the Section (ref. Emergency Medical Services Rules and Regulations).

4. Rapid transport to the appropriate medical facility

Patient transport will be initiated by the prehospital care provider following established local protocols.

5. Notify medical control at the receiving hospital

Contact with the receiving hospital will be made as soon as possible. An accurate description of the incident, injuries, current medical interventions based upon established protocols, and patient status will be relayed to the facility. Further management guidance will be

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~~requested from the receiving hospital medical control as required during transport.~~

6. ~~Treatment during transport~~

~~Patient care shall follow established local protocols.~~

7. ~~Indications to **NOT** activate the EMS system~~

~~The Trauma system should not be activated when the following patient conditions occur:~~

 a. ~~Decomposition~~

 b. ~~Rigor mortis~~

 c. ~~Normothermic asystole secondary to trauma (as determined by Advanced Life Support providers only; does not apply to Basic Life Support providers).~~

~~These patients should be transported at the direction of the medical examiner or coroner.~~

B. <u>Prehospital Trauma Treatment Standard</u>

 1. <u>Assessment</u>

 <u>Traumatically injured patients shall be appropriately triaged using the *Field Triage Decision Scheme: The Arkansas Trauma Triage Protocol* as defined in Section IV. C.</u>

 2. <u>Initiate resuscitation</u>

 <u>BLS interventions (establishment of patent airway, hemorrhage control, spinal immobilization, fracture immobilization, etc.) will be initiated by the EMS provider following established state protocols. If there are no state-mandated protocols established, the agencies shall follow local protocols.</u>

 3. <u>Rapid transport to the most appropriate trauma center, following contact with the ATCC when appropriate.</u>

 <u>Patient transport will be initiated by the EMS provider following established guidelines using the *Field Triage Decision Scheme: The Arkansas Trauma Triage Protocol*.</u>

 4. <u>Notify the receiving trauma center</u>

Contact with the receiving trauma center shall be made at least 15 minutes prior to patient arrival. If transport time is less than 15 minutes, contact shall be made as far in advance of arrival as possible. An accurate description of the incident, injuries, current medical interventions based upon established protocols, and patient status will be relayed to the trauma center. Further management guidance will be requested from the receiving hospital medical control as required during transport. The trauma center shall monitor the state-mandated EMS channel and EMS unit in a timely manner.

5.   Treatment during transport

Patient care shall follow established local protocols unless state-mandated protocols exist that address a specific issue.

6.   EMS providers shall not initiate transport procedures as set forth in the *Field Triage Decision Scheme: The Arkansas Trauma Triage Protocol* when the following patient conditions occur:
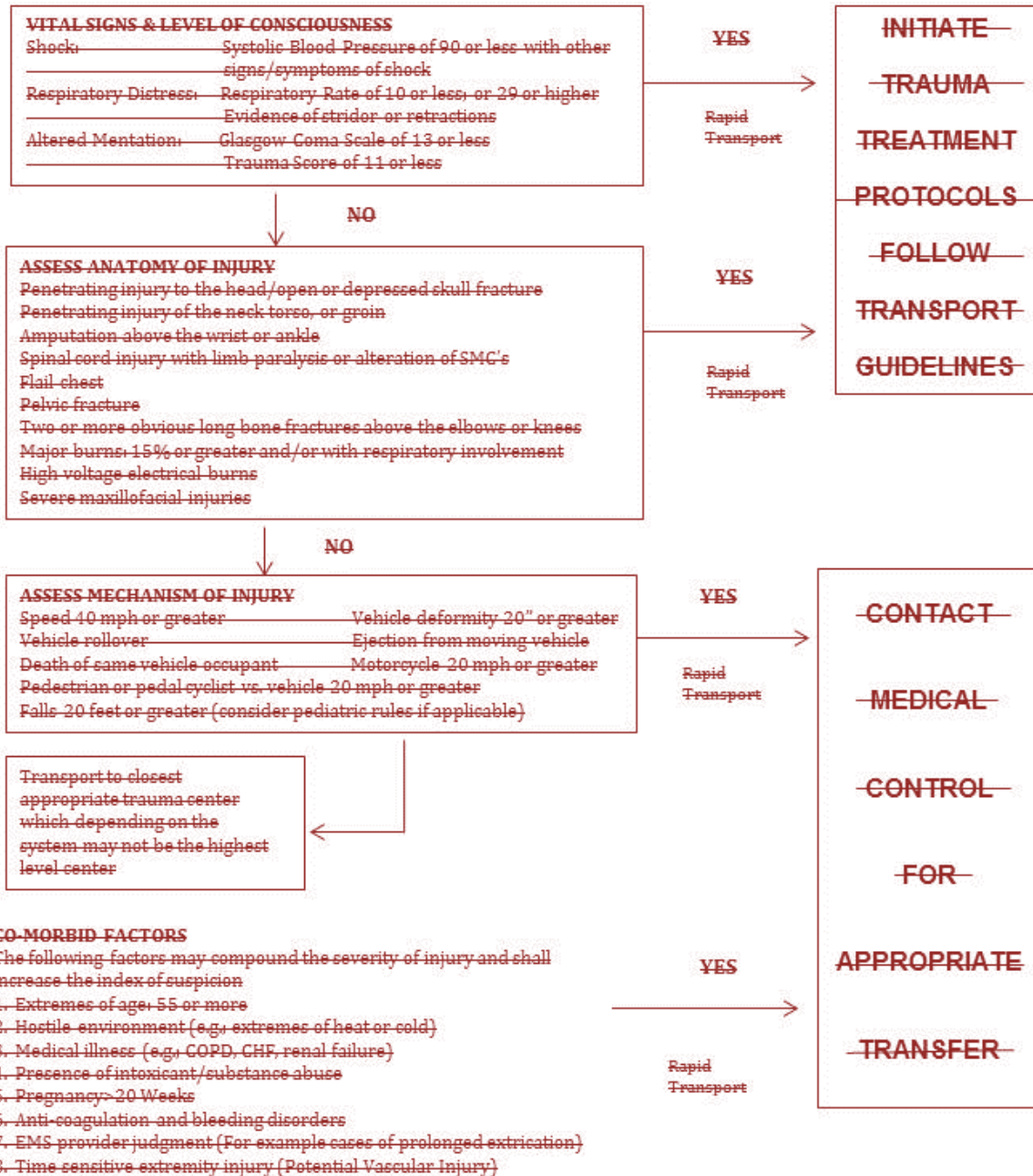
   a.   Decomposition

   b.   Rigor mortis

   c.   Normothermic asystole secondary to trauma (as determined by ALS providers only; does not apply to BLS providers).

These patients may be transported according to local protocol.

C. 1. Adult Prehospital Triage Criteria & Decision Scheme

VITAL SIGNS & LEVEL OF CONSCIOUSNESS
Shock: Systolic Blood Pressure of 90 or less with other signs/symptoms of shock
Respiratory Distress: Respiratory Rate of 10 or less, or 29 or higher Evidence of stridor or retractions
Altered Mentation: Glasgow Coma Scale of 13 or less Trauma Score of 11 or less

YES

Rapid Transport

→

NO

ASSESS ANATOMY OF INJURY
Penetrating injury to the head/open or depressed skull fracture
Penetrating injury of the neck torso, or groin
Amputation above the wrist or ankle
Spinal cord injury with limb paralysis or alteration of SMC's
Flail chest
Pelvic fracture
Two or more obvious long bone fractures above the elbows or knees
Major burns: 15% or greater and/or with respiratory involvement
High voltage electrical burns
Severe maxillofacial injuries

YES

Rapid Transport

→

INITIATE TRAUMA TREATMENT PROTOCOLS FOLLOW TRANSPORT GUIDELINES

NO

ASSESS MECHANISM OF INJURY
Speed 40 mph or greater   Vehicle deformity 20" or greater
Vehicle rollover   Ejection from moving vehicle
Death of same vehicle occupant   Motorcycle 20 mph or greater
Pedestrian or pedal cyclist vs. vehicle 20 mph or greater
Falls 20 feet or greater (consider pediatric rules if applicable)

YES

Rapid Transport

→

Transport to closest appropriate trauma center which depending on the system may not be the highest level center

←

CO-MORBID FACTORS
The following factors may compound the severity of injury and shall increase the index of suspicion
1. Extremes of age: 55 or more
2. Hostile environment (e.g., extremes of heat or cold)
3. Medical illness (e.g., COPD, CHF, renal failure)
4. Presence of intoxicant/substance abuse
5. Pregnancy> 20 Weeks
6. Anti-coagulation and bleeding disorders
7. EMS provider judgment (For example cases of prolonged extrication)
8. Time sensitive extremity injury (Potential Vascular Injury)

YES

Rapid Transport

→

CONTACT MEDICAL CONTROL FOR APPROPRIATE TRANSFER

C. 2. Pediatric Prehospital Pediatric Triage Criteria & Decision Scheme

VITAL SIGNS & LEVEL OF CONSCIOUSNESS

Respiratory Distress: Unstable or unmaintainable airway
                       Respiratory Rate < 10 or > 29
Shock: Age specific bradycardia or tachycardia
                       Capillary refill>3 seconds
                       Systolic Blood Pressure of 80 or less
Altered Mentation: Pediatric GCS of 9 or less
                       Pediatric Trauma Score of 9 or less
                       Combative

YES — Rapid Transport →

NO ↓

ASSESS ANATOMY OF INJURY
Penetrating injury to the head/open or depressed skull fracture
Penetrating injury of the neck torso, or groin
Amputation above the wrist or ankle
Spinal cord injury with limb paralysis or alteration of SMC's
Flail chest
Pelvic fracture
Two or more obvious long bone fractures above the elbows or knees
Major burns: 15% or greater and/or with respiratory involvement
High voltage electrical burns
Severe maxillofacial injuries

YES — Rapid Transport →

→ **INITIATE TRAUMA TREATMENT PROTOCOLS FOLLOW TRANSPORT GUIDELINES**

NO ↓

ASSESS MECHANISM OF INJURY
Speed 40 mph or greater   Vehicle deformity 20" or greater
Vehicle rollover   Ejection from moving vehicle
Death of same vehicle occupant   Motorcycle 20 mph or greater
Pedestrian or *pedal cyclist* vs. vehicle 20 mph or greater
Falls 20 feet or greater (consider pediatric rules if applicable)
*Children>10 Feet or 2 to 3 times the height of the child *1 Story = 10 Feet*

YES →

NO ←

Transport to closest **appropriate** Trauma center which depending on the system may not be the highest level center

CO-MORBID FACTORS

The following factors may compound the severity of injury and shall increase the index of suspicion:
1. Extremes of age: 12 or less/55 or more
2. Hostile environment (e.g. extremes of heat or cold)
3. Medical illness (e.g. COPD, CHF, renal failure)
4. Presence of intoxicant/substance abuse
5. Pregnancy>20 Weeks
6. Anti-coagulation and bleeding disorders
7. EMS provider judgment (For example cases of prolonged extrication)
8. Time sensitive extremity injury (Potential Vascular Injury)

YES — Rapid Transport →

→ **CONTACT MEDICAL CONTROL FOR APPROPRIATE TRANSFER**

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C.   Field Triage Decision Scheme: The Arkansas Trauma Triage Protocol

Measure vital signs and level of consciousness

Major

Glasgow Coma Scale	< 13
Systolic Blood Pressure	< 90 mmHg or age appropriate hypotension
Respiratory Rate	< 10 > 29 breaths/ minute
	(< 20 in infant < one year)
	or need for ventilatory support

NO

YES → Contact the ATCC and transport to the most appropriate hospital.

Assess anatomy of injury

Major

- All penetrating injuries to head, neck, torso, and extremities proximal to elbow or knee
- Chest wall instability or deformity (e.g., flail chest)
- Two or more proximal long-bone fractures
- Crushed, degloved, mangled, or pulseless extremity
- Amputation proximal to wrist and ankle
- Pelvic fractures
- Open or depressed skull fracture
- Paralysis

NO

Assess mechanism of injury and evidence of high-energy impact

Moderate

Falls
- Adults: > 20 feet (one story is equal to 10 feet)
- Children: > 10 feet or two or three times the height of the child

High-Risk Auto Crash
- Intrusion: > 12 in. occupant site; > 18 in. any site
- Ejection (partial or complete) from automobile
- Death in same passenger compartment
- Vehicle telemetry data/kinematics consistent with high risk of injury

Auto v. Pedestrian/Bicyclist Thrown, Run Over, or with Significant (>20mph) Impact

Motorcycle/ATV Crash > 20 mph with separation from vehicle

YES → Contact the ATCC and transport to the most appropriate hospital.

NO

Assess special patient or system considerations

Special Considerations

Older Adults
- Risk of injury/death increases after age 55 years
- SBP <110 might represent shock after age 65 years
- Low impact mechanisms (e.g. ground level falls) might result in severe injury

Children
- Should be triaged preferentially to pediatric-capable trauma centers

Anticoagulation Medication and Bleeding Disorders
- Patients with head injury are at high risk for rapid deterioration

Burns
- Without other trauma mechanism: Triage to burn facility
- With trauma mechanism: Triage to trauma center

Pregnancy > 20 weeks

EMS provider judgment

YES → Consider consultation with ATCC and transport to the most appropriate hospital.

NO

Minor   **Transport according to local protocol** 30

When in doubt, contact the ATCC

TS – Field Triage Decision Scheme rev. October 28, 2013

D. Trauma System Transport Standard

1. Patients meeting trauma criteria

~~Patients who meet the trauma criteria as outlined in Section IV.C. shall be transported to a Level I or Level II Facility unless:~~

~~a. The prehospital care provider is unable to establish or maintain an adequate airway or control excessive hemorrhage; in this case, the patient should be transported to the nearest licensed facility to provide the appropriate care.~~

~~1. If transport time to a Level I or Level II Facility is greater than 45 minutes by ground; transport the patient to a closer Level III Facility unless the Section of EMS and Trauma Systems has approved a deviation from these guidelines.~~

~~2. If transport time to a Level I, II, or III Facility is greater than 45 minutes; transport the patient to a closer Level IV Facility unless the Section of EMS and Trauma Systems has approved a deviation from these guidelines.~~

~~2. Override of criteria by Medical Control~~

~~Medical control may override the transport requirement outlined in Section IV.D.1. under the following conditions:~~

~~a. The hospital is unable to meet resource standards as defined for its designated Level.~~

~~b. Multiple patients are involved.~~

~~c. The patient needs specialized care and is stable.~~

Patients who meet the trauma criteria as outlined in Section IV. C. shall be transported to the most appropriate trauma center based on ATCC recommendation unless:

a. the EMS provider is unable to establish or maintain an adequate airway or control excessive hemorrhage; in these cases, the patient shall be transported to the nearest hospital able to provide the appropriate care; or,

b.   the ATCC recommends a specific trauma center and the patient refuses to be transported to that facility; in this case, the EMS provider shall fully inform the patient of the limited capacity and capability of the patient's chosen facility. The EMS provider has the discretion to transport the patient to the most appropriate trauma center to treat the patient's specific injuries (Act 553 of 2009, Ark. Code Ann. § 20-13-1003). If the patient refuses to be transported to the ATCC recommended trauma center and the EMS provider decides to take him/her to the patient's facility of choice, the EMS provider shall document the patient's refusal.

2.   Trauma bands shall be placed on all trauma patients who will be transported to a trauma center. Once applied to a trauma patient, the trauma band number shall be recorded on the patient care record.

3.   An EMS provider shall complete a radio report to the trauma center at least 15 minutes prior to patient arrival. If transport time is less than 15 minutes, contact shall be made as far in advance of arrival as possible.

4.   The EMS provider shall, at the time of transfer of care, leave a completed Encounter Form or a completed Short Form. If a Short Form is left with the receiving trauma center, the ambulance service shall submit a completed Encounter Form within 24 hours of transfer of care.

5.   An EMS provider shall maintain a minimum of two backfill agreements to be utilized in order to maintain service area coverage should the provider need to leave its service area for emergency trauma responses.

EMS providers shall participate in all QI reviews that involve care provided by the EMS service. These may occur at any level of the trauma system (e.g., the trauma center, the TAC QI/TRAC Subcommittee, or the TRAC QI Committee).

SECTION V: TRIAGE REQUIREMENTS FOR TRAUMA CENTERS

A.   Purpose

The role of the Level I and Level II (Ccomprehensive) and Level II (Major) Trauma facilities trauma centers shall be to provide the highest level of definitive, comprehensive care for the severely injured adult and pediatric patient with complex, multi-system trauma. In the event of the availability of a specialized Ppediatric Ttrauma Ccenter, the Level I or Level II centers facilities may elect to arrange for transfer of care to that

facilities center for pediatric patients. Level I and Level II Ttrauma centers facilities shall should have the capability of providing total patient care for every aspect of injury from prevention through the arrangement of rehabilitative services. The role of the Level III (Ggeneral) trauma center facility is to provide initial evaluation and stabilization, including surgical intervention, of the severely injured adult or pediatric patient. Critically injured patients who require specialty care are may be transferred to a higher Llevel trauma center facility in accordance with established criteria. The role of the Level IV (Bbasic) center facility is to provide resuscitation and stabilization of the severely injured adult or pediatric patient prior to transferring the patient to a higher Llevel trauma center facility.

B.   Standards for Level I (Comprehensive) and Level II (Major) Facilities

1.   Prehospital (EMS) Radio Report

The trauma facility shall monitor the EMS Communications system at all times. In the event of a trauma patient being transported, the EMS report shall be transmitted by the hospital provider to the Emergency Department of the receiving facility.

2.   Assignment of Trauma Score and Activation of the Trauma Protocol

Based upon the information received, the trauma facility triage nurse or other appropriate medical control officer shall assign a trauma score and, where indicated, activate the Trauma Treatment Protocol for that facility as outlined in Section V.C.

3.   Trauma Patients Not Meeting the Trauma Triage Criteria

Trauma patients shall undergo appropriate emergency department screening and evaluation as prescribed by local protocol.

C.   Triage Standard for Level I and II Facilities

1.   Receive EMS Radio Report

2.   Assign trauma score (RTS)

3.   Initiate Trauma Alert & Trauma Treatment Protocol if any one of the following criteria are met:

• Systolic Blood Pressure of 90 or less with other signs/symptoms of shock
• Respiratory Rate of 10 or less; or 29 or greater
• Glasgow Coma Scale of 13 or less
• Trauma Score of 11 or less

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• Pediatric Trauma Score of 9 or less

4. Immediate designated Trauma Team Physician evaluation and early consultation with either a Trauma Surgeon for a high energy event or an appropriate Surgical Subspecialist for isolated injury meeting any one of the following criteria:

• Penetrating injury to the head/open or depressed skull fracture
• Penetrating injury of the neck, torso, or groin
• Amputation above the wrist or ankle
• Spinal cord injury with limb paralysis or alteration of Sensory Motor Circulation (SMC's)
• Flail Chest
• Pelvic Fracture
• Two or more obvious long bone fractures above the elbows or knees
• Major burns: 15% or greater and/or with respiratory involvement
• High voltage electrical burns
• Severe maxillofacial injuries

5. Notify designated Trauma Team Physician on admission to emergency department and perform complete trauma evaluation and appropriate serial observations if the patient does not meet the above criteria but meets any of the following criteria for a high energy event:

• Speed 40 mph or greater   • Vehicle deformity 20" or greater
• Vehicle Rollover   • Ejection from moving vehicle
• Death of same vehicle occupant   • Motorcycle 20 mph or greater
• Pedestrian or pedal cyclist vs. vehicle 20 mph or greater
• Falls 20 feet or greater (consider pediatric rules if applicable)
• Children > 10 Feet or 2 to 3 times the height of the child
* 1 story = 10 Feet

 TRAUMA PATIENTS WHO MEET NONE OF THE ABOVE CRITERIA SHOULD UNDERGO APPROPRIATE EMERGENCY DEPARTMENT EVALUATION AND MANAGEMENT.

D. Standards for Level III (General) and Level IV (Basic) facilities

1. Prehospital (EMS) Radio Report

The trauma facility shall monitor the EMS Communications system at all times. In the event of a trauma patient being transported, the EMS report shall be transmitted by the prehospital provider to the Emergency Department of the receiving facility.

2. Assignment of Trauma Score and Activation of the Trauma Protocol

Based upon the information received, the trauma facility triage nurse or other appropriate medical control officer shall assign a trauma

score and, where indicated, activate the Trauma Treatment Protocol for that facility as outlined in Section V.E.

3. Trauma Patients Not Meeting the Trauma Triage Criteria

Trauma patients shall undergo appropriate screening and emergency department evaluation, observation, and consideration for discharge or admission.

4. Re-evaluation of Trauma Score Due to Deterioration of Patient Condition

The trauma patient whose condition deteriorates or is found to have significant injuries not detected in the initial evaluation should be reclassified and the Trauma Team activated.

E. Triage standard for Level III and IV Facilities
1. Receive EMS Report
2. Assign Trauma Score
3. Initiate Trauma Alert and Trauma Treatment Protocol if any of the following criteria are met:

• Systolic Blood Pressure of 90 or less with other signs/symptoms of shock
• Respiratory Rate of 10 or less; or 29 or greater
• Evidence of stridor or retractions
• Glasgow Coma Scale of 13 or less
• Trauma Score of 11 or less
• Pediatric Trauma Score of 9 or less
• Penetrating injury to the head/open or depressed skull fracture
• Penetrating injury of the neck, torso, or groin
• Amputation above the wrist or ankle
• Spinal cord injury with limb paralysis or alteration of Sensory Motor Circulation (SMC's)
• Flail Chest
• Pelvic Fracture
• Two or more obvious long bone fractures above the elbows or knees
• Major burns: 15% or greater and/or with respiratory involvement
• High voltage electrical burns
• Severe maxillofacial injuries

4. Apply High Risk Criteria For Consideration of Early Transfer guidelines developed by our facility to identify patients requiring interfacility transfer. A copy of these guidelines shall be kept on file with the Section of EMS & Trauma Systems. To assist the trauma facility in the development of these guidelines, recommendations for early transfer criteria are found in Section V.F.

5. Contact appropriate facility for transfer as soon as possible

6. Perform complete trauma evaluation and appropriate serial observations if the patient does not meet the above criteria but meets the criteria for a high energy event for any of the following:

• Speed 40 mph or greater   • Vehicle deformity 20" or greater
• Vehicle Rollover   • Ejection from moving vehicle
• Death of same vehicle occupant   • Motorcycle 20 mph or greater
• Pedestrian or pedal cyclist vs. vehicle 20 mph or greater

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- Falls 20 feet or greater (consider pediatric rules if applicable)
7. Consider any of the following Co-Morbid Factors
- Extremes of age: 12 or less/55 or more
- Pregnancy > than 20 weeks
- Hostile environment: (e.g.; extremes of heat or cold)
- Medical illness or prior history (Chronic Obstructive Pulmonary Disease [COPD], Congestive Heart Failure [CHF], renal failure, cardiac, diabetes, cirrhosis, morbid obesity, etc.)
- Pregnancy
- Immunosupressed patients
- Anti-coagulation and bleeding disorders
- EMS provider judgment (For example cases of prolonged extrication)
- Time sensitive extremity injury (Potential Vascular Injury)

PATIENTS WHO DETERIORATE OR ARE FOUND TO HAVE SIGNIFICANT INJURIES SHOULD BE RECLASSIFIED AND THE TRAUMA TEAM ACTIVATED. OTHER PATIENTS SHOULD UNDERGO APPROPRIATE EMERGENCY DEPARTMENT EVALUATION AND OBSERVATION AND CONSIDERATION FOR DISCHARGE OR ADMISSION.

F. Recommendations for High Risk Criteria for the Consideration of Early Transfer
(THESE GUIDELINES ARE NOT INTENDED TO BE HOSPITAL SPECIFIC)

CENTRAL NERVOUS SYSTEM

- Head Injury — Penetrating injury or open fracture (with or without Cerebral Spinal Fluid [CSF] leak)
  - Depressed skull fracture
  - Glasgow Coma Scale 13 or less or GCS deterioration
  - Lateralizing signs
- Spinal Cord Injury — Spinal column injury or major vertebral injury

CHEST

- Major chest wall injury
- Wide mediastinum or other signs suggesting great vessel injury
- Cardiac injury
- Patients who may require prolonged ventilation

PELVIS

- Unstable pelvis ring disruption
- Unstable pelvis fracture with shock or other evidence of continuing hemorrhage
- Open pelvic injury

MAJOR EXTREMITY INJURIES

- Fracture/dislocation with loss of distal pulses
- Open long-bone fractures
- Extremity ischemia

MULTIPLE-SYSTEM INJURY

- Head injury combined with face, chest, abdominal, or pelvic injury

- Burns associated with injuries
- Multiple long-bone fractures
- Injury to more than two body regions
- Severe maxillofacial injury

CO-MORBID FACTORS

- Age 55 or greater   • Age (12 or less)
- Cardiac or respiratory disease   • Insulin-dependent diabetes, morbid
                                         obesity
- Pregnancy   • Immunosupression

SECONDARY DETERIORATION (LATE SEQUELAE)

- Mechanical ventilation required
- Sepsis
- Single or multiple organ system failure (deterioration in central nervous,
  cardiac, pulmonary,
  hepatic renal, or coagulation systems.
- Major tissue necrosis

G.   Standards for the Referral of Patients to a Qualified Burn Center
    1.   A trauma patient meeting any one of the following criteria
            shall be considered a candidate for rapid transfer to a
            specialized burn center:
        a.   Second and third degree burns >10% BSA in patients <10 yrs or >
                50 yrs.
        b.   Second and third degree burns >20% BSA in other age groups.
        c.   Second and third degree burns involving face, hands, feet,
                genitalia, and perineum, or which involve skin overlying major
                joints.
        d.   Third degree burns > 5% BSA
        e.   High voltage electrical burns including lightning injury
        f.   Significant chemical burns
        g.   Inhalation injury
        h.   Burn injury in patients with preexisting condition that could
                complicate management, prolong recovery, or affect mortality.
        i.   Any burn patient in whom concomitant trauma poses an increased
                risk of morbidity or mortality may be initially treated in a trauma
                center until stable before appropriate transfer to a burn center.
        j.   Infants and children with burns who were seen initially in
                facilities without qualified personnel or proper equipment for burn
                care should be transferred to a burn center with those capabilities.
        k.   Burn injury in patients who will require special social and
                emotional or long-term rehabilitative support, including cases
                involving suspected abuse and neglect.

H.   Standards for the Triage and Transfer of the Pediatric Patient

    1.   Hemodynamically unstable patient not responsive to standard
            resuscitative techniques mandates immediate operative
            intervention. Nonoperative care is safe only in an environment
            that provides both close clinical observation by a surgeon
            experienced in the management of childhood trauma and
            promptly available medical care. A pediatric patient meeting

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any one of the following criteria **shall be considered** a candidate for rapid transfer to a facility capable of providing specialized pediatric care:
a. Children in coma showing a Glasgow Coma Scale of 13 or less or Glasgow Coma Scale deterioration
b. Infants and children with injuries requiring complex or extensive reconstruction
c. Infants and children with polysystem trauma requiring organ system support
d.. Any infants or children who meet any of the adult transfer criteria as outlined in Section V.F.
e. Hemodynamically stable infants and children with documented visceral injury being considered for observational management.

I. Standards for Transfers Between Trauma Facilities

1. Establishment of transfer agreements

Trauma facilities shall establish written transfer agreements with other cooperating facilities in advance to expedite the care of the trauma patient. A copy of the transfer agreement(s) shall be kept on file in the Section of EMS and Trauma Systems.

2. Trauma facilities shall develop an interfacility transfer form to be completed and sent with the patient at the time of transfer. The minimum patient data set provided to the receiving facility shall consist of the following data elements:

a. Patient Information: Name, Address, Age, Sex, Weight, Date and Time of Admission, History of Current Injury, Date and Time of Current Injury, Mechanism of Injury.
b. Vital Signs: Minimum of two sets; initial vital signs at time of admittance and vital signs at time of discharge from the referring facility: Blood pressure, pulse rate, respirations, temperature, oxygen saturation, Glasgow Coma Scale score, Trauma Score.
c. Identification and type of EMS transport service: Basic EMS, Intermediate EMS, Paramedic EMS, Helicopter, Fixed Wingd, RN/EMS or other applicable type.
d. Diagnosis
e. Treatments/Interventions performed by the referring facility
f. Date and time of discharge from the referring facility
g. Diagnostic studies accompanying patient
h. Records attached
i. Identification of the Referring Facility
j. Identification of the Referring Physician

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k.   Identification of the Receiving Facility

l.   Identification of the Receiving Physician

m.   **Minimum Patient Data Set for an Interfacility Transfer**   (SAMPLE FORMAT)

PATIENT INFORMATION

Name:_____

Address_____

Age_____   Sex_____   Weight_____

Date and Time of Admission_____

History of Current Injury_____

_____

_____

_____

Date/Time of Injury_____

Mechanism of Injury_____

_____

VITAL SIGNS

	INITIAL	DISCHARGE
BP	_____	_____
PULSE	_____	_____
RESPIRATION	_____	_____
TEMP	_____	_____
OXY SAT.	_____	_____
GCS SCORE	_____	_____
TRAUMA SCORE	_____	_____

TRANSFERRING SERVICE:

☐ Basic EMS
☐ Intermed. EMS
☐ Paramedic EMS
☐ Helicopter
☐ Fixed Wing
☐ RN/EMS
☐ Other_____

DIAGNOSIS:_____ _____

PREVIOUS HISTORY:_____

TREATMENTS/INTERVENTIONS:_____

_____

DATE AND TIME OF DISCHARGE:_____

TX FACILITY:_____ TX PHYSICIAN:_____

RCV FACILITY:_____ RCV. PHYSICIAN:_____

DIAGNOSTIC STUDIES ACCOMPANYING PATIENT: RECORDS ATTACHED

____LABORATORY   _____ EMS PREHOSPITAL CARE RPT.

____RADIOLOGY STUDIES   _____ NURSING RECORDS

____ELECTROCARDIOGRAM   _____ PHYSICIAN RECORDS

____OTHER_____   _____ OTHER

_____

B.   Standards for Level I-IV Trauma Centers

1.   Prehospital (EMS) radio report

The trauma center shall monitor the EMS communications system at all times. In the event of a trauma patient being transported, the EMS report shall be transmitted by the EMS provider to the ED of the receiving hospital 15 minutes prior to arrival at the facility. If transport time is less than 15 minutes, contact shall be made as far in advance of arrival as possible. The trauma center is required to maintain an up-to-date, accurate, and complete representation of capability and capacity on the ATCC dashboard.

2.   Implementation of a trauma activation protocol

Based upon the information received, the trauma facility triage nurse or other appropriate medical control officer shall activate the trauma activation protocol for that facility as outlined in Section V. C.

3.   Trauma patients not meeting the trauma triage criteria

These patients shall undergo appropriate ED screening and evaluation as prescribed by state protocol and CMS/EMTALA requirements.

4.   Re-evaluation of trauma patient and activation

A trauma patient whose condition deteriorates or is found to have significant injuries not detected in the initial evaluation shall be reclassified, and the trauma team shall be activated.

5.   Trauma patients requiring transfer shall be identified as soon as possible, and the ATCC shall be contacted for transfer as soon as it is evident that the patient's needs exceed the capability and capacity of the facility. Ongoing stabilization may be required following the request to transfer. A decision to transfer shall not be dependent upon a complete/partial patient workup.

6.   A transferring hospital shall utilize telemedicine when requested to do so by the receiving facility or the ATCC.

C.   Triage Standards for Level I-IV Trauma Centers

1.   Receive the EMS provider radio report.

2. Use the predetermined multi-tiered activation plan to activate the trauma team based on prehospital information when available.

3. Assure placement of a trauma band on the patient (if not already placed on the patient by the EMS provider).

4. At a minimum, centers shall include in the highest level of activation criteria the following:

    a. confirmed hypotension (<90mmHg adults or age appropriate for children) attributed to trauma;

    b. GCS < 9 with a mechanism due to trauma (general surgeon response can be at the discretion of the ED physician) (for Levels I, II, and III); GCS < 13 with a mechanism due to trauma (for Level IV);

    c. respiratory distress attributed to trauma;

    d. gunshot wound to the neck, chest, or abdomen;

    e. transfer of a patient from another facility receiving blood or pressure support to maintain vital signs; and,

    f. any patient for whom the ED physician feels the highest level of activation is warranted.

5. Trauma patients who meet none of the above criteria shall undergo appropriate ED evaluation and management. The facility shall have a protocol in place for the rapid assessment and treatment of patients taking anticoagulant medication with injury above the clavicles.

D. High Risk Criteria for the Consideration of Early Transfer

(These guidelines are not intended to be hospital-specific.) The following patients, when identified, shall be given consideration for early transfer to a facility with specific expertise in their care:

1. Comorbidities

    A trauma patient presenting with any one of the following comorbidities shall be considered a candidate for rapid transfer:

    a. age < 10 years or ≥ 55 years;

    b. patients taking anticoagulation with any head or brain injury;

or,

    c.   pregnancy when obstetrics monitoring is unavailable.

2. Burn patients

A trauma patient presenting with any one of the following criteria shall be considered a candidate for rapid transfer to a specialized burn center (all centers transferring burn patients shall utilize telemedicine when requested by the burn center):

    a.   second and third degree burns >10% body surface area in patients <10 years or > 50 years;

    b.   second and third degree burns >20% body surface area in other age groups;

    c.   second and third degree burns involving face, hands, feet, genitalia, or perineum, or which involve skin overlying major joints;

    d.   third degree burns > 5% body surface area;

    e.   high voltage electrical burns, including lightning injury;

    f.   significant chemical burns;

    g.   inhalation injury;

    h.   burn injury in patients with pre-existing conditions that could complicate management, prolong recovery, or affect mortality;

    i.   any burn patient in whom concomitant trauma poses an increased risk of morbidity or mortality may be initially treated in a trauma center until stable before appropriate transfer to a burn center;

    j.   infants and children with burns who were seen initially in centers without qualified personnel or proper equipment for burn care shall be transferred to a burn center with those capabilities; or,

    k.   burn injury in patients who will require special social and emotional or long-term rehabilitative support, including cases involving suspected abuse and neglect.

3. Pediatric patient

A hemodynamically unstable pediatric patient not responsive to standard resuscitative techniques mandates immediate operative intervention. Nonoperative care is safe only in an environment that provides both close clinical observation by a surgeon experienced in the management of childhood trauma and promptly available medical care. A pediatric patient presenting with any one of the following criteria shall be considered a candidate for rapid transfer to a facility capable of providing specialized pediatric care:

a. GCS of ≤ 13 or GCS deterioration of two or more;

b. infants and children with injuries requiring complex or extensive reconstruction;

c. infants and children with polysystem trauma requiring organ system support;

d. infants or children who meet any of the adult transfer criteria as outlined in Section V. E.; or,

e. hemodynamically stable infants and children with documented visceral injury being considered for observational management.

E. Standards for Transfers between Trauma Centers

1. The decision to transfer an injured patient to a facility for specialty care in an acute situation shall not be based on the patient's ability to pay or insurance status.

2. Qualified physicians on-call for a facility shall participate actively in the assessment of an injured patient and in the decision to transfer based on the patient's best interest.

3. Conducting a hospital-to-hospital transfer

a. The sending ED shall contact and inform the ATCC of the need to transfer an injured patient.

b. The ATCC shall gather pertinent information.

    c.   The ATCC shall evaluate both sending and potential receiving facilities' dashboard status and compare this to the patient's needs.

    d.   The ATCC shall then contact the closest, most appropriate trauma center, considering all known factors, such as recent volume to the facility, the patient's actual needs, distance, and weather.

    e.   The ATCC shall facilitate the conversation between the sending and receiving trauma centers and will remain on the recorded line to provide needed assistance until the transfer is accepted.

4. Urgent trauma patient transfers

The need for an urgent trauma transfer exists when, in the opinion of the treating physician, the following two conditions are met:

    a.   the immediate needs of the patient cannot be met in the sending facility due to lack of capability or capacity; and,

    b.   the patient's condition is such that failure to meet the immediate needs will likely result in loss of life, limb, fertility, or permanent impairment that transfer to a higher level of care could potentially ameliorate.

The facility seeking the urgent trauma transfer shall contact the ATCC to provide patient condition information and to obtain concurrence with the urgent trauma transfer classification. All urgent trauma transfers shall prompt the involvement of the ATCC medical director in real time. The medical director shall verify the urgent nature of the transfer and concur there is reasonable evidence the two conditions of an urgent trauma transfer are met. If the above conditions are met and concurrence from ATCC is obtained, this transfer qualifies as an urgent trauma transfer.

Once the ATCC confirms the patient meets the criteria for urgent trauma transfer, the ATCC shall contact the EMS provider identified by the transferring hospital to coordinate pickup. The ATCC shall confirm with the transferring hospital the time the patient will be ready for pickup and communicate this information to the EMS provider. The sending hospital should contact the EMS provider designated on the ATCC dashboard early in the process to allow the provider as much advance notice as possible of the impending urgent transfer.

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If the EMS provider cannot be at the transferring hospital by the agreed upon time, a backfill provider shall be contacted by the EMS provider. The backfill provider must be within the boundaries of the service area before coverage is considered in place. If the service is unable to secure a backfill agreement acceptance, the ATCC shall be available to assist with the backfill, but not assume responsibility. The EMS provider shall have ten minutes to accept the transfer request and shall arrive at the hospital at the time agreed upon between the transferring hospital and the EMS agency. The patient and paperwork should be ready for transfer at that time.

All urgent trauma transfer requests shall prompt a review at the local TRAC's QI Committee to ensure that the system is being used appropriately, that the urgent trauma transfer is accomplished in a timely manner, and that each segment of the system performed its responsibilities. Potential abuses of the system shall be elevated to the QI/TRAC Subcommittee of the TAC for review and recommendation of action steps, if required, to the ADH in order to prevent future abuses.

5.   Non-urgent trauma patient transfers

If the transfer request does not meet the two criteria for an urgent transfer, yet the patient's injury requires a higher level of care, the transferring trauma center shall call the ATCC to coordinate acceptance with the receiving center. The transferring center shall notify its EMS provider and coordinate an appropriate time for patient pickup. The EMS provider shall have no less than one hour to arrive at the transferring facility. The transferring center shall have the patient ready for pickup by the agreed upon time.

SECTION VI: STANDARDS FOR TRAUMA FACILITY CENTER DESIGNATION

A.   Purpose

Any hospital that desires authorization to provide trauma care services within the Arkansas Trauma System shall request designation from the Trauma Section. No hospital may be represented to the public as an Arkansas-designated trauma center facility unless that facility hospital holds a certificate of trauma center designation issued by the Arkansas Department of HealthADH. Hospitals may choose to seek an additional trauma center designation offered by the ACS.

B.   Trauma Facility Center Designation Process

1. Application

    An aApplication for trauma facility center designation shall be made on forms provided by the ADH.

2. Site survey

    Upon the review and approval by the Section of the application materials submitted in section VI.B.1., an on-site survey of the facility will be scheduled. All costs associated with conducting on-site surveys shall be the responsibility of the applicant. The on-site survey shall be conducted based upon the standards described in Section VII or Section VIII as applicable. The survey team shall consist of members approved by the Section as outlined in Section IX. The survey team shall submit a comprehensive report to the Section. The Section shall review the survey findings and issue a decision recommending one of the following options:

    a. Full approval at the Level designation requested by the applicant.

    b. Provisional Approval; Temporary approval issued for one year pending the completion of a second on-site survey or submission of documentation of corrective actions by the facility which focus on the specified deficiencies. At the conclusion of the first Provisional approval, the Section may consider a second provisional approval for up to one (1) year. At the conclusion of the second Provisional term, if the facility has not met the Department's requirements, the provisional approval shall be revoked and the facility must reapply for trauma facility designation.

    c. Full approval at a lower Level of designation as recommended by the Section based upon the facilities' current capabilities as determined by the Section review of the on-site survey.

    d. The Board of Health may conduct public meetings consistent with the Administrative Procedures Act to modify provisions of these rules and regulations in order to meet state, regional, or community necessity for trauma care.

    e. Approval denied; facility must resubmit new application and fee.

    f. If an application for designation is denied or not approved at the desired level please see Section XIII for the appeals process.

3.   Certification of an Approved Trauma Facility

Upon approval by the Section of all application requirements as set forth in Section VI.B.1 & 2, a Certificate of Trauma Facility Designation will be issued identifying the facility as a state-certified provider of trauma care. This certificate shall be in force for a time period not to exceed four years from the date of issue or if provisional, shall be reviewed after one (1) year.

4.   Denial of Trauma Facility Designation

A facility's application for designation may be denied for, but not limited to, the following reasons:

a.   Failure to comply with these sections and/or Health Facilities Services Rules and Regulations.
b.   Willful preparation or filing of false reports or records.
c.   Fraud or deceit in obtaining or attempting to obtain designation status.
d.   Failure to have appropriate staff or equipment required for designation as described in Section VII or Section VIII as applicable.
e.   A documented history of unauthorized disclosure of medical or other confidential information.
f.   A documented history of alteration or inappropriate destruction of medical records.
g.   A documented history of refusal to render care because of a patient's race, sex, creed, national origin, sexual preference, age, handicap, medical problem, or inability to pay.

5.   Reapplication for Designation

Six (6) months after the denial of a facility's application for designation as outlined in Section VI.B.2.e., the facility may reapply for Level designation as described in section VI.B.1. & 2.

6.   Appeals Process - Please see Section XIII

C.   Suspension or Revocation of Designation

1.   A trauma facility's Level designation may be suspended or revoked for, but not limited to, the following reasons:

a.   Failure to comply with these sections and/or Health

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Facilities Services Rules and Regulations.

b. Willful preparation or filing of false reports or records.

c. Fraud or deceit in obtaining or attempting to obtain designation status.

d. Failure to submit data to the state trauma registry as described in Section XII.

e. Failure to have appropriate staff or equipment required for designation as described in Section VII or Section VIII as applicable.

f. Unauthorized disclosure of medical or other confidential information.

g. Alteration or inappropriate destruction of medical records.

h. Refusal to render care because of a patient's race, sex, creed, national origin, sexual preference, age, handicap, medical problem, or inability to pay.

2. Occasional Failure to Meet Standards

Occasional failure of a hospital or facility to meet its obligations shall not be grounds for denial, suspension, or revocation by the Section if the circumstances under which the failure occurred:

a. Do not reflect an overall deterioration in quality of and commitment to trauma care.

b. Are corrected within a reasonable time frame by the facility as determined by the Section.

3. Complaints

Upon receipt of a complaint describing an alleged violation of these Sections, the Section shall:

a. Initiate a review of the complaint

b. Notify the trauma facility of the complaint

c. Develop a written report of the review

d. Notify the trauma facility of the results of the review

4. Notification of Action

If the Section proposes to suspend or revoke a designation, the Section shall notify the facility by registered or certified mail at the last address shown in the Section records. The notice shall state the alleged facts that warrant the action and state that the hospital or facility has an opportunity to request a hearing in accordance with the department's formal hearing

procedures.

a. The facility shall request a hearing within fifteen (15) postmark days after the date of the suspension or revocation notice. This request shall be in writing and submitted to the Section Director. If a hearing is requested, the hearing shall be held in accordance with the Department hearing procedures.

b. If the hospital or facility does not request a hearing in writing, after being sent the notice of opportunity for hearing, it is deemed to have waived the opportunity for a hearing and the suspension or revocation decision shall stand.

Upon the review and approval by the Trauma Section of the application materials submitted pursuant to Section VI. B. 1., an on-site survey of the facility shall be scheduled. All costs associated with conducting an on-site survey shall be the responsibility of the applicant. The on-site survey shall be conducted based upon the standards described in Sections VII or VIII, as applicable. All requirements, including CMEs, meeting attendance (e.g., operations, peer review, TRAC), and certifications (e.g., TNCC, ATLS, RTTDC) shall be verified as met or not met at the time of the site survey visit. No additional documentation will be accepted after the visit and used in consideration of the determination of compliance with criteria. The survey team and the TAC Designation Subcommittee shall not consider any activities or certifications that may occur after the site survey. The survey team shall consist of members approved by the Trauma Section as outlined in Section VI. B. 3. The survey team shall submit a comprehensive report to the Trauma Section and the TAC Designation Subcommittee, which will review the findings and report its recommendation to the TAC. The TAC, in turn, shall submit the recommendation to the Trauma Section. The Trauma Section shall review the survey findings, in conjunction with the recommendation, and issue a decision to implement one of the following options:

a. Full designation - Designation level requested by the applicant for a period of three years.

b. Provisional designation - Temporary approval issued for one year in which the hospital enjoys all the rights and privileges of operating as a designated trauma center. The facility is required to submit a corrective action plan to address the deficiencies within 90 days of the date of the designation letter to the Trauma Section for approval. It shall be the hospital's responsibility to correct the deficiencies and complete a focused review prior to the end of the provisional

year.

The focused review and subsequent approval process requires at least six weeks; therefore, the facility shall submit all paperwork and undergo an on-site visit (if one is required) at least six weeks prior to the expiration of its provisional designation at one year. All requirements, including CMEs, meeting attendance (e.g., operations, peer review, TRAC) and certifications (e.g., TNCC, ATLS, RTTDC) shall be met at the time of the site survey visit. There will be no automatic extension of the provisional designation while awaiting the outcome of a focused review. During the focused review, all deficiencies and weaknesses will be addressed by the review team. Additional deficiencies and weaknesses may be cited if discovered and verified during the focused review process. At the conclusion of the provisional term, if the facility has not met the ADH's requirements, the provisional designation shall be revoked and the facility shall reapply for trauma center designation.

At the conclusion of the first provisional approval, the facility may request, and the Trauma Section may consider, a second and final provisional approval for up to one year. Consideration will be given to facilities for which the failure to meet the corrective action prescribed is beyond their immediate control. At the conclusion of the second provisional term, if the facility has not met the ADH's requirements, the provisional designation shall be revoked and the facility shall reapply for trauma center designation.

A hospital that is not designated cannot represent itself as a trauma center but may apply to be "in-pursuit of designation" with an action plan in place approved by the Trauma Section. It does not have to repay previously received funding but is not eligible for continued funding unless designated at a later date.

c. Designation at a different level - Full or provisional designation at a different level of designation as recommended by the Trauma Section based upon the facility's current capabilities as determined by the Trauma Section's review of the on-site survey.

d. Approval denied or suspended/revoked - The facility shall resubmit a new application. This cannot be done earlier than

six months after the denial or suspension/revocation. The facility has the option to designate at a lower level with the approval of the ADH at the time of suspension/revocation.

If an application for designation is denied or not approved at the desired level, please see Section VI. C. for the appeal process.

3. Trauma center site survey team

   a. Purpose

      As part of the trauma center designation process, following a successful application, an on-site survey of the prospective trauma center shall be conducted to evaluate the quality of the applicant's compliance with the standards outlined in Sections VII and VIII.

      The survey of hospitals for trauma center designation shall include interviews with designated hospital staff, a review of the physical plant and equipment, and a review of records and documents as deemed necessary to assure compliance with the requirements of the Rules set forth in this document. The cost of the site survey shall be paid by each applicant hospital or renewing trauma center unless otherwise stated by the Trauma Section.

   b. The survey team will be selected by the Trauma Section and consist of individuals who are disinterested both politically and financially from the facility to be surveyed. Each team member shall have past experience and/or special training related to trauma designation site surveys.

   c. The following individuals shall comprise the survey team. As noted in Section VI. B. 3. d., the actual composition of the team is dependent upon the level of trauma center designation sought by the hospital.

      1) General surgeon (pediatric surgeon for pediatric specialty facility) who currently works in a designated trauma center and who is a FACS or a member of the ACOS.

      2) Emergency physician (pediatric emergency physician for pediatric specialty facility) who currently works in

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a designated trauma center and who is Board-certified in EM or approved by the Trauma Section.

3) TPM who is a RN with responsibility for monitoring and evaluating nursing care of trauma patients and for the coordination of the QI and patient safety programs of the trauma center in conjunction with the TMD.

4) Trauma Section representative who has a regular working relationship with the TAC.

d. The survey team shall be comprised of the following for the designation levels set forth below:

1) Level I - two physicians, one of whom shall be a surgeon, a TPM, and a Trauma Section representative. The majority of the clinical review team shall be out-of-state reviewers;

2) Level II - two physicians, one of whom shall be a surgeon, a TPM, and a Trauma Section representative. At least one member of the clinical review team shall be an out-of-state reviewer;

3) Level III - one physician, one TPM, and a Trauma Section representative. Both clinicians may be from within the state but shall be from another region(s) of the state; and,

4) Level IV - one physician or one TPM and a Trauma Section representative. The clinician reviewer shall be from another region of the state.

In the event that in-state reviewers are not available, out-of-state reviewers may be substituted at the facility's cost.

e. All team members, with the exception of the Trauma Section representative, shall be active in the management of trauma patients.

f. Additional team members may be assigned at the discretion of the Trauma Section, based on previous performance, concerns, or complaints. The additional cost shall be the responsibility of the facility.

g. The survey team shall evaluate the quality of each applicant's compliance with the standards set forth in Sections VII and VIII by:

1) conducting interviews with hospital personnel;

2) examining equipment, touring the physical plant; and,

3) reviewing medical records, staff rosters and schedules, operations and peer review committee meeting minutes, Trauma Registry data, and other documents relevant to trauma care.

h. Findings of the survey team shall be forwarded to the Trauma Section within two weeks of the survey date.

i. An out-of-state hospital shall be surveyed under the same criteria by which in-state facilities are verified. However, if the out-of-state applicant is designated as a trauma center in an adjacent state with an established trauma system, the standards of review meet or exceed Arkansas' standards, and there is no competition for designation at that level, the Trauma Section may use the administrative findings, conclusions, and decisions of the adjacent state's or ACS's verification process to make the decision to designate. Additional information may be requested by the Trauma Section to make a final decision. Out-of-state facilities wishing to exercise this option shall notify the ADH Trauma Section at least six months prior to the anticipated site survey.

4. Certification of an approved trauma center

Upon approval by the Trauma Section of all application requirements as set forth in Section VI. B. 1. and 2., a certificate of trauma center designation shall be issued identifying the facility as an Arkansas-certified provider of trauma care. This certificate shall be enforced for a time period not to exceed three years from the date of issue or, if provisional, shall be reviewed by the end of the one year provisional period.

5. Trauma centers are required to notify the Trauma Section of administrative and trauma team staff changes.

a. Notification of administrative changes include the facility's President, CEO, COO, and/or Administrator. Trauma centers are required to notify the Trauma Section within 30 days of a

status change by submitting the administrative/trauma team staff change notification form.

b. Notification of trauma team staff changes include the TMD, TPM, and/or Registrar. Trauma centers are required to notify the Trauma Section immediately of a status change by submitting the administrative/trauma team staff change notification form.

c. The Trauma Section reserves the right to perform an on-site evaluation of the facility if the changes are felt to be substantial, may change the commitment to the Trauma Program, or change the clinical or administrative performance of the program.

6. Denial of trauma center designation

A trauma center's designation may be denied for, but not limited to, any one of the following reasons:

a. failure to comply with applicable sections within these Rules and/or the Rules and Regulations for Hospitals and Related Institutions in Arkansas;

b. failure to provide care consistent with the facility's capability and capacity;

c. willful preparation or filing of false reports or records;

d. fraud or deceit in obtaining or attempting to obtain designation status;

e. failure to submit data to the Trauma Registry as described in Section XI;

f. failure to have appropriate staff or equipment required for designation as described in Sections VII or VIII, as applicable;

g. unauthorized disclosure of medical or other confidential information;

h. alteration or inappropriate destruction of medical records; or,

i. refusal to render care because of a patient's race, ethnicity, sex, creed, national origin, sexual preference, gender identity, age, handicap, medical problem, or inability to pay.

C.   Appeal Process

Any hospital that fails a trauma center designation site survey may file an appeal under the following guidelines:

1. A hospital that files an appeal shall submit a written request for re-review to the Trauma Section within 30 calendar days of denial. The request shall state the specific point(s) of disagreement with any deficiencies noted and provide support for reconsideration of the ruling. The Trauma Section shall send the hospital's request to the TAC's Designation Subcommittee for consideration. The hospital may make a request to present its case to the TAC Designation Subcommittee in person. Within one week of considering the request, the TAC Designation Subcommittee shall make a recommendation to the Trauma Section, which shall retain the authority to either uphold or modify the previous decision regarding designation.

2. Should a hospital continue to disagree with the ruling of the Trauma Section, it may continue the appeal process. A hospital wishing to do so shall submit a written petition to the Director of the ADH for a hearing. The petition shall clearly set forth the nature of the appeal.

3. Hearings may be conducted before the entire Board, one or more members of the Board, an examiner or referee, or one or more members of the ADH. The Director of the ADH shall recommend to the President of the Board the composition of the hearing committee and the hearing officer to preside at the hearing. The President of the Board shall appoint the hearing officer and other hearing committee members.

4. All administrative enforcement and hearing procedures hereunder, in which a final order is issued by the ADH, shall be conducted in accordance with the Administrative Procedures Act (Ark. Code Ann. § 25-15-201 et seq.) and amendments thereto.

D.   Suspension/Revocation of Designation

1. The Trauma Section may, at its discretion, authorize a random site survey to review a trauma center for compliance with these Rules at the expense of the ADH.

2. A trauma center's designation may be suspended/revoked at any time for, but not limited to, any one of the following reasons:

    a. failure to comply with applicable sections within these Rules and/or the Rules and Regulations for Hospitals and Related Institutions in Arkansas;

    b. failure to provide care consistent with the facility's capability and capacity;

    c. willful preparation or filing of false reports or records;

    d. fraud or deceit in obtaining or attempting to obtain designation status;

    e. failure to submit data to the Trauma Registry as described in Section XI;

    f. failure to have appropriate staff or equipment required for designation as described in Sections VII or VIII, as applicable;

    g. unauthorized disclosure of medical or other confidential information;

    h. alteration or inappropriate destruction of medical records; or,

    i. refusal to render care because of a patient's race, ethnicity, sex, creed, national origin, sexual preference, gender identity, age, handicap, medical problem, or inability to pay.

3. Reapplication for designation after suspension/revocation

Six months after a suspension/revocation of designation as outlined in Section VI. B. 2. d., the facility may reapply for designation at the discretion of the Trauma Section in Sections VI. B. 1. and 2.

At the time of the suspension/revocation, the facility has the option to designate at a lower level with the approval of the Trauma Section.

4. Occasional failure to meet standards

Occasional failure (less than 5% of the total time in a three month period) of a trauma center to meet its obligations shall not be grounds for suspension or revocation by the Trauma Section if the circumstances under which the failure occurred:

    a. do not reflect an overall deterioration in the quality of and

commitment to trauma care; and,

    b.   are corrected within a reasonable time frame by the facility as determined by the Trauma Section.

5.   Complaints

Upon receipt of a complaint describing an alleged violation as described in Section VI. D. 2 above, the Trauma Section shall:

    a.   notify the trauma center of the complaint;

    b.   initiate a review of the complaint, which may consist of an on-site review by the Trauma Section;

    c.   develop a written report of the review; and,

    d.   notify the trauma center of the results of the review.

6.   Notification of action

If the Trauma Section proposes to suspend/revoke a designation, the Trauma Section shall notify the trauma center by registered or certified mail at the last address shown in the Trauma Section records. The notice shall state the alleged facts that warrant the action and state that the trauma center has an opportunity to request a hearing in accordance with the Administrative Procedures Act, § 25-15-201 et seq.

    a.   The trauma center shall request a hearing within 15 calendar days after the date of the suspension/revocation notice. This request shall be in writing and submitted to the Trauma Section. If a hearing is requested, the hearing shall be held in accordance with the Administrative Procedures Act as noted above. The trauma center shall continue to function at the level of its designation until the process is completed.

    b.   If the trauma center does not request a hearing in writing within 15 calendar days from the date of notice, it is deemed to have waived the opportunity for a hearing and the suspension/revocation decision shall stand.

E.   Random Site Survey

The Trauma Section reserves the right to perform a focused or full site survey based on a reason to believe a trauma center is not in compliance

with the Rules. Should such a survey be conducted, it shall be done at no expense to the facility.

F.   Joint Trauma Service Applications

1. Trauma centers may apply for joint designation as a Level I, II, or III trauma center. The plan for multiple trauma centers to operate as a single trauma center shall be endorsed by the TRAC. Once the decision has been made to work cooperatively to achieve a level of designation, each facility shall submit an application for the given level. The Trauma Section shall follow the same process of evaluating the application as it would for a single facility application with the exceptions listed below:

a.   cooperative trauma oversight with one TMD and a joint trauma service is preferred;

b.   a cooperative multidisciplinary committee with representation from all the participating facilities;

c.   a coordinated set of policies and procedures to deliver optimal trauma care;

d.   a predetermined trauma center rotation schedule shall be made available to the TRAC and Trauma Section;

e.   trauma centers seeking joint designation shall serve the same primary service area;

f.   a coordinated QI program for trauma, including joint peer review and joint system review; and,

g.   trauma centers shall maintain individual trauma registries; however, the centers shall have the capability to create joint reports.

SECTION VII: TRAUMA FACILITY RESOURCE STANDARDS LEVELS

The following table shows levels of categorization and their (R)equired or (D)esirable characteristics	IV	III	II	I

	IV	III	II	I
A. HOSPITAL ORGANIZATION				
1. Trauma Service	D	D	D	R
a. Specified delineation of privileges for the Trauma Service must occur by the medical staff Credentialing Committee				
b. Trauma Team: Organized and directed by a general surgeon expert in and committed to the care of the injured; all patient with multiple system or major injury must be initially evaluated by the trauma team when appropriate, and the surgeon who shall be responsible for overall care of a patient (the team leader) identified. A team approach is required for optimal care of patients with multiple system injuries.				
2. Emergency Department	R	R	R	R
The Emergency Department staffing shall ensure immediate and appropriate care for the trauma patient. The Emergency Department physician shall function as a designated member of the trauma team, and the relationship between Emergency Department physicians and other participants of the trauma team must be established on a local level, consistent with resources but adhering to these standards and ensuring optimal care.				
3. Surgical Specialty Capability Availability	D	R	R	R
a. General Surgery Board Certified by Accreditation Council for Graduate Medical Education (A.C.G.M.E) or Osteopathic Graduate Medical Education (O.G.M.E.) who (may be a surgeon who is a graduate of an A.C.G.M.E. or American Osteopathic Association (AOA) approved [O.G.M.E]) approved residency and who is less than five years out of training. If the surgeon fails to obtain board certification within five years, s/he is no longer eligible, even though s/he has obtained Advanced Trauma Life Support (ATLS) course completion). Alternatives to board certification may be applied as defined in Section I, Definitions: "Alternate Criteria."				
1. Full, unrestricted trauma surgery privileges	D	R	R	R
2. ATLS* At least once	R	R	R	R
3. On call and promptly available (within 30 minutes)		R		
4. On call and promptly available to the patient upon activation of the trauma protocol.			R	
5. In house and immediately available to the patient on arrival in the Emergency Department (assumes 5 minute prehospital notification). A Post Graduate Year (PGY) 3 or higher Resident may be used to fulfill this requirement.				R
The following table shows levels of categorization and their (R)equired or (D)esirable characteristics	IV	III	II	I

Characteristics	IV	III	II	I
b. Neurologic surgery				
1. Full, unrestricted neurosurgery privileges. On-call and promptly available.		D	R	R
OR			R	R
2. Physician with special competence, as judged by the Chief of Neurosurgery, in the care of patients with neural trauma, and who is capable of initiating measures directed toward stabilizing the patient and initiating diagnostic procedures. In house and immediately available.				
c. Cardiac surgery (on-call and promptly available)			R	R
d. Microsurgery capabilities (promptly available)			D	R
e. Obstetric/Gynecological Surgery (on-call and promptly available) (With the exception of Pediatric Facilities)			R	R
f. Hand Surgery (on-call and promptly available)			D	R
g. Ophthalmic surgery (on-call and promptly available)		D	R	R
h. Oral, Otorhinolaryngologic, **OR** Plastic/Maxillofacial Surgery (on-call and promptly available).		D	R	R
i. Orthopedic Surgery (on-call and promptly available)	D	D	R	R
j. Pediatric Surgery capabilities (on-call and promptly available) (Applies to Pediatric Facilities)			R	R
k. Thoracic Surgery (on-call and promptly available)		D	R	R
l. Urologic surgery (on-call and promptly available)		D	R	R
4. Non-Surgical Specialty Capability Availability				
a. Anesthesiology				
1. Anesthesiology (full, unrestricted anesthesiology privileges)	D	D	R	R
ATLS* and Advanced Cardiac Life Support (ACLS) At least once	D	D	D	D
2. Certified Registered Nurse Anesthetist (current national certification essential)				
ACLS and trauma life support course	D	D	D	D
The following table shows levels of categorization and their (R)equired or (D)esirable characteristics	IV	III	II	I

3. Anesthesiologist: In-house and immediately available to the patient upon arrival in the Emergency department (assumes fifteen-minute prehospital notification). * *A PGY-3 or higher resident in anesthesiology may be used to fill this requirement with the approval of the chief of Anesthesiology	-	-	-	R
4. Anesthesiologist: On-call and promptly available to the patient upon arrival in the Emergency Department (assumes fifteen-minute prehospital notification).	-	-	R	-
5. Anesthesiologist **OR** Certified Registered Nurse Anesthetist: On-call and promptly available.	D	R	-	
b. Cardiology (on-call and promptly available)	-	D	R	R
c. Chest Medicine	-	-	D	R
d. Gastroenterology	-	-	D	R
e. Hematology	-	D	R	R
f. Infectious Disease	-	-	D	R
g. Internal Medicine	-	R	R	R
h. Nephrology	-	D	R	R
i. Neuroradiology	-	-	-	D
j. Pathology	-	D	R	R
k. Pediatrics (on-call and promptly available)	-	D	R	R
l. Psychiatry	-	-	D	R
m. Radiology (on-call and promptly available)	D	D	R	R

B. SPECIAL FACILITIES/RESOURCES/CAPABILITIES

1. Emergency Department
a. Personnel

1. Designated Physician Director	D	R	R	R
2. Emergency Physician				
a. Full time emergency medicine practitioner with special competence in the care of the critically injured patient.	D	D	R	R
b. Physicians who are qualified and experienced in caring for patients with traumatic injuries and who can initiate resuscitative measures.	R	R	-	-

The following table shows levels of categorization and their (R)equired or (D)esirable characteristics	IV	III	II	I
c. ATLS At least once	R	R	R	R
d. In-house and immediately available to the patient upon arrival in the emergency department.	D	R	R	R
e. On-call and promptly available.	R			
3. Emergency Department Registered Nurse				
a. ACLS or Pediatric Advanced Life Support (PALS) or Emergency Nursing Pediatric Course (ENPC) (as appropriate)	R	R	R	R
b. Initial sixteen hour Health Department approved Trauma Life Support course.	R	R	R	R
c. In the Emergency Department and immediately available.	D	R	R	R
d. In house and immediately available.	R			
b. Equipment for resuscitation and to provide life support for the critically or seriously injured shall include but not be limited to:				
1. Airway control and ventilation equipment including laryngoscope and endotracheal tubes of all sizes, valve mask resuscitator, sources of oxygen, pulse oximeter, CO_2 monitoring, mechanical ventilator.	R	R	R	R
2. Suction devices	R	R	R	R
3. Electrocardiograph oscilloscope defibrillator	R	R	R	R
4. Apparatus to establish central venous pressure monitoring	D	R	R	R
5. Standard IV fluids & administration devices, including IV catheters.	R	R	R	R
6. Intravenous fluid and blood warmers	R	R	R	R
7. Sterile surgical sets for standard ED procedures	R	R	R	R
8. Gastric lavage equipment	R	R	R	R

The following table shows levels of categorization and their (R)equired or (D)esirable characteristics	IV	III	II	I
9. Drugs and supplies necessary for emergency care	R	R	R	R
10. a. X ray capability 24 hours coverage by in house technician	D	D	R	R
b. Technician on call and promptly available to patient upon arrival in the emergency department.	R	R		
11. Two way radio linked with vehicles of the prehospital EMS system.	R	R	R	R
12. Skeletal Traction device for spinal injuries (spinal or backboard immobilization devices may be used as an alternative).	R	R	R	R
13. Special equipment needed for pediatric patients, readily available. (ref. ACEP Policy Statement, September 2000, Pediatric Equipment Guidelines).	R	R	R	R
2. Intensive Care Unit (ICU) for Trauma Patients (ICU's may be separate specialty units).				
a. Designated Medical Director			R	R
b. Physician on duty in ICU 24 hours a day or immediately available		D	R	R
c. Nurse-patient minimum **average** ratio of 1:2 on shift for trauma patients		R	R	R
d. Immediate access to clinical laboratory services.		R	R	R
e. Equipment				
1. Airway control and ventilation devices		R	R	R
2. Oxygen source with concentration controls		R	R	R
3. Cardiac emergency cart		R	R	R
4. Temporary transvenous pacemaker		R	R	R
5. Electrocardiograph oscilloscope defibrillator		R	R	R
6. Cardiac output monitoring		D	R	R
7. Electronic pressure monitoring		D	R	R
8. Mechanical ventilator respirators		R	R	R
9. Patient weighing devices		R	R	R

The following table shows levels of categorization and their (R)equired or (D)esirable characteristics	IV	III	II	I
10. Pulmonary function measuring devices	-	R	R	R
11. Temperature control devices	-	R	R	R
12. Drugs, intravenous fluids and supplies	-	R	R	R
13. Intracranial pressure monitoring devices	-	D	R	R
3. Postanesthetic Recovery Room (PAR); (surgical intensive care unit is acceptable).	-			
a. Registered nurses and other essential personnel 24 hours a day	D	R	R	R
b. Appropriate monitoring and resuscitation equipment	D	R	R	R
4. Acute Hemodialysis Capability (or transfer agreement)		D	D	R
5. Organized Burn Care	R	R	R	R
a. Physician-directed Burn Center Unit staffed by nursing personnel trained in burn care and equipped properly for the care of the extensively burned patient				
OR				
b. Transfer agreement with nearby burn center or hospital with a burn unit.				
6. Acute Spinal Cord Injury Management Capability	R	R	R	R
a. In circumstances where a designated spinal cord injury rehabilitation center exists in the region, early transfer should be considered; transfer agreements should be in effect.				
b. In circumstances where a head injury center exists in the region, transfer should be considered in selected patients; transfer agreements should be in effect.				
7. Radiological Special Capabilities				
a. Comprehensive range of angiography services		D	R	R
b. Sonography		D	R	R
c. Nuclear scanning			D	R

The following table shows levels of categorization and their (R)equired or (D)esirable characteristics	IV	III	II	I
d. In house computerized tomography	-	-	R	R
e. In-house radiologic technician	-	-	R	R
f. Technician on-call and promptly available	-	R		
8. Rehabilitation Medicine	R	R	R	R
a. Physician directed Rehabilitation service staffed by nursing personnel trained in rehabilitation care and equipped properly for the care of the critically injured patient.				
OR				
b. Transfer agreement when medically feasible to a nearby rehabilitation service.				
9. Pediatric Service	-	D	R	R
Nursing personnel caring for pediatric patients are properly trained and equipped.				
C. OPERATING SUITE SPECIAL REQUIREMENTS				
Equipment Instrumentation				
1. Operating Room adequately staffed and equipped for trauma care (promptly available).	D	R		
Immediately available to the patient upon arrival in the Operating Room or when requested by surgeon (may be satisfied by one RN in-house and immediately available to the Operating Suite with the remainder of the crew on-call and promptly available).	-	-	R	
In house staff and Operating Room immediately available to patient upon arrival in the Emergency Department (assumes five minute prehospital notification).	-	-	-	R
2. Cardiopulmonary bypass capability	-	-	R	R
3. Operating Microscope	-	-	D	R
4. Thermal control equipment				
a. for the patient	R	R	R	R
b. for blood	R	R	R	R

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	IV	III	II	I
~~The following table shows levels of categorization and their (R) equired or (D) esirable characteristics~~	~~IV~~	~~III~~	~~II~~	~~I~~

5. X-Ray capability	R	R	R	R
6. Endoscopes	D	R	R	R
7. Craniotome	D	D	R	R
8. Monitoring equipment	R	R	R	R
D. CLINICAL LABORATORY SERVICES AVAILABLE 24 HOURS A DAY				
1. Standard analyses of blood, urine, and other body fluids	R	R	R	R
2. Blood typing and cross-matching	R	R	R	R
3. Coagulation studies	R	R	R	R
4. Comprehensive blood bank or access to a community central blood bank and adequate hospital storage facilities	R	R	R	R
5. Blood gases and pH determination	R	R	R	R
6. Serum and urine osmolality	D	D	R	R
7. Microbiology	D	R	R	R
8. Serum alcohol determination	D	R	R	R
9. Drug screening	D	R	R	R
E. QUALITY IMPROVEMENT				
1. Organized Quality Improvement program	R	R	R	R
2. Special audit for all trauma deaths and other specified cases	R	R	R	R
3. Trauma conference; multi-disciplinary	D	R	R	R
Regular and periodic multi-disciplinary trauma conferences that include all members of the trauma team. This conference shall be for the purpose of quality improvement through critiques of individual cases, and incorporated into the existing quality improvement/peer review program activities of the hospital.				
4. Medical nursing audit, utilization review, tissue review	R	R	R	R

	IV	III	II	I
The following table shows levels of categorization and their (R)equired or (D)esirable characteristics				
5. **Trauma Registry review**	**R**	**R**	**R**	**R**
Documentation of severity of injury and outcome by trauma score, age, injury severity score, TRISS, survival, length of stay, ICU length of stay, with monthly review of statistics.				
Participation in the Section of EMS & Trauma Systems Trauma Registry and Quality Improvement activities as prescribed in the area plan.				
Designated Trauma Registry Coordinator				
6. **Review of prehospital and regional trauma systems**	**D**	**D**	**D**	**D**
F. **OUTREACH PROGRAM**	**D**	**D**	**R**	**R**
Telephone and on-site consultations with physicians of the community and outlying areas.				
G. **PUBLIC EDUCATION**	**R**	**R**	**R**	**R**
Injury prevention in the home and industry, and on the highway and athletic fields; standard first aid; problems confronting public, medical profession, and hospitals regarding optimal care for the injured. Could be a collaborative effort by multiple hospitals or the region.				
H. **TRAUMA RESEARCH PROGRAM**			**D**	**R**
I. **TRAUMA EDUCATION PROGRAM**				
1. Ongoing **continuing education program** focused on trauma **provided** or sponsored **by the hospital.** The continuing education should include at least 16 hours every 4 years and must meet the standards for approved continuing education set by individual state licensing boards or certifying entities for:				
a. Staff physicians	**R**	**R**	**R**	**R**
b. Nurses	**R**	**R**	**R**	**R**
c. Allied health personnel	**R**	**R**	**R**	**R**
d. Community physicians	**R**	**R**	**R**	**R**
e. Prehospital personnel	**R**	**R**	**R**	**R**
2. **Accredited general surgery residency program**				**R**

SECTION VII: TRAUMA CENTER CRITERIA

Criteria for Level I and II Trauma Centers

Purpose: To define and clarify the criteria necessary for a comprehensive care facility to become a Level I trauma center, for a major care facility to become a Level II trauma center, and to ensure optimal care of the injured.

Definition: Level I and Level II trauma centers provide comprehensive care to patients following injury. Services include both medical and surgical specialties coordinated to achieve the best outcomes for the most severely injured patients. These comprehensive care facilities are also involved in professional and community education as well as IVP. Level I centers have the additional responsibilities and requirements to provide sub-specialty services, such as cardiac, hand, and reconstructive surgery, and have a commitment to trauma research and graduate medical education.

Level I and II Criteria			
Level	**Section**	**Required (R) or Desirable (D)**	**Criteria**
	TRAUMA PROGRAM		
	1. Support/Infrastructure		
I, II	**Institutional Support**	R	(1.1) Clear evidence of hospital board, administrative, and medical staff support in the form of a written resolution to attain and maintain the level of designation; the resolution shall be updated at least every three years. (1.2) Financial support of additional FTEs, space, and/or equipment, as required. (1.3) Authorization for the trauma program's leadership and committees to perform their required duties. (1.4) Clearly defined lines of reporting for the TMD and TPM within the organization.
I, II	**Trauma Program Administration and Infrastructure**	R	(1.5) Program within an acute care facility with defined leadership (TMD, TPM) with the authority to develop, oversee, and improve the care of the injured within the facility, and is integrated into the local, regional, state, and national system of trauma care. (1.6) The trauma program shall participate in the development and improvement of prehospital care protocols and patient safety programs.
	2. Staffing		
I, II	**Trauma Medical Director (TMD)**	R	***Requirements and qualifications for the TMD:*** (2.1) A general surgeon in good standing in the institution with state licensure, has membership in professional organizations, possesses clinical knowledge and expertise, actively participates in the care of injured patients, and has a personal interest and the time to be the champion for trauma patient care to the medical staff and the trauma center. (2.2) Board-certified/Board-eligible in general surgery (pediatric surgery in a pediatric facility). (2.3) Current in ATLS as either a provider or an instructor or attendance and documentation of self-assessment CME at an ADH-approved national trauma meeting. ***Responsibilities and duties of the TMD:*** (2.4) Participate in trauma call. (2.5) Lead the trauma QI and patient safety programs within the trauma center. (2.6) Have a method to identify injured patients, monitor the provision of health care services, make periodic rounds, and hold formal and informal

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			discussions with individual practitioners.
			(2.7) Perform a written annual review of the performance of all the surgeons on the call panel. Documentation of such shall be available for review at the designation site survey.
			(2.8) Have the ability to contribute to the TPM's performance evaluation.
			(2.9) Demonstrate with his/her signature awareness of the facility's invoices to the ADH for payment.
			(2.10) There shall be a verifiable, written job description that clearly identifies expectations of leadership and authority to perform the duties required, including the authority to conduct trauma-specific peer review, place members on and take members off of a trauma *call schedule* **, be involved in the development of the trauma center's bypass protocol and the decisions regarding bypass and "Charlie Temp" status, and affect process changes identified in the trauma multidisciplinary meetings.
			(2.11) Have responsibility and authority for determining each call panel member's ability to participate on the trauma call schedule based on a periodic review.
			(2.12) Have responsibility and authority to ensure compliance with verification requirements; and report changes in the program that would affect the designation of the facility to the ADH.
			*** The ability to grant or remove a provider's privileges to practice in an area is reserved for the facility's board and Medical Staff Committee. There should be a distinction of a provider's privileges to participate in care of the trauma patient and participation in a trauma call schedule. The facility's board and Medical Staff Committee shall take into consideration the input of the TMD when considering trauma privileges, while the TMD shall have the discretion of which providers participate in the trauma call schedule. A decision by the TMD to place or remove a provider from the trauma call schedule shall not be viewed as affecting or restricting a provider's hospital privileges, as that decision is reserved for the facility's board and Medical Staff Committee.*
I, II	**Trauma Program Manager (TPM)**	R	**Requirements and qualifications for the TPM:** (2.13) A RN with responsibility for monitoring and evaluating nursing care of trauma patients and the coordination of QI and patient safety programs for the trauma center in conjunction with the TMD. (2.14) He/she shall be well trained and knowledgeable in trauma. The TPM shall also obtain CE so as to remain up to date in regard to trauma. (2.15) ATCN, TNCC, or ADH-approved equivalent course certifications shall be current. (2.16) The training of a TPM new to this position shall include a TPM course, a QI course, and an AIS coding course or state sponsored coding course. **Responsibilities and duties of the TPM:** (2.17) There shall be a verifiable, written job description for the TPM that clearly identifies expectations of leadership and authority to perform the duties required.

			(2.18) Dedicate at least 1.0 FTE to trauma programs having a trauma patient record volume of 500 or greater. (2.19) The time and resources allocated shall be sufficient for the TPM to be effective in the job of QI, community education, clinical education, IVP, and research as required.
I, II	**Trauma Registrar**	R	(2.20) There shall be a verifiable, written job description for the Trauma Registrar, who is separate from but supervised by the TPM and who has appropriate training (e.g., the AAAM course or state sponsored coding course and the ATS, Trauma Registrar Course in injury severity scaling). (2.21) The facility shall have adequate resources to maintain accurate and timely collection, evaluation and submission of trauma data.
I, II	**Trauma Program Staff**	R	(2.22) Trauma Program staff shall have adequate support resources to efficiently and effectively oversee and administer the trauma program and remain engaged in an effective QI process.
I, II	**Trauma Liaisons**	R	(2.23) Official physician liaisons shall be named for EM, orthopedics, neurosurgery, anesthesia, critical care, and radiology. Liaisons are responsible for the accurate dissemination of information from the trauma committee meetings to their service members. (2.24) Liaisons are responsible for attending the Trauma Program Operational Review Committee meetings and at least 50% of Trauma Peer Review Committee meetings. The liaison responsibilities may be shared by physician members of the specialty.
I, II	**Trauma Team**	R	(2.25) A predetermined set of care providers and ancillary personnel (physicians, mid-level practitioners, nurses, X-ray technologists, laboratory, respiratory therapists, etc.) needed to provide resuscitation, rapid triage, and transfer of the severely injured.
I, II	**Consultant Coverage**	R	(2.26) Trauma centers shall have an internal policy identifying the expectations for consultant responses. Deviations to the policy shall be tracked in the QI process.
	3. Participation		

I, II	**General Surgery Participation**	**R**	***Requirements of the general surgeon(s):*** (3.1) Shall provide 24/7 general surgical coverage. (3.2) Shall have privileges in general surgery. (3.3) Shall be Board-certified/Board-eligible in general surgery, or a FACS. (3.4) Shall have taken ATLS at least once or shall be current in ATLS within one year of hire. (3.5) Shall obtain the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years. (3.6) Core surgeons shall participate in at least 50% of the Trauma Peer Review Committee meetings and disseminate information back to all non-core surgeons. (3.7) Shall respond to the ED promptly (Level I – 15 minutes, Level II – 30 minutes) an aggregate of 80% of the time when on-call and when the highest level of trauma is activated. (3.8) Trauma panel surgeons shall respond promptly to activations, remain knowledgeable in trauma care principles, whether treating patients locally or transferring them to a center with more resources, and participate in QI activities. (3.9) Level I facilities shall have a surgeon in -house 24/7. This requirement can be fulfilled by a general surgical senior resident (PGY-3 or greater).

I, II	**Orthopedic Surgery Participation**	**R**	***Requirements of the orthopedic surgeon(s):***
			(3.10) Shall provide 24/7 orthopedic coverage. On-call and promptly available when requested by the trauma surgeon or EM specialist.
			(3.11) Shall obtain the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years.
			(3.12) A liaison shall participate in at least 50% of the Trauma Peer Review Committee meetings and disseminate information back to all orthopedic surgeons on the call panel.
			(3.13) Orthopedic surgeons shall have privileges in general orthopedic surgery.
			(3.14) In the cases where the orthopedist is not dedicated to the facility 24/7, an orthopedic backup plan is required and shall be approved by the TMD.
			(3.15) The following orthopedic-specific QI filters shall be in place and tracked (other filters may be added at the discretion of the ADH Trauma Section):
			    1. time from injury to washout for open fractures;
			    2. time from injury to ORIF for femur fracture; and,
			    3. appropriateness and timing of IV antibiotics for all open fractures.

I, II	**Neurosurgical Participation**	**R**	***Requirements of the neurosurgeon(s):*** (3.16) Shall provide 24/7 neurosurgical coverage. On-call and promptly available when requested by the trauma surgeon or EM specialist.

			(3.17) Shall obtain the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years.
			 (3.18) The liaison shall participate in at least 50% of the Trauma Peer Review Committee meetings and disseminate information back to all neurosurgeons on the call panel.
			 (3.19) In the case where the neurosurgeon is not dedicated to the facility 24/7, a neurosurgical backup plan is required and shall be approved by the TMD.
			 (3.20) The following neurosurgical specific QI filters shall be tracked (others may be developed at the discretion of the ADH Trauma Section):
			     1. all cases requiring the backup to be called in, or the trauma center is Charlie Temp or bypassed due to unavailability of the neurosurgeon on-call; and,
			     2. neurotrauma care shall be reviewed for compliance with the Brain Trauma Foundation Guidelines. *https://www.braintrauma.org/pdf/protected/Guidelines_Management_2007w_bookmarks.pdf*

I, II	**Anesthesiology Participation**	R	***Requirements of the anesthesiologist(s):*** (3.21) Anesthesia services in Level I trauma centers are available in-house 24/7. This may be fulfilled by an anesthesiologist, PGY4 or greater anesthesia resident, or a CRNA. If a CRNA is utilized, an anesthesiologist shall be promptly available. If a CRNA is utilized, it shall be with the approval of the Chief of Anesthesiology. (3.22) Anesthesiology services in a Level II are on-call and promptly available for emergency operations. (3.23) Anesthesiology services are promptly available for airway problems. (3.24) A fully credentialed anesthesia provider shall be present for all trauma operations. (3.25) There is an anesthesiologist liaison designated to the trauma program. (3.26) The availability of the anesthesia services and the absence of delays in airway control or operations are documented by the trauma QI program. (3.27) In a Level II trauma center without in-house anesthesia services, protocols are in place to ensure the timely arrival at the bedside of the anesthesia provider. (3.28) In a Level II trauma center without in-house anesthesia services, there is documentation of the presence of physicians skilled in emergency airway management. (3.29) The anesthesia liaison participates in the trauma QI program. (3.30) The anesthesiology representative or designee to the trauma QI program attends at least 50% of the Trauma Peer Review Committee meetings.
I, II	**Emergency Medicine Participation**	R	***Requirements of emergency medicine physician (s):*** (3.31) There is a liaison from the EM Service to the Trauma Program who effectively disseminates information back to the EM service.

			(3.32) The EM liaison has the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years. (3.33) The EM liaison regularly attends the trauma QI meeting and has documented 50% attendance at the Trauma Peer Review Committee meetings.
I, II	**Medical Specialty Support**	R	(3.34) The following medical specialties shall be on-call and promptly available at the request of the trauma service: • critical care medicine • pathology • internal medicine/pulmonary • interventional radiology • pediatrics • cardiology • nephrology
I	**Surgical Specialty Support** **(Level I)**	R	(3.35) The following surgical specialties shall be on-call and promptly available at the request of the trauma service: • urology • cardiac surgery with pump capability • hand surgery with microvascular capability • maxillofacial coverage • plastics/reconstructive • ophthalmology
II	**Surgical Specialty Support** **(Level II)**	R	(3.36) Required staff with a facility plan for care of the patient admitted to the facility by the specialists in a timely manner. The surgical specialist need not be on-call. Patients should not be sent out of the community because of lack of these resources available to the patient (90% compliance is expected). • cardiac surgery • urology • maxillofacial coverage (any specialty, such as plastics, ENT, and OMFS) • ophthalmology • plastics/reconstructive surgery
	TRAUMA FACILITY AND OPERATIONS		
	4. Emergency Department (ED)		

I, II	**Leadership**	**R**	(4.1) The ED has a designated emergency physician director supported by an appropriate number of additional physicians to ensure immediate care for injured patients. This may be different from the trauma liaison. (4.2) An ED nursing liaison shall be identified and available to the trauma team.
I, II	**Communication with ED Physicians and Nurses**	**R**	(4.3) A reliable method shall exist to communicate changes in trauma process to all staff members caring for injured patients in the ED. An example of this would be a communication book in the ED, requiring a signature by nurses and physicians when changes or other important updates to the trauma process are determined through the QI program.
I, II	**Physician, Mid-level Practitioners and Nursing Availability**	**R**	(4.4) ED shall have 24/7 in-house emergency coverage by physicians and nurses. (4.5) Level I facilities shall have EM providers who are Board-certified/Board-eligible recognized by ABEM, AOBEM and ABP in the ED 24/7. (4.6) A tracking mechanism shall be in place and reviewed in the QI program. The QI program shall review all times the ED physician leaves the ED uncovered in order to respond to an emergency in-house. (4.7) EM physicians on the call panel are regularly involved in the care of injured patients. (4.8) The EM representative or designee to the Trauma Peer Review Committee attends a minimum of 50% of these meetings. (4.9) There is EM physician participation with the overall trauma QI program and the Trauma Program Operational Process Performance Committee (dealing with systems issues).
I, II	**CME Requirements for Providers**	**R**	(4.10) Category I CME is necessary to maintain knowledge in the field. The physicians or mid-level practitioners caring for trauma patients in the ED shall obtain the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years.
I, II	**Trauma Educational Certification for Physicians and Mid-Level Practitioners**	**R**	(4.11) Maintaining current ATLS certification for physicians and mid-level practitioners is essential for those who cover the ED as participants on the trauma team who are not Board-certified/Board eligible in EM. Physicians Board-certified/Board eligible in EM, as recognized by ABEM, AOBEM, or ABP, shall have completed ATLS at least once, and are encouraged but not required to be current.
I, II	**Trauma Nursing Educational Preparation**	**R**	(4.12) Current certification in one of the trauma nursing courses is essential for nurses who assist in trauma resuscitations. ATCN, TNCC, or ADH-approved equivalent course shall be obtained. 80% of ED trauma nurses

			shall be certified and newly hired ED trauma nurses shall be certified within their first year of hire. (4.13) 80% of nurses working in the ED shall be current in ACLS and PALS or ENPC.
I, II	**Nursing Trauma Continuing Education**	R	(4.14) It is necessary that nurses who assist with trauma resuscitations continue to be educated on trauma treatment and issues and shall obtain 12 hours of trauma-specific nursing CE or 12 hours of trauma-specific internal education every three years.

I, II	**Activation Criteria**	R	(4.15) The criteria for the highest level of trauma team activations shall be clearly defined and evaluated by the QI program.
			 (4.16) A patient ≤ 15 years of age who meets a center's criteria for the highest level of activation or is classified as either a major or moderate trauma patient under the Arkansas Trauma Triage Protocol and requires transfer, shall be transferred to a designated pediatric trauma center.
			 (4.17) The facility shall activate the predetermined trauma team based on a set of written activation criteria that include:
			    1. confirmed hypotension (< 90mmHg adults or age appropriate for children) attributed to trauma;
			    2. GCS < 9 with a mechanism due to trauma (general surgeon response can be at the discretion of the ED physician);
			    3. respiratory distress attributed to trauma;
			    4. gunshot wound to the neck, chest or abdomen;
			    5. transfer of a patient from another facility receiving blood or pressure support to maintain vital signs; and,
			    6. any patient for whom the ED physician feels the highest level of activation is warranted.
			 (4.18) Activation of the trauma team for the highest level shall be based on prehospital notification when available.
			 (4.19) Facilities may create a tiered activation system with variable response from hospital and physician personnel, but shall have the above criteria in the highest level of activation. For the program's highest level of activation, the surgeon shall be in the ED on patient arrival, with adequate notification from the field. Activation occurs based on prehospital criteria when available. The program shall demonstrate that the surgeon's presence is in compliance at least 80% of the time. Demonstration of the attending surgeon's prompt arrival for patients with appropriate activation criteria shall be monitored by the hospital's trauma QI program.
			 (4.20) The facility shall be able to demonstrate under and over-triage rates based on its activation criteria.
			 (4.21) The facility shall be able to track the arrival of the physicians who should respond to a given level of activation.

I, II	**Helipad or**	R	

	Landing Zone		(4.22) Shall have a helipad or landing zone.
I, II	**Trauma Image Repository**	**R**	(4.23) Availability to send and receive images to and from TIR in the ED. (4.24) Utilization of TIR when appropriate for expediting trauma patient care.
I, II	**Roles and Responsibilities in the Trauma Bay**	**R**	(4.25) Written protocol for roles and responsibilities of all team members during trauma team resuscitations.
I, II	**Safe Transport of Patients Within and Out of the Emergency Department**	**R**	(4.26) A policy is required describing the level of resources required for the safe movement of patients out of the trauma bay, either within the ED or to other departments in the trauma center.
	5. Essential Equipment (shall include but not be limited to)		
I, II	**Airway Control and Ventilation Equipment (Adult and Pediatric)**	**R**	(5.1) Neonatal to adult oxygen masks, ambu bags, and ETTs (5.2) Every facility shall have equipment and a plan for difficult intubations. (5.3) Cricothyrotomy supplies and drugs necessary for emergency intubation
I, II	**Airway Monitoring**	**R**	(5.4) Pulse Oximetry (5.5) Qualitative End-tidal CO2 Determination – Color Change Detectors (5.6) Continuous End-tidal CO2 Monitoring
I, II	**Thermal Regulation**	**R**	(5.7) The ability to regulate the room temperature in the trauma bay in a reasonable amount of time. (5.8) Fluid warming devices (5.9) Thermal control blankets
I, II	**Large Bore IV Catheters**	**R**	(5.10) 14 – 18 gauge IVs (5.11) Interosseous catheters
I, II	**Focused Assessment with Sonography for Trauma (FAST)**	**R**	(5.12) Machine available to the trauma team and members of the trauma team trained in its use.
I, II	**Standard Procedure Trays**	**R**	(5.13) Thoracotomy (adult and pediatric) (5.14) Tube thoracostomy tray with tubes (adult and pediatric) (5.15) Surgical tray with airway equipment (adult and pediatric)
I, II	**Standard Airway Equipment**	**R**	Ensure equipment is available in both adult and pediatric sizes.

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			(5.16) Oral and nasal airway (5.17) Ambu bags (5.18) ETT - with cuffed ETT down to size 4.0
I, II	**Pediatric Resuscitation Equipment**	R	(5.19) Color-coded, length-based resuscitation tape Weight-based, color-coded resuscitation cart Pediatric equipment available as listed in the American Academy of Pediatrics Joint Policy Statement-Guidelines for Care of Children in the Emergency Department (2009). *http://pediatrics.aappublications.org/content/early/2009/09/21/peds.2009-1807.citation*
I, II	**PACS and Lab Results Computer**	R	(5.20) Shall be in reasonable proximity to the trauma bay for ease of access by the trauma team.
	6. Operative Services		
I, II	**Operating Room (OR)**	R	(6.1) The OR is adequately staffed and immediately available (Level I) and promptly available (Level II) for emergency procedures. (6.2) The OR has provision for the timely completion of semi-urgent cases so as not to cause delay to the patient (orthopedic cases). (6.3) The OR has the essential equipment for trauma care. (6.4) There is a mechanism in place for providing additional staff for a second OR when the first OR is occupied. (6.5) The QI program evaluates OR availability and delays when an on-call team is used.
I, II	**Post-anesthesia Care Unit (PACU)**	R	(6.6) The PACU has qualified nurses available 24/7 as needed during the patient's post-anesthesia recovery phase. (6.7) The PACU is covered by a call team from home with documentation by the QI program that PACU nurses are available and delays are not occurring. (6.8) The PACU has the necessary equipment to monitor and resuscitate adult and pediatric patients. In facilities where pediatric patients are cared for, this equipment shall include ambu bags, ETTs and oral airways appropriate to the age of the patients. (6.9) The QI program ensures that the PACU has the necessary equipment to monitor and resuscitate patients. (6.10) If the PACU acts as an overflow area for the ICU and trauma patients are housed there while waiting for an ICU bed, the nurses in the PACU shall have similar qualifications as the ICU nurse for the care of trauma patients.

	7. Intensive Care Unit		
I, II	**Intensive Care Unit (ICU)**	R	(7.1) Physicians, properly trained, experienced and credentialed are available to the injured patient in the ICU 24/7. (7.2) There is a provision for immediate, in-house 24/7 physician response to a patient emergency. (7.3) The trauma center has a surgical director or co-director for the ICU, who is a core surgeon, who participates in setting policies and administration related to trauma ICU patients, and participates in the QI program. (7.4) Coverage of emergencies in the ICU does not leave the ED without an appropriate physician coverage plan. (7.5) The trauma surgeon remains in charge of trauma patients in the ICU and is kept informed of and concurs with major therapeutic and management decisions. (7.6) The nurse caring for a trauma patient has appropriate initial training in the care of injured patients and maintains competency in the care of injured patients. (7.7) A qualified nurse is available 24/7 to provide care during the ICU phase. (7.8) The patient/nurse ratio does not exceed 2:1 for critically ill trauma patients in the ICU. (7.9) The ICU has the necessary equipment to monitor and resuscitate patients. (7.10) There are written protocols for declaration of brain death. (7.11) When ICU patients are held in other locations (PACU, ED) due to temporary lack of bed space, all requirements for ICU care would apply. (7.12) The ability to perform intracranial pressure (ICP) monitoring is required. Guidelines for the use of ICP monitoring shall follow the Brain Trauma Foundation Guidelines. *https://www.braintrauma.org/pdf/protected/Guidelines_Management_2007w_bookmarks.pdf* (7.13) A pathway for the care of the patient with a severe traumatic brain injury shall exist (see above link for the Brain Trauma Foundation Guidelines).
	8. Other Trauma Care Areas and Services		
I, II	**Pediatric Care**	R	(8.1) Any adult trauma center that annually admits 100 or more injured children ≤ 15 years of age shall fulfill the following additional criteria demonstrating its capability to care for injured children: trauma surgeons shall be credentialed for pediatric trauma care by the hospital's credentialing body, and there shall be a pediatric ED area, pediatric intensive care area, appropriate resuscitation equipment, and a pediatric-specific trauma QI program. (8.2) Hospitals admitting fewer than 100 injured children annually, ≤ 15 years of age, shall review and document the review of all pediatric patients in the QI program.

			(8.3) Pediatric resuscitation equipment shall be available in all pediatric care areas.
I, II	**Geriatric Care/Special Needs**	**R**	(8.4) The facility shall have a protocol for the admission and care of geriatric/special needs patients (age > 65 years). (8.5) There shall be a protocol in place in the facility for the rapid evaluation of patients with head injuries who are on anticoagulants, which shall include a component addressing the rapid reversal of such agents when possible. The protocol may exclude patients who are on aspirin only.
I, II	**Laboratory Services Available 24/7**	**R**	(8.6) Standard analysis of blood, urine, and other body fluids, including micro-sampling for pediatric patients when appropriate. Blood gases and pH determination is required. (8.7) The capability for coagulation studies, blood gases, and microbiology shall be available 24/7. (8.8) Thromboelastography is required at Level I trauma centers.
I, II	**Blood Bank/Ability to Transfuse Blood 24/7**	**R**	(8.9) The blood bank shall be capable of blood typing and cross matching. (8.10) The blood bank shall have an adequate supply of red blood cells available with additional red blood cells, fresh frozen plasma, platelets and cryoprecipitate to meet the needs of injured patients through a regional source and tracked through the QI program. (8.11) Mass transfusion protocol that results in a balanced resuscitation with red cells, plasma, and platelets. (8.12) Prompt availability of universal donor blood. (8.13) Facilities shall have a protocol for the rapid reversal of anticoagulants when available. Facilities may develop their own protocol until such time that state guidelines are adopted.
I, II	**Radiological Services Available 24/7**	**R**	(8.14) Radiologists shall be promptly available, in person or by teleradiology, when requested for the interpretation of radiographs. (8.15) X-ray technologists shall be promptly available 24/7 upon activation of the trauma team. (8.16) Diagnostic information shall be communicated in a written form and in a timely manner. (8.17) Critical information shall be verbally communicated to the trauma team. (8.18) Final reports are timely and accurately reflect communications, including changes between preliminary and final interpretations. (8.19) Changes in interpretation shall be monitored through the QI program. (8.20) The trauma center has policies designed to ensure that trauma patients who may require resuscitation and monitoring are accompanied by appropriately trained providers during transportation to and while in the radiology department. (8.21) Conventional radiography and CT are available in-house 24/7.

			(8.22) MRI and interventional radiology are available 24/7. When the MRI or interventional radiology technologist responds from outside the hospital, the Trauma Program documents the response time. (8.23) Radiologists shall over-read trauma films sent from referring facilities and render written reports when requested. (8.24) The TIR is utilized to expedite care of patients being transferred in and out when appropriate.
I, II	**Respiratory Therapy Services**	R	(8.25) There shall be a respiratory therapist available in-house 24/7 and available to the trauma patient.
I, II	**Rehabilitation Services**	R	(8.26) Rehabilitation services shall be available during the acute phase of care. (8.27) Protocol development and consultation shall be available from a physician with training in physical medicine and rehabilitation or with a physician whose practice focuses on rehabilitation. (8.28) Protocols shall be in place for the timely consultation with rehabilitation and therapy services. (8.29) Transfer agreements shall be in place for in-patient rehabilitation services if they do not exist within the facility. (8.30) Patients with spinal cord injury shall be reported to the Spinal Cord Commission within five business days of patient arrival. (8.31) Functional outcome measurements made on discharge shall be obtained per institutional protocol until such time when there are state protocols adopted.
I, II	**Therapy Services**	R	(8.32) Physical therapy (8.33) Occupational therapy (8.34) Speech therapy
I, II	**Social Services**	R	(8.35) Social work Case management Chaplain services Child life (pediatric hospitals and hospitals admitting more than 100 pediatric patients annually)
	9. Effective Transfer of Patients		
I, II	**Coordinate All Trauma Transfers Through the ATCC**	R	(9.1) All trauma transfers shall be coordinated through the ATCC. Compliance shall be 95% of the time as an aggregate (average) over the reporting period (this does not apply to out-of-state hospitals transferring to out-of-state hospitals). The program shall monitor transfers in its QI program and be able to demonstrate compliance. The decision to accept or not accept a patient to the facility shall be made within 10 minutes of

			contact by the ATCC at least 90% of the time. The exception to this 10 minute requirement is for stable, single system orthopedic, ophthalmologic, or maxillofacial injuries where discussion with the specialist would be beneficial (all communication shall still come though ATCC and an answer given as to acceptance within 20 minutes). The acceptance time shall be tracked in the facility's QI program. A direct physician-to-physician contact is not required for acceptance of a transfer. The acceptance may be granted by anyone designated by the facility to accept a patient on behalf of the facility, including an ED nurse. (9.2) Denials for acceptance of transfers shall be tracked through the trauma program's QI process. Utilization of the ATCC shall be actively tracked in the facility's QI program with a list of all patients transferred out with the corresponding trauma band number. (9.3) All diversions (Bravo, Charlie Temp, and Delta) shall be documented and tracked in the hospital's trauma QI program. Diversions that exceed 5% of the time for required services shall be reported quarterly with a corrective action plan to the TRAC and the ADH.
I, II	**Appropriate Documentation of Patient Records for Transferred Patients**	R	(9.4) Transferring facilities shall send a copy of the patient's pertinent medical record along with radiographic studies (by the TIR or CD when the TIR is not available). (9.5) Final readings by the referring facility's radiologists shall be sent to the receiving facility as soon as available when requested by the receiving facility. Transfer shall not be delayed waiting on this final reading report. (9.6) Copies of original run sheets and readings of the X-ray studies shall be sent to the receiving hospital no later than the next business day.
I, II	**Well-defined Transfer Plans are Essential**	R	(9.7) The plan shall be codified in the facility, approved by the Trauma Program Operations Review Committee, and disseminated to the ED physicians and surgeons in the program. All transfers out shall be reviewed in the review committee by the TMD and TPM and documented as appropriate or inappropriate. The decision to transfer an injured patient to a specialty facility in acute situation shall be based solely on the need of the patient; for example, the method of payment is not considered.
I, II	**Teletrauma**	R	(9.8) The hospital shall have collaborative agreements with referral trauma centers and demonstrate successful use.
	10. Quality Improvement and Peer Review Process		
I, II	**Quality Improvement (QI)**	R	(10.1) The center shall have a clearly defined QI program for the trauma patient population. The QI program shall be supported by a reliable method of

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			data collection that consistently gathers valid and objective information necessary to identify opportunities for improvement. The results of analysis shall define corrective strategies, the results of which shall be documented. The trauma program shall be empowered to address issues in multiple disciplines. (10.2) The TMD (or his/her respective physician designee), the TPM (or his/her respective nurse designee), and specialty representatives in EM, orthopedics, neurosurgery, anesthesia, critical care, and radiology shall attend at least 50% of the Trauma Peer Review Committee meetings.

I, II	**Audit Filters**	R	(10.3) Use of the current Arkansas State QI Audit Filters is mandatory.
			(10.4) The facility shall track and trend the cases that trigger one of the state audit filters. The trauma center may add additional filters to suit its specific needs. The facility shall use the trended information gathered from review of the audit filters to guide the QI program.
			(10.5) Identified problem trends shall undergo review in the multidisciplinary QI meetings with action plans generated, documented, and followed by loop closure.
			(10.6) Orthopedic, neurosurgical and geriatric/special needs-specific audit filters shall be tracked (see orthopedic, neurosurgical and geriatric/special needs sections).
			(10.7) Non-surgical admission (NSA)
			Trauma centers may admit more than 10% of the admitted trauma patients to a non-surgical service.
			If a trauma service admits more than 10% of injured patients to a non-surgical service, the trauma program shall:
			    1. be able to run a Trauma Registry report of all patients admitted to a non-surgical service (total number of NSAs);
			    2. determine the number of NSAs that had an appropriate surgical service consult;
			    3. determine the number of NSAs resulting from same level falls;
			    4. determine the number of NSAs resulting from drowning and hanging; and,
			    5. determine the number of NSAs with ISS < 9.
			(10.8) All NSA patients not meeting criteria 2-5 shall be reviewed in the QI meeting for appropriateness of admission to a non-surgical service.

I, II	**Trauma Chart Reviews**	R	(10.9) Review charts on all trauma patients meeting state Trauma Registry inclusion criteria, including deaths, unexpected outcomes, all pediatric patients, and other patients who meet state QI audit filter criteria. (10.10) Review of the entire patient's encounter with the trauma system, from EMS through hospital treatment and discharge, transfer, or death, with identification of opportunities for improvement in any and all aspects of care. (10.11) Identified opportunities for improvement shall be followed by an action

			plan and loop closure documenting the effect of the action plan.
I, II	**Trauma-Specific QI Program**	R	(10.12) This program shall be a structured process, led by the trauma program, to demonstrate continuous evaluation to improve care for injured patients that is coordinated with the hospital-wide QI program. The components of an organized trauma QI program shall be: (10.13) a reliable method of identifying trauma patients presenting to and/or admitted to the facility; (10.14) the infrastructure to abstract patient information from the hospital and prehospital records in order to identify quality of care issues that is reliable and consistently obtains valid and objective information necessary to identify opportunities for improvement; (10.15) a clearly defined set of data points and audit filters to be abstracted from the patient's record; (10.16) proper identification and ICD-9, ICD-10 (or newer version), and AIS coding of all injuries; (10.17) selection of facility-specific process and outcome measures that are related to patient care and can be benchmarked to national standards; (10.18) a functional trauma registry that supports the QI program; (10.19) validation of data abstraction, injury identification, and ISS coding is mandatory; (10.20) a multidisciplinary review process that occurs at frequent, regular intervals and analyzes trauma care in the institution in order to identify opportunities for improvement; (10.21) multidisciplinary involvement as evidenced by both meeting an attendance threshold and submission of case reviews in specialty areas; (10.22) the results of this multidisciplinary review process leads to corrective actions that are documented which may include a letter to inform the responsible party with or without response, an educational offering related to the identified issue, a policy change or development of new policy, counseling of the responsible person, or removal from the trauma call panel; (10.23) when a consistent problem or inappropriate variation is identified, corrective actions are taken and documented; (10.24) tracking and trending of identified performance issues is necessary to ensure compliance to process changes; (10.25) the TMD and TPM shall be empowered by the hospital's administration to address issues that involve multiple disciplines and perform loop closure for issues identified; (10.26) the TMD and TPM shall be aware of current national standards of trauma care and hold their call panel physicians to this expectation; (10.27) creation of protocols, guidelines, or pathways based on the findings from multidisciplinary meetings; and, (10.28) the QI program reviews the appropriate referral of patients to the regional organ procurement organization and subsequent organ

			donation rate.
I, II	**Trauma Multidisciplinary Review (TMR) Process**	R	(10.29) This process shall be led by the TMD and the TPM with representation from all core surgeons, specialties, and services, participates on the trauma team at the facility, which is authorized by the facility to establish, review, and improve the care of the injured. The TMR process shall: 1. establish trauma treatment protocols; 2. oversee compliance with these protocols; 3. identify opportunities for improvement; 4. develop plans for resolution and ensures improvement of identified issues; and, 5. monitor loop closure of issues identified in the process. (10.30) While there may be a single multidisciplinary meeting in a facility, this multidisciplinary process shall consist of two distinct parts: 1. Trauma Program Operations Review Committee; and, 2. Trauma Peer Review Committee. (10.31) The minutes of these discussions shall be recorded separately. (10.32) The peer review portion shall report through the hospital's trauma QI program to assure protection and continuity of practitioner data for credentialing processes. The conduct of the peer review meeting shall be compliant with state and federal law to ensure confidentiality and patient protection. (10.33) Meetings shall occur with a frequency that ensures timely resolution of issues identified through the trauma QI program. Trauma centers with few trauma patients may accomplish this on a quarterly basis while centers with more trauma volume may need to hold such meetings on a more frequent basis. (10.34) Attendance by the ED director or EM liaison, TMD, all core surgeons, specialties (including, but not limited to, neurosurgical, orthopedic, radiology, and critical care liaisons), and services is required and they shall attend at least 50% of the Trauma Peer Review Committee meetings. (10.35) In circumstances when attendance is not mandated (non-core members), the TMD ensures dissemination of information from the trauma peer review committee. The TMD shall document the dissemination of information from the trauma peer review committee.
	11. Responsibility to the Arkansas Department of Health (ADH)		
I, II	**Trauma Registry Data and Submission to the Trauma Registry**	R	(11.1) Timely abstraction of the charts of injured patients who meet inclusion criteria; data shall be entered into the Trauma Registry and closed within 60 days of discharge. (11.2) Data shall be submitted to the Trauma Registry when requested by the ADH.

			(11.3) At the time of submission of the designation site survey pre-review questionnaire, the trauma center shall submit all trauma patient records to the Trauma Registry even if the submission is not within the standard reporting period. (11.4) Trauma Registry data are collected and analyzed.
I, II	**Accuracy of the Trauma Data Submitted to the Trauma Registry**	**R**	(11.5) The trauma center shall create and implement a verifiable process to ensure accuracy and completeness of the data submitted to the Trauma Registry. (11.6) Trauma centers are required to document complete and accurate data for all trauma patients meeting state Trauma Registry inclusion criteria.
I, II	**Participation in Trauma Regional Advisory Council (TRAC)**	**R**	At least 50% of the required (to be determined by the TRAC) regional meetings shall be attended by the: (11.7) TMD or physician designee; and, (11.8) TPM or nurse designee.
I, II	**Active Participation in the Regional and State QI Review Process**	**R**	(11.9) The TMD (or his/her respective physician designee) and TPM (or his/her respective nurse designee) shall attend 50% of the regional peer review meetings. (11.10) The TMD (or his/her respective physician designee) and TPM (or his/her respective nurse designee) shall attend 100% of the regional and state peer review meetings when the facility's cases are discussed. (11.11) The trauma center shall provide adequate clinical patient information for meaningful discussion in the protected QI meetings sanctioned by the ADH. (11.12) The Trauma Program shall provide data and participate meaningfully in the regional and state QI meetings as required by the chair of the committee, TRAC MD, or state TMD.
I, II	**Community Outreach and Education in Trauma-specific Opportunities Sponsored by the Hospital**	**R**	(11.13) The facility shall provide opportunities for staff and community physicians, nurses, allied health personnel, and prehospital providers to receive CME credits. The facility may satisfy this requirement by working independently or with other facilities, the TRAC, regional organizations, or ADH-approved educational foundation to provide this education. The facility's contribution to education and outreach shall be verifiable at review.
I	**Accredited Residency Education Program (Level I)**	**R**	(11.14) A Level I trauma center shall provide a continuous rotation in trauma care for residents (PGY 2 or higher) that is part of an accredited (adult or pediatric) graduate medical education program in any of the following disciplines: general surgery, orthopedic surgery, EM, or neurosurgery; or support an acute care surgery fellowship consistent with the educational

			requirements of the American Association for the Surgery of Trauma. *http://www.aast.org/acutecaresurgery/programrequirements.aspx* Pediatric Level I trauma centers requires PGY 3 or higher). In circumstances in which the primary residency program is not housed in the facility, the rotation should lead to increasing the number of trained graduates in that specialty.
I	**12. Trauma Research**		
I	**Trauma Research (Level I)**	R	(12.1) The Level I trauma center shall meet one of the following research requirements: • minimum of 10 peer-reviewed articles published or accepted in journals included in *Index Medicus* in 3 years; or 4 peer-reviewed articles published in journals included in *Index Medicus/Medline* http://www.nlm.nih.gov/bsd/aim.html in 3 years; • meet the criterion of 3 of 7 scholarly activities as defined below by ACS in *Resources for Optimal Care of the Injured Patient 2006* : 1. "Leadership in major trauma organizations. There must be evidence of this leadership for a Level I organization. Evidence includes membership in trauma committees of any of the regional and national trauma organizations such as the American Association for the Surgery of Trauma (AAST), Western Trauma Association, Eastern Association for the Surgery of Trauma, and the ACS Committee on Trauma. 2. Peer-reviewed funding for trauma research. There should be demonstrated evidence of funding of the center from a recognized government or private agency or organization. 3. Evidence of dissemination of knowledge to include review articles, book chapters, technical documents, Web-based publications, editorial comments, training manuals, and trauma-related course material. 4. Display of scholarly applications of knowledge as evidenced by case reports or reports of clinical series in journals included in MEDLINE. 5. Participation as a visiting professor or invited lecturer at national or regional trauma conferences. 6. Support of resident participation in institution-focused scholarly activity, including laboratory experiences, clinical trials, or resident trauma paper competitions at the state, regional, or national level. 7. Mentorship of residents and fellows, as evidenced by the development of a trauma fellowship program or successful matriculation of graduating residents into trauma fellowship programs." (12.2) The research shall represent work related to the trauma center or as part of a national research consortium.

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			(12.3) The articles shall include authorship or co-authorship by a member of the general surgery trauma team, and at least two of the following six disciplines: EM, neurosurgery, orthopedics, radiology, anesthesia, and rehabilitation.
	13. Other Responsibilities of Comprehensive Trauma Centers		
I, II	**Injury and Violence Prevention (IVP)**	R	(13.1) The facility shall have an identified staff member who is the point of contact for IVP activities and notify the Trauma Section and the TRAC IVP Committee regarding the identity of the designated person. (13.2) The facility shall demonstrate involvement with the TRAC in regional IVP planning efforts. (13.3) The facility shall work with the ADH-affiliated IVP programs by participating in evidence-based prevention programs, either alone or in collaboration with other facilities, such as the regional Hometown Health Initiative, local EMS agencies, or the TRAC. (13.4) The facility shall demonstrate participation in ADH-affiliated IVP programs and shall participate in evaluation efforts for regional IVP programs.
I, II	**Alcohol Screening and Intervention**	R	(13.5) The facility shall have a method to screen admitted trauma patients for alcohol use or abuse and have a plan to assist patients with positive screens. Screening can be in the form of a consumption questionnaire or biological measurements. Assistance can be provision of appropriate referrals or in-house intervention, such as brief motivational interviewing.
I, II	**Disaster Management**	R	(13.6) The hospital shall participate in regional disaster planning and drills. (13.7) The hospital shall meet the disaster-related requirements of TJC or an equivalent licensing body. (13.8) A trauma panel surgeon or clinical member of the trauma team shall be involved in the hospital's disaster committee. (13.9) As an emergency response exercise, the hospital shall activate its Emergency Operations Plan twice a year at each site included in the plan. If the hospital activates its Emergency Operations Plan in response to one or more actual emergencies, these emergencies may serve in place of emergency response exercises. Tabletop sessions, though useful, are not acceptable substitutes for these exercises. (13.10) The trauma center shall have an Emergency Operations Plan described in the hospital disaster manual.
I, II	**Organ Procurement Organization (OPO)**	R	(13.11) The trauma center shall have an established relationship with a recognized OPO. (13.12) The trauma center shall have written policies for triggering notification of the OPO.

			(13.13) The trauma center shall track its percentage of referral of eligible patients and track the percentage of successful donors from the pool of referred patients.

Criteria for Level III Trauma Centers

Purpose: To define and clarify the criteria necessary for a general care facility to become a Level III trauma center and ensure optimal care of the injured.

Definition: The Level III trauma center (general) serves communities that do not have immediate access to a Level I or II institution. Level III trauma centers can provide prompt assessment, resuscitation, emergency operations, stabilization, and also arrange for transfer to a facility that can provide definitive trauma care. General surgeons and orthopedic surgeons are required in a Level III facility.

Level III Criteria			
Level	**Section**	**Required (R) or Desirable (D)**	**Criteria**
	TRAUMA PROGRAM		
	1. Support/Infrastructure		
III	**Institutional Support**	R	(1.1) Clear evidence of hospital board, administrative, and medical staff support in the form of a written resolution to attain and maintain the level of designation; the resolution shall be updated at least every three years. (1.2) Financial support of additional FTEs, space, and/or equipment, if required. (1.3) Authorization for the trauma program's leadership and committees to perform their required duties. (1.4) Clearly defined lines of reporting for the TMD/TMCD and TPM within the organization.
III	**Trauma Program Administration and Infrastructure**	R	(1.5) Program within an acute care facility with defined leadership (TMD/TMCD and TPM) with the authority to develop, oversee and improve the care of the injured within the facility, and is integrated into the local, regional, state, and national system of trauma care. (1.6) The trauma program shall participate in the development and improvement of prehospital care protocols and patient safety programs.
	2. Staffing		
III	**Trauma Medical Director (TMD)/Trauma Medical Co-Director (TMCD)**	R	*Requirements and qualifications for the TMD/TMCD:* (2.1) A facility may have a co-director who is a general surgeon. If a facility has a director and a co-director, one shall be a general surgeon. (2.2) A physician in good standing in the institution with state licensure, has membership in professional organizations, possesses clinical knowledge and expertise, actively participates in the care of injured patients, and has a personal interest and the time to be the champion for trauma patient care to the medical staff and the trauma center. (2.3) Board-certified/Board-eligible in his/her specialty or a FACS. (2.4) Current in ATLS as either a provider or an instructor. *Responsibilities and duties TMD/TMCD:* (2.5) Participate in trauma call. (2.6) Lead the trauma QI and patient safety programs within the trauma center. (2.7) Have a method to identify injured patients, monitor the provision of health care services, make periodic rounds, and hold formal and

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			informal discussions with individual practitioners.
			(2.8) There shall be a verifiable, written job description that clearly identifies expectations of leadership and authority to perform the duties required, including the authority to conduct trauma-specific peer review, place members on and take members off of a trauma *call schedule* **, be involved in the development of the trauma center's bypass protocol and the decisions regarding bypass and "Charlie Temp" status, and affect process changes identified in the trauma multidisciplinary meetings.
			(2.9) Have responsibility and authority for determining each call panel member's ability to participate on the trauma call schedule based on a periodic review.
			(2.10) Have responsibility and authority to ensure compliance with verification requirements; and report changes in the program that would affect the designation of the facility to the ADH.
			(2.11) Have the ability to contribute to the TPM's performance evaluation.
			(2.12) Demonstrate with his/her signature awareness of the facility's invoices to the ADH for payment.
			(2.13) TMD or TMCD (shall be a surgeon) shall perform a written annual review of the performance of all the surgeons on the call panel. Documentation of such shall be available for review at the designation site survey.
			*** The ability to grant or remove a provider's privileges to practice in an area is reserved for the facility's Board and Medical Staff Committee. There should be a distinction of a provider's privileges to participate in care of the trauma patient and participation in a trauma call schedule. The facility's Board and Medical Staff Committee shall take into consideration the input of the TMD or TMCD when considering trauma privileges, while the TMD or TMCD shall have the discretion of which providers participate in the trauma call schedule. A decision by the TMD or TMCD to place or remove a provider from the trauma call schedule shall not be viewed as affecting or restricting a provider's hospital privileges, as that decision is reserved for the facility's Board and Medical Staff Committee.*
III	**Trauma Program Manager (TPM)**	R	***Requirements and qualifications for the TPM:*** (2.14) A RN with responsibility for monitoring and evaluating nursing care of trauma patients and the coordination of QI and patient safety programs for the trauma center in conjunction with the TMD/TMCD. (2.15) He/she shall be well trained and knowledgeable in trauma. The TPM shall also obtain continuing education so as to remain up to date in regard to trauma. (2.16) ATCN, TNCC, or ADH-approved equivalent course certifications shall be current. (2.17) The training of a TPM new to this position shall include a TPM course, a QI course, and an AIS coding course or state-sponsored coding course. ***Responsibilities and duties of the TPM:*** (2.18) There shall be a verifiable, written job description for the TPM that

			clearly identifies expectations of leadership and authority to perform the duties required. (2.19) Dedicate at least 1.0 FTE to trauma programs having a trauma patient record volume of 500 or greater. (2.20) The time and resources allocated shall be sufficient for the TPM to be effective in the job of QI, community education, clinical education, and IVP.
III	**Trauma Registrar**	R	(2.21) There shall be a verifiable, written job description for the Trauma Registrar that clearly identifies expectations. (2.22) The facility shall have adequate resources to maintain accurate and timely collection, evaluation and submission of trauma data. (2.23) After passing 500 trauma patient records, there shall be an identified Trauma Registrar, who is separate from but supervised by the TPM and who has appropriate training in injury severity scaling (e.g., AAAM course or state-sponsored coding course, ATS Trauma Registrar Course).
III	**Trauma Program Staff**	R	(2.24) Trauma programs shall have adequate support resources to efficiently and effectively oversee and administer the trauma program and remain engaged in an effective QI process.
III	**Trauma Liaisons**	R	(2.25) Official physician liaisons shall be named for EM, orthopedics, anesthesia, critical care, and radiology (if available in-house). In addition, if a neurosurgery service is provided, a liaison shall be named. Liaisons are responsible for the accurate dissemination of information from the trauma committee meetings to their service members. (2.26) Liaisons are responsible for attending the Trauma Program Operational Review Committee meetings and at least 50% of Trauma Peer Review Committee meetings. The liaison responsibilities may be shared by physician members of the specialty.
III	**Trauma Team**	R	(2.27) A predetermined set of care providers and ancillary personnel (physicians, mid-level practitioners, nurses, X-ray technologists, laboratory, respiratory therapist, etc.) needed to provide resuscitation, rapid triage, and transfer of the severely injured.
III	**Consultant Coverage**	R	(2.28) Trauma centers shall have an internal policy identifying the expectations for consultant responses. Deviations to the policy shall be tracked in the QI process.
	3. Participation		
III	**General Surgery Participation**	R	***Requirements of the general surgeon(s):***

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			(3.1) Shall have 24/7 general surgical coverage.
			(3.2) Shall have privileges in general surgery.
			(3.3) Shall be Board-certified/Board-eligible in general surgery or a FACS or satisfy the criteria for an alternate pathway if deemed necessary by the ADH.
			(3.4) Shall have taken ATLS at least once or shall be current in ATLS within one year of hire.
			(3.5) Shall obtain the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years.
			(3.6) Core surgeons shall participate in at least 50% of the Trauma Peer Review Committee meetings and disseminate information back to all surgeons.
			(3.7) Surgeons shall respond to the ED promptly (within 30 minutes) an aggregate of 80% of the time when on-call and when the highest level of trauma is activated.
			(3.8) Trauma panel surgeons shall respond promptly to activations, remain knowledgeable in trauma care principles, whether treating patients locally or transferring them to a center with more resources, and participate in QI activities.
III	**Orthopedic Surgery Participation**	**R**	***Requirements of the orthopedic surgeon(s):*** 3.9 Level III trauma centers shall have orthopedic coverage. In a designation or re-designation year, Level III trauma centers that do not have 24/7 orthopedic coverage may attain the classification in one of two ways: 1. In the first year, the Level III trauma center shall not transfer more than 50% of all trauma patients for treatment at another facility; in the second year, the center shall not transfer more than 45% of trauma patients; in the third year and thereafter, the center shall not transfer more than 40% of trauma patients. If the Level III trauma center fails to meet these thresholds in any year, the Level III trauma center must submit a Corrective Action Plan for approval to the Arkansas Department of Health to be implemented within one year of the approval date. If neither the threshold nor the Corrective Action Plan is attained, the Level III designation shall be suspended and the center must reapply for designation; or 2. The Level III trauma center must transfer 5% fewer trauma patients for treatment at another facility than the center transferred in the previous year (the "index year"); 10% fewer than the index year in the second year; and 15% fewer than the index year in the third year. Facilities that remain above the 40% standard for transfers of trauma patients subsequent to year three shall continue to decrease by 5% annually until the 40% standard is met. If the Level III trauma center fails to meet these thresholds in any year, the Level III trauma center must submit a Corrective Action Plan for approval to the

			Arkansas Department of Health to be implemented within one year of the approval date. If neither the improvement threshold nor the Corrective Action Plan is attained, the Level III designation shall be suspended and the center must reapply for designation. (3.10)　Shall obtain the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years. (3.11)　A liaison shall participate in at least 50% of the Trauma Peer Review Committee meetings and disseminate information back to all orthopedic surgeons on the call panel. (3.12)　Orthopedic surgeons shall have privileges in general orthopedic surgery. (3.13)　In the cases where the orthopedist is not dedicated to the facility 24/7, an orthopedic backup plan is required and shall be approved by the TMD. (3.14)　The following orthopedic specific QI filters shall be in place and tracked (other filters may be added at the discretion of the ADH Trauma Section): 　　1.　time from injury to washout for open fractures; 　　2.　time from injury to ORIF for femur fracture; and, 　　3.　appropriateness and timing of IV antibiotics for all open fractures.
III	**Neurosurgical Participation**	D	***Neurosurgical coverage is not required in a Level III facility.*** However, if a Level III facility represents itself as having neurosurgical capability and capacity on the ATCC dashboard, the following applies and is required of the neurosurgeons at the facility: (3.15)　Shall obtain the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years. (3.16)　The liaison shall participate in at least 50% of the Trauma Peer Review Committee meetings and disseminate information back to all neurosurgeons on the call panel. (3.17)　The following neurosurgical-specific QI filters shall be tracked (others may be developed at the discretion of the ADH Trauma Section): 　　1.　all cases requiring the backup to be called in or the patient to be diverted or transferred due to unavailability of the neurosurgeon on-call; and, 　　2.　neurotrauma care shall be reviewed for compliance with the Brain Trauma Foundation Guidelines. 　　*https://www.braintrauma.org/pdf/protected/Guidelines_Management_2007w_bookmarks.pdf*

III	**Anesthesiology Participation**	**R**	*Requirements of the anesthesiologist(s):* (3.18) Anesthesiology services are promptly available for emergency operations. (3.19) Anesthesiology services are promptly available for airway problems. This may be fulfilled by an anesthesiologist or a CRNA. If a CRNA is utilized an anesthesiologist shall be promptly available. If a CRNA is utilized it shall be with the approval of the Chief of Anesthesiology. (3.20) There is an anesthesiologist liaison designated to the trauma program. (3.21) The availability of the anesthesia services and the absence of delays in airway control or operations are documented by the trauma QI program. (3.22) In trauma centers without in-house anesthesia services, protocols are in place to ensure the timely arrival at the bedside of the anesthesia provider. (3.23) In a center without in-house anesthesia services, there is documentation of the presence of physicians skilled in emergency airway management. (3.24) The anesthesia liaison participates in the trauma QI program. (3.25) The anesthesiology representative or designee to the trauma program attends at least 50% of the Trauma Peer Review Committee meetings.
III	**Emergency Medicine Participation**	**R**	*Requirements of emergency medicine physician (s):* (3.26) There is a liaison from the EM Service to the Trauma Program who effectively disseminates information back to the EM service. (3.27) The EM liaison has the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years. (3.28) The EM liaison regularly attends the trauma QI meeting and has documented 50% attendance at the Trauma Peer Review Committee meetings.
III	**Medical Specialty Support**	**R**	(3.29) The following specialty shall be on-call and promptly available at the request of the trauma service: • Internal medicine
	TRAUMA FACILITY AND OPERATIONS		
	4. Emergency Department (ED)		
III	**Leadership**	**R**	(4.1) The ED has a designated emergency physician director supported by an appropriate number of additional physicians to ensure immediate care for injured patients.
III	**Communication with ED Physicians and Nurses**	**R**	(4.2) A reliable method shall exist to communicate changes in trauma process to all staff members caring for injured patients in the ED. An example of this would be a communication book in the ED, requiring a signature by

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			nurses and physicians when changes or other important updates to the trauma process are determined through the QI program.
III	**Physician, Mid-level Practitioners and Nursing Availability**	R	(4.3) ED shall have 24/7 in-house emergency coverage by physicians and nurses. (4.4) A tracking mechanism shall be in place and reviewed in the QI program. The QI program shall review all times the ED physician leaves the ED uncovered in order to respond to an emergency in-house. (4.5) EM physicians on the call panel are regularly involved in the care of injured patients. (4.6) The EM representative or designee to the Trauma Peer Review Committee attends a minimum of 50% of these meetings. (4.7) There is EM physician participation with the overall trauma QI program and the Trauma Program Operational Process Performance Committee (dealing with systems issues).
III	**CME Requirements for Providers**	R	(4.8) Physicians who cover the ED in rural trauma centers may not see enough trauma to stay abreast of current treatment protocols. Category I CME is necessary to maintain knowledge in the field. The physician or mid-level practitioner caring for trauma patients in the ED shall obtain the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years.
III	**Trauma Educational Certification for Physicians and Mid-Level Practitioners**	R	(4.9) Maintaining current ATLS certification for physicians and mid-level practitioners is essential for those who cover the ED as participants on the trauma team who are not Board-certified in EM. Physicians Board-certified/Board-eligible in EM, as recognized by ABEM, AOBEM or ABP, shall have completed ATLS at least once, and are encouraged but not required to be current.
III	**Trauma Nursing Educational Preparation**	R	(4.10) Current certification in one of the trauma nursing courses is essential for nurses who assist in trauma resuscitations. ATCN, TNCC, or ADH-approved equivalent course will be obtained. 80% of ED trauma nurses shall be certified and newly hired ED trauma nurses shall be certified within their first year of hire. (4.11) 80% of nurses working in the ED shall be current in ACLS and PALS or ENPC.
III	**Trauma Nursing Continuing Education**	R	(4.12) It is necessary that nurses who assist with trauma resuscitations continue to be educated on trauma treatment and issues and shall obtain 12 hours of trauma-specific nursing CE or 12 hours of trauma- specific internal education every three years.

III	**Activation Criteria**	R	(4.13) The criteria for the highest level of trauma team activations shall be clearly defined and evaluated by the QI program.
			 (4.14) A patient ≤ 15 years of age who meets a center's criteria for the highest level of activation or is classified as either a major or moderate trauma patient under the Arkansas Trauma Triage Protocol and requires transfer, shall be transferred to a designated pediatric trauma center.
			 (4.15) The facility shall activate the predetermined trauma team based on a set of written activation criteria that include:
			   1. confirmed hypotension (< 90mmHg adults or age appropriate for children) attributed to trauma;
			   2. GCS < 9 with a mechanism due to trauma (general surgeon response can be at the discretion of the ED physician);
			   3. respiratory distress attributed to trauma;
			   4. gunshot wound to the neck, chest or abdomen;
			   5. transfer of a patient from another facility receiving blood or pressure support to maintain vital signs; and,
			   6. any patient for whom the ED physician feels the highest level of activation is warranted.
			 (4.16) Activation of the trauma team for the highest level shall be based on prehospital notification when available.
			 (4.17) Facilities may create a tiered activation system with variable response from hospital and physician personnel, but shall have the above criteria in the highest level of activation. For the program's highest level of activation, the surgeon shall be in the ED on patient arrival, with adequate notification from the field. The maximum acceptable response time is 30 minutes tracked from time of activation. Activation occurs based on prehospital criteria when available. The program shall demonstrate that the surgeon's presence is in compliance at least 80% of the time. Demonstration of the attending surgeon's prompt arrival for patients with appropriate activation criteria shall be monitored by the hospital's trauma QI program.
			 (4.18) The facility shall be able to demonstrate its under and over-triage rates based on their activation criteria.
			 (4.19) The facility shall be able to track the arrival of the physicians who should respond to a given level of activation.

III	**Rural Trauma Team Development Course (RTTDC)**	R	(4.20) Rural facilities shall demonstrate participation by members of the trauma resuscitation team, including physicians, nurses and allied health personnel within a regional facility by attending once during a review period.
III	**Helipad or Landing Zone**	R	(4.21) Shall have a helipad or a written, organized plan for getting the trauma patient to a safe landing zone with alternative sites should the primary landing site be unavailable.

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III	**Trauma Image Repository**	**R**	(4.22) Availability to send and receive images to and from TIR in the ED. (4.23) Utilization of TIR when appropriate for expediting trauma patient care.
III	**Roles and Responsibilities in the Trauma Bay**	**R**	(4.24) Written protocol for roles and responsibilities of all team members during trauma team resuscitations.
III	**Safe Transport of Patients Within and Out of the Emergency Department**	**R**	(4.25) A policy is required describing the level of resources required for the safe movement of patients out of the trauma bay, either within the ED or to other departments in the trauma center.
	5. Essential Equipment (shall include but not be limited to)		
III	**Airway Control and Ventilation Equipment (Adult and Pediatric)**	**R**	(5.1) Neonatal to adult oxygen masks, ambu bags, and ETTs (5.2) Every facility shall have equipment and a plan for difficult intubations. (5.3) Cricothyrotomy supplies and drugs necessary for emergency intubation
III	**Airway Monitoring**	**R**	(5.4) Pulse Oximetry (5.5) Qualitative End-tidal CO_2 Determination – Color Change Detectors (5.6) Continuous End-tidal CO_2 Monitoring if neurosurgery services are provided
III	**Thermal Regulation**	**R**	(5.7) The ability to regulate the room temperature in the trauma bay in a reasonable amount of time. (5.8) Fluid warming devices (5.9) Thermal control blankets
III	**Large Bore IV Catheters**	**R**	(5.10) 14 – 18 gauge IVs (5.11) Interosseous catheters
III	**Focused Assessment with Sonography for Trauma (FAST)**	**R**	(5.12) Machine available to the trauma team and members of the trauma team trained in its use.
III	**Standard Procedure Trays**	**R**	(5.13) Thoracotomy (adult and pediatric) (5.14) Tube thoracostomy tray with tubes (adult and pediatric) (5.15) Surgical tray with airway equipment (adult and pediatric)
III	**Standard Airway Equipment**	**R**	Ensure equipment is available in both adult and pediatric sizes.

			(5.16) Oral and nasal airway (5.17) Ambu bags (5.18) ETT - with cuffed ETT down to size 4.0
III	**Pediatric Resuscitation Equipment**	**R**	(5.19) Color-coded, length-based resuscitation tape Weight-based, color-coded resuscitation cart Pediatric equipment available as listed in the American Academy of Pediatrics Joint Policy Statement-Guidelines for Care of Children in the Emergency Department (2009) *http://pediatrics.aappublications.org/content/early/2009/09/21/peds.2009-1807.citation*
III	**PACS and Lab Results Computer**	**R**	(5.20) Shall be in reasonable proximity to the trauma bay for ease of access by the trauma team.
	6. Operative Services		
III	**Operating Room (OR)**	**R**	(6.1) The ORs are promptly available within 30 minutes of notification of the need for an urgent case to allow for emergency operations on musculoskeletal injuries, such as open fracture debridement and stabilization and compartment decompression. (6.2) The OR is adequately staffed and promptly available. (6.3) The OR has the essential equipment. (6.4) There is craniotomy equipment available in trauma center that offers neurosurgery services. (6.5) The QI program evaluates OR availability and delays when an on-call team is used.
III	**Post-anesthesia Care Unit (PACU)**	**R**	(6.6) The PACU has qualified nurses available 24/7 as needed during the patient's post-anesthesia recovery phase. (6.7) The PACU is covered by a call team from home with documentation by the QI program that PACU nurses are available and delays are not occurring. (6.8) The PACU has the necessary equipment to monitor and resuscitate adult and pediatric patients. In facilities where pediatric patients are cared for, this equipment shall include ambu bags, ETTs and oral airways appropriate to the age of the patients. (6.9) The QI program ensures that the PACU has the necessary equipment to monitor and resuscitate patients. (6.10) If the PACU acts as an overflow area for the ICU, and trauma patients are housed there while waiting for an ICU bed, the nurses in the PACU shall have similar qualifications as the ICU nurse for the care of trauma patients.

	7. Intensive Care Unit		
III	**Intensive Care Unit (ICU)**	R	(7.1) When a critically ill trauma patient is treated locally, there shall be a mechanism in place to provide prompt availability of a physician, who has the ability to care for critically ill patients 24/7. (7.2) The surgical director or the surgical co-director shall be a surgeon, who is credentialed by the hospital to care for ICU trauma patients, and who participates in the QI program. (7.3) Coverage of emergencies in the ICU does not leave the ED without an appropriate physician coverage plan. (7.4) The trauma center has a surgical director or co-director for the ICU who participates in setting policies and administration related to trauma ICU patients. (7.5) The trauma surgeon remains in charge of trauma patients in the ICU and is kept informed of and concurs with major therapeutic and management decisions. (7.6) A qualified nurse is available 24/7 to provide care during the ICU phase. (7.7) The patient/nurse ratio does not exceed 2:1 for critically ill patients in the ICU. (7.8) The ICU has the necessary equipment to monitor and resuscitate patients. (7.9) There are written protocols for declaration of brain death. (7.10) When ICU patients are held in other locations (PACU, ED) due to temporary lack of bed space, all requirements for ICU care would apply. (7.11) Intracranial pressure monitoring in facilities with neurosurgical coverage.
	8. Other Trauma Care Areas and Services		
III	**Pediatric Care**	R	(8.1) Any adult trauma center that annually admits 100 or more injured children ≤15 years of age shall fulfill the following additional criteria demonstrating its capability to care for injured children: trauma surgeons shall be credentialed for pediatric trauma care by the hospital's credentialing body, and there shall be a pediatric ED area, pediatric intensive care area, appropriate resuscitation equipment, and a pediatric-specific trauma QI program. (8.2) Hospitals admitting fewer than 100 injured children annually, ≤15 years of age, shall review and document the review of all pediatric patients in the QI program. (8.3) Pediatric resuscitation equipment shall be available in all pediatric care areas.
III	**Geriatric Care/Special Needs**	R	(8.4) The facility shall have a protocol for the admission and care of geriatric/special needs patients (age > 65 years). (8.5) There shall be a protocol in place in the facility for the rapid evaluation

			of patients with head injuries who are on anticoagulants, which shall include a component addressing the rapid reversal of such agents when possible. The protocol may exclude patients who are on aspirin only.
III	**Laboratory Services Available 24/7**	**R**	(8.6) Standard analysis of blood, urine, and other body fluids, including micro-sampling for pediatric patients when appropriate. Blood gases and pH determination is required. (8.7) The capability for coagulation studies, blood gases, and microbiology shall be available 24/7.
III	**Blood Bank/Ability to Transfuse Blood 24/7**	**R**	(8.8) The blood bank shall be capable of blood typing and cross matching. (8.9) The blood bank shall have an adequate supply of red blood cells available with additional red blood cells, fresh frozen plasma, platelets and cryoprecipitate to meet the needs of injured patients through a regional source and tracked through the QI program. (8.10) Mass transfusion protocol that results in a balanced resuscitation with red cells, plasma and platelets. (8.11) Prompt availability of universal donor blood. (8.12) Facilities shall have a protocol for the rapid reversal of anticoagulants when available. Facilities may develop their own protocol until such time that state guidelines are adopted.
III	**Radiological Services Available 24/7**	**R**	(8.13) Radiologists are promptly available, in person or by teleradiology, when requested for the interpretation of radiographs. (8.14) X-ray technologists shall be promptly available 24/7 upon activation of the trauma team. (8.15) Diagnostic information is communicated in a written form and in a timely manner. (8.16) Critical information is verbally communicated to the trauma team. (8.17) Final reports accurately reflect communications, including changes between preliminary and final interpretations. (8.18) Changes in interpretation shall be monitored through the QI program. (8.19) The trauma center shall have policies designed to ensure that trauma patients who may require resuscitation and monitoring are accompanied by appropriately trained providers during transportation to and while in the radiology department. (8.20) Conventional radiography and CT are available 24/7. (8.21) When the CT technologist responds from outside the hospital, the Trauma Program documents the response time. (8.22) TIR is utilized to expedite care of patients being transferred in and out when appropriate.
III	**Respiratory Therapy Services**	**R**	(8.23) There shall be a respiratory therapist available and on-call 24/7.

III	**Rehabilitation Services**	**R**	(8.24) Facilities shall be required to provide rehabilitation services or have transfer agreement(s) signed with rehabilitation facilities to ensure the timely transfer of patients requiring these services.
III	**Therapy Services**	**R**	(8.25) Facilities are required to provide these services or have transfer agreement(s) signed to ensure the timely transfer of the following services: • Physical therapy • Occupational therapy • Speech therapy
III	**Social Services**	**R**	(8.26) Social work Case management Chaplain services
	9. Effective Transfer of Patients		
III	**Coordinate All Trauma Transfers Through the ATCC**	**R**	(9.1) All trauma transfers shall be coordinated through the ATCC. Compliance shall be 95% of the time as an aggregate (average) over the reporting period (this does not apply to out-of-state hospitals transferring to out-of-state hospitals). The program shall monitor transfers in its QI program and be able to demonstrate compliance. The decision to accept or not accept a patient to the facility shall be made within 10 minutes of contact by the ATCC at least 90% of the time. The exception to this 10 minute requirement is for stable, single system orthopedic, ophthalmologic, or maxillofacial injuries where discussion with the specialist would be beneficial (all communication shall still come though ATCC and an answer given as to acceptance within 20 minutes). The acceptance time shall be tracked in the facility's QI program. A direct physician-to-physician contact is not required for acceptance of a transfer. The acceptance may be granted by anyone designated by the facility to accept a patient on behalf of the facility, including an ED nurse. (9.2) Denials for acceptance of transfers shall be tracked through the trauma program's QI process. Utilization of the ATCC shall be actively tracked in the facility's QI program with a list of all patients transferred out with the corresponding trauma band number. (9.3) All diversions (Bravo, Charlie Temp, and Delta) shall be documented and tracked in the hospital's trauma QI program. Diversions that exceed 5% of the time for required services shall be reported quarterly with a corrective action plan to the TRAC and the ADH.
III	**Appropriate Documentation of Patient**	**R**	(9.4) Transferring facilities shall send a copy of the patient's pertinent medical record along with radiographic studies (by the TIR when

III	**Records for Transferred Patients**		available or readable CD when the TIR is not available). (9.5) Final readings by the referring facility's radiologists shall be sent to the receiving facility as soon as available when requested by the receiving facility. Transfer shall not be delayed waiting on this final reading report. (9.6) Copies of original run sheets and readings of the X-ray studies shall be sent to the receiving hospital no later than the next business day.
III	**Well-defined Transfer Plans are Essential**	**R**	(9.7) The plan shall be codified in the facility, approved by the Trauma Program Operations Review Committee, and disseminated to ED physicians and surgeons in the program. All transfers out are reviewed in the review committee by the TMD/TMCD and TPM and documented as appropriate or inappropriate. The decision to transfer an injured patient to a specialty facility in an acute situation shall be based solely on the needs of the patient; for example, the method of payment is not considered.
III	**Teletrauma**	**R**	(9.8) The hospital shall have collaborative agreements with referral trauma centers and demonstrate successful use.
	10. Quality Improvement and Peer Review Process		
III	**Quality Improvement (QI)**	**R**	(10.1) The center shall have a clearly defined QI program for the trauma patient population. The QI program shall be supported by a reliable method of data collection that consistently gathers valid and objective information necessary to identify opportunities for improvement. The results of analysis shall define corrective strategies, the results of which shall be documented. The trauma program shall be empowered to address issues in multiple disciplines. (10.2) The TMD/TCMD (or his/her respective physician designee), the TPM (or his/her respective nurse designee), and specialty representatives in EM, orthopedics, neurosurgery, anesthesia, critical care, and radiology (if available in-house) shall attend at least 50% at the Trauma Peer Review Committee meetings.
III	**Audit Filters**	**R**	(10.3) Use of the current Arkansas State QI Audit Filters is mandatory. (10.4) The facility shall track and trend the cases that trigger one of the state audit filters. The trauma center may add additional filters to suit its specific needs. The facility shall use the trended information gathered from review of the audit filters to guide the QI program. (10.5) Identified problem trends shall undergo review in the multidisciplinary QI meetings with action plans generated, documented, and followed by loop closure. (10.6) Orthopedic, neurosurgical and geriatric/special needs-specific audit

			filters shall be tracked. (see orthopedic, neurosurgical and geriatric/special needs sections). Shall track neurosurgical audit filters in facilities when neurosurgery is available. (10.7) Non-surgical admission (NSA) Trauma centers may admit more than 10% of the admitted trauma patients to a non-surgical service. If a trauma service admits more than 10% of injured patients to a non-surgical service, the trauma program shall: 1. be able to run a Trauma Registry report of all patients admitted to a non-surgical service (total number of NSAs); 2. determine the number of NSAs that had an appropriate surgical service consult; 3. determine the number of NSAs resulting from same level falls; 4. determine the number of NSAs resulting from drowning and hanging; and, 5. determine the number of NSAs with ISS < 9. (10.8) All NSA patients not meeting criteria 2-5 shall be reviewed in the QI meeting for appropriateness of admission to a non-surgical service.
III	**Trauma Chart Reviews**	R	(10.9) Review charts on all trauma patients meeting state Trauma Registry inclusion criteria, including deaths, unexpected outcomes, all pediatric patients, and other patients who meet state QI audit filter criteria. (10.10) Review of the entire patient's encounter with the trauma system, from EMS through hospital treatment and discharge, transfer, or death, with identification of opportunities for improvement in any and all aspects of care. (10.11) Identified opportunities for improvement shall be followed by an action plan and loop closure documenting the effect of the action plan.
III	**Trauma-Specific QI Program**	R	(10.12) This program shall be a structured process, led by the trauma program, to demonstrate continuous evaluation to improve care for injured patients that is coordinated with the hospital-wide QI program. The components of an organized trauma QI program shall be: (10.13) a reliable method of identifying trauma patients presenting to and/or admitted to the facility; (10.14) the infrastructure to abstract patient information from the hospital and prehospital records in order to identify quality of care issues that is reliable and consistently obtains valid and objective information necessary to identify opportunities for improvement; (10.15) a clearly defined set of data points and audit filters to be abstracted from the patient's record; (10.16) proper identification and ICD-9, ICD-10 (or newer version), and AIS coding of all injuries; (10.17) selection of facility-specific process and outcome measures that are

III			related to patient care and can be benchmarked to national standards; (10.18) a functional trauma registry that supports the QI program; (10.19) validation of data abstraction, injury identification, and ISS coding is mandatory; (10.20) a multidisciplinary review process that occurs at frequent, regular intervals and analyzes trauma care in the institution in order to identify opportunities for improvement; (10.21) multidisciplinary involvement as evidenced by both meeting an attendance threshold and submission of case reviews in specialty areas; (10.22) the results of this multidisciplinary review process leads to corrective actions that are documented may include a letter to inform the responsible party with or without response, an educational offering related to the identified issue, a policy change or development of new policy, counseling of the responsible person, or removal from the trauma call panel; (10.23) when a consistent problem or inappropriate variation is identified, corrective actions are taken and documented; (10.24) tracking and trending of identified performance issues is necessary to ensure compliance to process changes; (10.25) the TMD/TCMD and TPM shall be empowered by the hospital's administration to address issues that involve multiple disciplines and perform loop closure for issues identified; (10.26) the TMD/TCMD and TPM shall be aware of current national standards of trauma care and hold their call panel physicians to this expectation; (10.27) creation of protocols, guidelines, or pathways based on the findings from multidisciplinary meetings; (10.28) there is a QI program that convincingly demonstrates appropriate care in the facility that treats neurotrauma patients; and, (10.29) the QI program reviews the appropriate referral of patients to the regional organ procurement organization and subsequent organ donation rate.

III	**Trauma Multidisciplinary Review (TMR) Process**	R	(10.30) This process shall be led by the TMD/TCMD and the TPM with representation from all core surgeons, specialties, and services, participates on the trauma team at the facility, which is authorized by the facility to establish, review, and improve the care of the injured. The TMR process shall:
			  1. establish trauma treatment protocols;
			  2. oversee compliance with these protocols;
			  3. identify opportunities for improvement;
			  4. develop plans for resolution and ensures improvement of identified issues; and,
			  5. monitor loop closure of issues identified in the process.
			(10.31) While there may be a single multidisciplinary meeting in a facility, this multidisciplinary process shall consist of two distinct parts:
			  1. Trauma Program Operations Review Committee; and,
			  2. Trauma Peer Review Committee.

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			(10.32) The minutes of these discussions shall be recorded separately. (10.33) The peer review portion shall report through the hospital's trauma QI program to assure protection and continuity of practitioner data for credentialing processes. The conduct of the peer review meeting shall be compliant with state and federal law to ensure confidentiality and patient protection. (10.34) Meetings shall occur with a frequency that ensures timely resolution of issues identified through the trauma QI program. Trauma centers with few trauma patients may accomplish this on a quarterly basis while hospitals with more trauma volume may need to hold such meetings on a weekly basis. (10.35) Attendance by the ED director or EM liaison, TMD/TCMD, all core surgeons, specialties, services when available, and radiology when available in-house, is required and they shall attend at least 50% of the Trauma Peer Review Committee meetings. (10.36) In circumstances when attendance is not mandated (non-core members), the TMD/TCMD ensures dissemination of information from the trauma peer review committee. The TMD/TCMD shall document the dissemination of information from the trauma peer review committee.
	11. Responsibility to the Arkansas Department of Health (ADH)		
III	**Trauma Registry Data and Submission to the Trauma Registry**	**R**	(11.1) Timely abstraction of the charts of injured patients who meet inclusion criteria; data shall be entered into the Trauma Registry and closed within 60 days of discharge. (11.2) Data shall be submitted to the Trauma Registry when requested by the ADH. (11.3) At the time of submission of the designation site survey pre-review questionnaire, the trauma center shall submit all trauma patient records to the Trauma Registry even if the submission is not within the standard reporting period. (11.4) Trauma Registry data are collected and analyzed.
III	**Accuracy of the Trauma Data Submitted to the Trauma Registry**	**R**	(11.5) The trauma center shall create and implement a verifiable process to ensure accuracy and completeness of the data submitted to the Trauma Registry. (11.6) Trauma centers are required to document complete and accurate data for all trauma patients meeting Trauma Registry inclusion criteria.
III	**Participation in Trauma Regional Advisory Council (TRAC)**	**R**	At least 50% of the required (to be determined by the TRAC) regional meetings shall be attended by the: (11.7) TMD/TCMD or physician designee; and, (11.8) TPM or nurse designee.

III	**Active Participation in the Regional and State Peer Review Process**	R	(11.9) The TMD/TCMD (or his/her respective physician designee) and TPM (or his/her respective nurse designee) shall attend 50% of the regional peer review meetings. (11.10) The TMD/TCMD (or his/her respective physician designee) and TPM (or his/her respective nurse designee) shall attend 100% of the regional and state peer review meetings when the facility's cases are discussed. (11.11) The trauma center shall provide adequate clinical patient information for meaningful discussion in the protected QI meetings sanctioned by the ADH. (11.12) The Trauma Program shall provide data and participate meaningfully in the regional and state QI meetings as required by the chair of the committee, TRAC MD, or state TMD.
III	**Community Outreach and Educational Programs in Trauma-specific Opportunities Sponsored by the Hospital**	R	(11.13) The facility shall provide opportunities for staff and community physicians, nurses, allied health personnel, and prehospital providers to receive CME credits. The facility may satisfy this requirement by working independently or with other facilities, the TRAC, regional organizations, or ADH-approved education foundation to provide this education. The facility's contribution to education and outreach shall be verifiable at review.
	12. Other Responsibilities of General Trauma Facilities		
III	**Injury and Violence Prevention (IVP)**	R	(12.1) The facility shall have an identified staff member who is the point of contact for IVP activities and notify the Trauma Section and the TRAC IVP Committee regarding the identity of the designated person. (12.2) The facility shall demonstrate involvement with the TRAC in regional IVP planning efforts. (12.3) The facility shall work with the ADH-affiliated IVP programs by participating in evidence-based prevention programs, either alone or in collaboration with other facilities, such as the regional Hometown Health Initiative, local EMS agencies, or the TRAC. (12.4) The facility shall demonstrate participation in ADH-affiliated IVP programs and shall participate in evaluation efforts for regional IVP programs.
III	**Alcohol Screening and Intervention**	R	(12.5) The facility shall have a method to screen admitted trauma patients for risky alcohol use or abuse and have a plan to assist patients with positive screens. Screening can be in the form of a consumption questionnaire or biological measurements. Assistance can be provision of appropriate referrals or in-house intervention, such as brief motivational interviewing.

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III	Disaster Management	R	(12.6) The hospital shall participate in regional disaster planning and drills. (12.7) The hospital shall meet the disaster-related requirements of TJC or an equivalent licensing body. (12.8) A trauma panel surgeon or clinical member of the trauma team shall be involved in the hospital's disaster committee. (12.9) As an emergency response exercise, the hospital shall activate its Emergency Operations Plan twice a year at each site included in the plan. If the hospital activates its Emergency Operations Plan in response to one or more actual emergencies, these emergencies can serve in place of emergency response exercises. Tabletop sessions, though useful, are not acceptable substitutes for these exercises. (12.10) The trauma center shall have an Emergency Operations Plan described in the hospital disaster manual.
III	Organ Procurement Organization (OPO)	R	(12.11) The trauma center shall have an established relationship with a recognized OPO. (12.12) The facility shall have written policies for triggering notification of the OPO. (12.13) The facility shall track its percentage of referral of eligible patients and track the percentage of successful donors from the pool of referred patients.

Criteria for Level IV Trauma Centers

Purpose: To define and clarify the criteria necessary for a rural acute care facility to become a Level IV trauma center and ensure optimal care of the injured.

Definition: The Level IV trauma center (basic) is a rural medical treatment facility without continuous surgical availability that has a commitment to excellence in trauma care. Level IV centers have an organized program that defines the trauma patient and activates a multidisciplinary treatment team that is rapidly available to treat the injured patients using pre-determined clinical guidelines developed by the trauma system. A Level IV trauma center is expected to function at its clinical capability, which may exceed the minimum "essential" categorization criteria. For example, if a general surgeon is sometimes available, he/she shall be an active member of the trauma team. If he/she is on-call for the hospital and responsible for patient care, then the surgeon shall also be responsible for trauma patient care.

Level IV Criteria			
Level	Section	Required (R) or Desirable (D)	Criteria
	TRAUMA PROGRAM		
	1. Support/Infrastructure		
IV	Institutional Support	R	(1.1) Clear evidence of hospital board, administrative, and medical staff support in the form of a written resolution to attain and maintain the level of designation; the resolution shall be updated at least every three years. (1.2) Financial support of additional FTEs, space, and/or equipment, as required. (1.3) Authorization for the trauma program's leadership and committees to perform their required duties. (1.4) Clearly defined lines of reporting for the TMD and TPM within the organization.
IV	Trauma Program Administration and Infrastructure	R	(1.5) Program within an acute care facility with defined leadership (TMD, TPM) and authority to develop, oversee, and improve the care of the injured within the facility, and is integrated into the local, regional, state, and national system of trauma care. (1.6) The Trauma Program shall participate in the development and improvement of prehospital care protocols and patient safety programs.
	2. Staffing		
IV	Trauma Medical Director (TMD)	R	***Requirements and qualifications for the TMD:*** (2.1) A physician in good standing in the institution with state licensure, has membership in professional organizations, possesses clinical knowledge and expertise, actively participates in the care of injured patients, and has a personal interest and the time to be the champion for trauma patient care to the medical staff and the trauma center. (2.2) Current in ATLS as a provider or an instructor. ***Responsibilities and duties of the TMD:*** (2.3) Lead the trauma QI and patient safety programs within the trauma center. (2.4) Have the ability to contribute to the TPM's performance evaluation. (2.5) Demonstrate with his/her signature awareness of the facility's invoices to the ADH for payment. (2.6) Have a method to identify injured patients, monitor the provision of health care services, and hold formal and informal discussions with individual practitioners. (2.7) There shall be a verifiable, written job description that clearly identifies expectations of leadership and authority to perform the duties required, including the authority to conduct trauma-specific peer review, place

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IV		R	members on and take members off of a trauma *call schedule* **, be involved in the development of the trauma center's bypass protocol and the decisions regarding bypass and "Charlie Temp" status, and affect process changes identified in the trauma multidisciplinary meetings. (2.8) Have responsibility and authority for determining each call panel member's ability to participate on the trauma call schedule based on a periodic review. (2.9) Have responsibility and authority to ensure compliance with verification requirements; and report changes in the program that would affect the designation of the facility to the ADH. *** The ability to grant or remove a provider's privileges to practice in an area is reserved for the facility's board and Medical Staff Committee. There should be a distinction of a provider's privileges to participate in care of the trauma patient and participation in a trauma call schedule. The facility's board and Medical Staff Committee shall take into consideration the input of the TMD when considering trauma privileges, while the TMD shall have the discretion of which providers participate in the trauma call schedule. A decision by the TMD to place or remove a provider from the trauma call schedule shall not be viewed as affecting or restricting a provider's hospital privileges, as that decision is reserved for the facility's board and Medical Staff Committee.*
IV	**Trauma Program Manager (TPM)**	R	***Requirement and qualifications for the TPM:*** (2.10) A RN with responsibility for monitoring and evaluating nursing care of trauma patients and the coordination of QI and patient safety programs for the trauma center in conjunction with the TMD. (2.11) He/she shall be well trained and knowledgeable in trauma. The TPM shall also obtain continuing education so as to remain up to date in regard to trauma. (2.12) ATCN, TNCC, or ADH-approved equivalent course certifications shall be current. (2.13) The training of a TPM new to this position shall include a TPM course and a QI course. ***Responsibilities and duties of the TPM:*** (2.14) There shall be a verifiable, written job description for the TPM that clearly identifies expectations of leadership and authority to perform the duties required. (2.15) Dedicate at least 1.0 FTE to trauma programs having a trauma patient record volume of 500 or greater. (2.16) The time and resources allocated shall be sufficient for the TPM to be effective in the job of QI, community education, clinical education, and IVP.
IV	**Trauma Registrar**	R	(2.17) There shall be a verifiable, written job description for the Trauma Registrar that clearly identifies expectations. (2.18) The facility shall have adequate resources to maintain accurate and timely

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			collection, evaluation, and submission of trauma data. (2.19) The training of a Trauma Registrar new to this position shall include a course approved by the ADH.
IV	**Trauma Program Staff**	R	(2.20) Trauma Program staff shall have adequate support resources to efficiently and effectively oversee and administer the trauma program and remain engaged in an effective QI process.
IV	**Trauma Liaisons**	R	(2.21) Official physician liaisons shall be named for EM. In addition, if a neurosurgery, orthopedics, anesthesia, critical care, and in-house radiology service is provided, a liaison shall be named. Liaisons are responsible for the accurate dissemination of information from the trauma committee meetings to their service members. (2.22) Liaisons are responsible for attending the Trauma Program Operational Review Committee meetings and at least 50% of Trauma Peer Review Committee meetings. The liaison responsibilities may be shared by physician members of the specialty.
IV	**Trauma Team**	R	(2.23) A predetermined set of care providers and ancillary personnel (physicians, mid-level practitioners, nurses, X-ray technologists, laboratory, respiratory therapist, etc.) needed to provide resuscitation, rapid triage, and transfer of the severely injured.
IV	**Consultant Coverage**	R	(2.24) Trauma centers shall have an internal policy identifying the expectations for consultant responses. Deviations to the policy shall be tracked in the QI process.
	3. Participation		
IV	**General Surgery Participation**	R	***General surgery coverage is not required at a Level IV facility.*** However, if a hospital represents itself as having general surgical capability and capacity on the ATCC dashboard, the following applies and is required of the general surgeon(s): (3.1) Shall have privileges in general surgery. (3.2) Shall be Board-certified/Board-eligible in general surgery or a FACS or satisfy the criteria for an alternate pathway if deemed necessary by the ADH. (3.3) Shall have taken ATLS at least once or shall be current in ATLS within one year of hire. (3.4) Shall obtain the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years. (3.5) Core surgeons shall participate in at least 50% of the Trauma Peer Review Committee meetings and disseminate information back to all surgeons. (3.6) Shall respond to the ED promptly (within 30 minutes) on an aggregate of 80% of the time when on-call and when the highest level of trauma is

			activated.
			(3.7) Surgeons shall respond promptly to activations, remain knowledgeable in trauma care principles, whether treating patients locally or transferring them to a center with more resources, and participate in QI activities.

IV	**Orthopedic Surgery Participation**		***Orthopedic surgery coverage is not required at a Level IV facility.*** However, if a hospital represents itself as having orthopedic surgical capability and capacity on the ATCC dashboard, the following applies and is required of the orthopedic surgeon(s):
			 (3.8) Shall obtain the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years.
			 (3.9) A liaison shall participate in at least 50% of the Trauma Peer Review Committee trauma meetings and disseminate information back to all orthopedic surgeons on the call panel.
			 (3.10) Orthopedic surgeons shall have privileges in general orthopedic surgery.
			 (3.11) The following Orthopedic specific QI filters shall be in place and tracked (other filters may be added at the discretion of the ADH Trauma Section):
			     1. time from injury to washout for open fractures;
			     2. time from injury to ORIF for femur fracture; and,
			     3. appropriateness and timing of IV antibiotics for all open fractures.

IV	**Anesthesiology Participation**		***Anesthesiology coverage is not required at a Level IV facility.*** However, if a hospital has anesthesiology on-call to assist with urgent surgical cases, the following applies and is required of the anesthesiologist(s): (3.12) Anesthesiology services are promptly available for emergency operations; (3.13) Anesthesiology services are promptly available for airway problems if on--call for urgent surgical cases; This may be fulfilled by an anesthesiologist or a CRNA. If a CRNA is utilized, the supervising physician shall be promptly available. If a CRNA is utilized, it shall be with the approval of the chief anesthesiologist or supervising physician if the facility does not have a chief anesthesiologist; (3.14) There is an anesthesiology liaison designated to the trauma program; (3.15) The availability of the anesthesia services and the absence of delays in airway control or operations is documented by the trauma QI program; (3.16) In trauma centers without in-house anesthesia services, protocols are in place to ensure the timely arrival at the bedside of the anesthesia provider; (3.17) In a center without in-house anesthesia services, there is documentation of the presence of physicians skilled in emergency airway management; (3.18) Availability of anesthesia services and the absence of delays in airway control or operations are documented in the trauma QI program; (3.19) The anesthesia liaison participates in the trauma QI program; and, (3.20) The anesthesiology representative or designee to the trauma program attends at least 50% of the Trauma Peer Review Committee meetings.

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	TRAUMA FACILITY AND OPERATIONS		
	4. Emergency Department (ED)		
IV	**Leadership**	**R**	**(4.1)** As with the TMD, a physician leader is essential. The TMD may also be the ED Director. The ED Director shall be an active liaison to the trauma program.
IV	**Communication With ED Physicians and Nurses**	**R**	**(4.2)** A reliable method shall exist to communicate changes in trauma process to all staff members caring for injured patients in the ED. An example of this would be a communication book in the ED, requiring a signature by nurses and physicians when changes or other important updates to the trauma process are determined through the QI program.
IV	**Physician, Mid-level Practitioners and Nursing Availability**	**R**	**(4.3)** ED that is available 24/7 with physicians and nurses rapidly available (within 10 minutes of notification of the highest level of activation) to resuscitate the injured patient. This has to be met 80% of the time. **(4.4)** A tracking mechanism shall be in place and reviewed in the QI program.
IV	**CME Requirements for Providers**	**R**	**(4.5)** Physicians who cover the ED in rural trauma centers may not see enough trauma to stay abreast of current treatment protocols. Category I or II CME is necessary to maintain knowledge in the field. The physician or mid-level practitioner caring for trauma patients in the ED shall obtain the required verifiable 18 hours of Category I trauma-specific CME, or 18 hours of trauma-specific internal education every three years.
IV	**Trauma Educational Certification - Physician and Mid-Level Practitioners**	**R**	**(4.6)** Maintaining current ATLS certification for physicians and mid-level practitioners is essential for those who cover the ED as participants in the trauma team who are not Board-certified in EM. Physicians Board-certified/Board-eligible in EM, as recognized by ABEM, AOBEM, and ABP shall have completed ATLS at least once, and are encouraged but not required to be current.
IV	**Trauma Nursing Educational Preparation**	**R**	**(4.7)** Current certification in one of the trauma nursing courses is essential for nurses who assist in trauma resuscitations. ATCN, TNCC, or ADH-approved equivalent course will be obtained. 80% of ED trauma nurses shall be certified and newly hired ED trauma nurses shall be certified within their

			first year of hire. (4.8) 80% of nurses working in the ED shall be current in ACLS and PALS or ENPC.
IV	**Trauma Nursing Continuing Education**	R	(4.9) It is necessary that nurses who assist with trauma resuscitations continue to be educated on trauma treatment and issues and shall obtain 12 hours of trauma-specific nursing CE or 12 hours of trauma-specific internal education every three years.

IV	**Activation Criteria**	R	(4.10) The criteria for the highest level of trauma team activations are clearly defined and evaluated by the QI program.
			 (4.11) A patient ≤ 15 years of age who meets a center's criteria for the highest level of activation or is classified as either a major or moderate trauma patient under the Arkansas Trauma Triage Protocol and requires transfer, shall be transferred to a designated pediatric trauma center.
			 (4.12) The facility shall activate the predetermined trauma team based on a set of written activation criteria that include:
			   1. confirmed hypotension (< 90mmHg adults or age appropriate for children) attributed to trauma;
			   2. GCS < 13 with a mechanism due to trauma (general surgeon response, if provided, can be at the discretion of the ED physician);
			   3. respiratory compromise or obstruction or an intubated patient from the scene:
			   4. gunshot to the neck, chest, or abdomen; and,
			   5. any patient that the ED physician feels the highest level of activation is warranted.
			 (4.13) Activation of the trauma team for the highest level shall be based on prehospital notification when available, regardless of the ultimate decision to transfer.
			 (4.14) Facilities may create a tiered activation system with variable response from hospital and physician personnel but, at a minimum, shall have the above criteria in the highest level of activation. The facility shall determine the expectation for physician response to the various levels of activation and be able to track this as part of the QI program.
			 (4.15) The physicians on-call for the ED shall be notified for patients' meeting the highest level of activation when the trauma team is activated and is expected to be present in the ED within 10 minutes of team activation.
			 (4.16) Level IV facilities are not required to have surgical capability; however, if general surgeons are participating on the Level IV facility's trauma call panel and are on-call, they are expected to be promptly available (30 minutes) upon notification of activation of the highest level of trauma.
			 (4.17) The facility shall be able to demonstrate its under and over-triage rates based on their activation criteria.
			 (4.18) The facility shall be able to track arrival of the physicians who should respond to a given level of activation.

IV	**Rural Trauma Team Development Course (RTTDC)**	R	(4.19) Rural facilities shall demonstrate participation by at least three members of the trauma resuscitation team, including physicians, nurses, and allied health personnel, three times per review period.
IV	**Helipad or Landing Zone**	R	(4.20) Shall have a helipad or a written, organized plan for getting the trauma patient to the ED from an established safe landing zone with alternative sites should the primary landing site be unavailable. Exceptions may be made by the ADH on an individual facility basis for urban Level IV facilities.
IV	**Trauma Image Repository**	R	(4.21) Availability to send and receive images to and from TIR in the ED. (4.22) Utilization of TIR when appropriate for expediting trauma patient care.
IV	**Roles and Responsibilities in the Trauma Bay**	R	(4.23) Written protocol for roles and responsibilities of all team members during trauma team resuscitations.
IV	**Safe Transport of Patients Within and Out of the Emergency Department**	R	(4.24) A policy is required describing the level of resources required for the safe movement of patients out of the trauma bay, either within the ED or to other departments in the trauma center.
	5. Essential Equipment (shall include but not be limited to)		
IV	**Airway Control and Ventilation Equipment (Adult and Pediatric)**	R	(5.1) Neonatal to adult oxygen masks, ambu bags, and ETTs (5.2) Every facility shall have equipment and a plan for difficult intubations. (5.3) Cricothyrotomy supplies and drugs necessary for emergency intubation
IV	**Airway Monitoring**	R	(5.4) Pulse Oximetry (5.5) Qualitative End-tidal CO2 Determination – Color Change Detectors (5.6) Continuous End-tidal CO2 Monitoring (**Desired**)
IV	**Thermal Regulation**	R	(5.7) The ability to regulate the room temperature in the trauma bay in a reasonable amount of time. (5.8) Fluid warming devices (5.9) Thermal control blankets
IV	**Large Bore IV Catheters**	R	(5.10) 14 – 18 gauge IVs (5.11) Interosseous catheters

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IV	**Focused Assessment with Sonography for Trauma (FAST)**	D	(5.12) Machine available to the trauma team and members of the trauma team trained in its use.
IV	**Standard Procedure Trays**	R	(5.13) Thoracotomy (adult and pediatric) (5.14) Tube thoracostomy tray with tubes (adult and pediatric) (5.15) Surgical tray with airway equipment (adult and pediatric)
IV	**Standard Airway Equipment**	R	Ensure equipment is available in both adult and pediatric sizes. (5.16) Oral and nasal airway (5.17) Ambu bags (5.18) ETT - with cuffed ETT down to size 4.0
IV	**Pediatric Resuscitation Equipment**	R	(5.19) Color-coded, length-based resuscitation tape Weight-based, color-coded resuscitation cart Pediatric equipment available as listed in the American Academy of Pediatrics Joint Policy Statement-Guidelines for Care of Children in the Emergency Department (2009) *http://pediatrics.aappublications.org/content/early/2009/09/21/peds.2009-1807.citation*
IV	**PACS and Lab Results Computer**	R	(5.20) Shall be in reasonable proximity to the trauma bay for ease of access by the trauma team.
IV	**Suction Devices**	R	(5.21) Oral and tracheal suction devices for adult and pediatric patients, as well as tubing required for connection, shall be present in the trauma bay and CT scanner.
	6. Other Trauma Care Areas and Services		
IV	**Pediatric Care**	R	(6.1) Hospitals admitting fewer than 100 injured children annually, ≤15 years of age, shall review and document the review of all pediatric patients in the QI program. (6.2) Pediatric resuscitation equipment shall be available in all pediatric care areas.
IV	**Geriatric Care/Special Needs**	R	(6.3) The facility shall have a protocol for the admission and care of geriatric/special needs patients (age > 65 years). (6.4) There shall be a protocol in place in the facility for the rapid evaluation of patients with head injuries who are on anticoagulants, which shall include a component addressing the rapid reversal of such agents when possible.

			The protocol may exclude patients who are on aspirin only.
IV	**Laboratory Services Available 24/7**	R	(6.5) Standard analysis of blood, urine, and other body fluids, including micro-sampling for pediatric patients when appropriate. Blood gases and pH determination is required.
IV	**Blood Bank Ability to Transfuse Blood 24/7**	R	(6.6) The ability to provide oxygen carrying capacity along with volume expansion in an actively bleeding injured patient. The facility shall have the ability to perform a type and cross match or have at least two units of O negative blood available. (6.7) Facilities shall have a protocol for the rapid reversal of anticoagulants when available. Facilities may develop their own protocol until such time that state guidelines are adopted.
IV	**Radiological Services Available 24/7**	R	(6.8) X-ray technologists shall be promptly available 24/7 upon activation of the trauma team. (6.9) The TIR shall be utilized to expedite care of patients being transferred in and out when appropriate.
IV	**Respiratory Therapy**	R	(6.10) Shall have a respiratory therapist or other personnel trained to fulfill that function (evaluated at the time of verification) who is on-call and promptly available.
IV	**Rehabilitation Services**	R	(6.11) Facilities shall be required to provide rehabilitation services or have transfer agreement(s) signed with rehabilitation facilities to ensure the timely transfer of patients requiring these services.
IV	**Therapy Services**	D	Physical therapy Occupational therapy Speech therapy
IV	**Social Services**	D	Social work Case management Chaplain services
	7. Effective Transfer of Patients		
IV	**Coordinate All Trauma Transfers Through the**	R	(7.1) All trauma transfers shall be coordinated through the ATCC with an expectation of compliance at 95% of the time as an aggregate (average) over the reporting period.

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IV	**ATCC**	**R**	**(7.2)** Utilization of the ATCC shall be actively tracked in the facility's QI program with a list of all patients transferred out and the corresponding trauma band number. **(7.3)** A trauma facility shall not be on diversion for any required category listed on the ATCC dashboard for more than 5% of the time during any three month period.
IV	**Appropriate Documentation of Patient Records for Transferred Patients**	**R**	**(7.4)** Transferring facilities shall send a copy of the patient's pertinent medical record along with radiographic studies (by the TIR when available or readable CD when the TIR is not available). **(7.5)** Final readings by the referring facility's radiologists shall be sent to the receiving facility as soon as available when requested by the receiving facility. Transfer shall not be delayed waiting on this final reading report. **(7.6)** Copies of original run sheets and readings of X-ray studies shall be sent to the receiving hospital no later than the next business day.
IV	**Well-defined Transfer Plans are Essential**	**R**	**(7.7)** The plan shall be codified in the facility, approved by the Trauma Program Operations Review Committee, and disseminated to the ED physicians and surgeons in the program. All transfers out shall be reviewed in the review committee by the TMD and TPM and documented as appropriate or inappropriate. The decision to transfer an injured patient to a specialty facility in acute situation shall be based solely on the need of the patient; for example, the method of payment is not considered.
IV	**Teletrauma**	**R**	**(7.8)** The hospital shall have collaborative agreements with referral trauma centers and demonstrate successful use.
	8. Quality Improvement and Peer Review Process		
IV	**Quality Improvement (QI)**	**R**	**(8.1)** The center shall have a clearly defined QI program for the trauma patient population. The QI program shall be supported by a reliable method of data collection that consistently gathers valid and objective information necessary to identify opportunities for improvement. The results of analysis shall define corrective strategies, the results of which shall be documented. The trauma program shall be empowered to address issues in multiple disciplines. **(8.2)** The TMD (or his/her respective physician designee), the TPM (or his/her respective nurse designee) and, if available, specialty representatives in EM, orthopedics, neurosurgery, anesthesia, critical care, and radiology (if in-house) shall attend at least 50% at the Trauma Peer Review Committee meetings.
IV	**Audit Filters**	**R**	**(8.3)** Use of the current Arkansas State QI Audit Filters is mandatory. **(8.4)** The facility shall track and trend the cases that trigger one of the state audit

			filters. The trauma center may add additional filters to suit its specific needs. The facility shall use the trended information gathered from review of the audit filters to guide the QI program. (8.5)　Identified problem trends shall undergo review in the multidisciplinary QI meetings with action plans generated, documented, and followed by loop closure. (8.6)　Orthopedic and geriatric/special needs-specific audit filters shall be tracked (see orthopedic, and geriatric/special needs sections). Applies to Level IV if orthopedic services care for injured patients in the facility. (8.7)　Non-surgical admission (NSA) Trauma centers may admit more than 10% of the admitted trauma patients to a non-surgical service. If a trauma service admits more than 10% of injured patients to a non-surgical service, the trauma program shall: 　1.　be able to run a registry report of all patients admitted to a non-surgical service (total number of NSAs); 　2.　determine the number of NSAs that had an appropriate surgical service consult; 　3.　determine the number of NSAs resulting from same level falls; 　4.　determine the number of NSAs resulting from drowning and hanging; and, 　5.　determine the number of NSAs with ISS < 9. (8.8)　All NSA patients not meeting criteria 2-5 shall be reviewed in the QI meeting for appropriateness of admission to a non-surgical service.
IV	**Trauma Chart Reviews**	R	(8.9)　Review charts on all trauma patients meeting state Trauma Registry inclusion criteria, including deaths, unexpected outcomes, all pediatric patients, and any other patients that meet state QI audit filter criteria. (8.10)　Review of the entire patient's encounter with the trauma system from EMS through hospital treatment and discharge, transfer, or death, with identification of opportunities for improvement in any and all aspects of care. (8.11)　Identified opportunities for improvement shall be followed by an action plan and loop closure documenting the effect of the action plan.
IV	**Trauma-Specific QI Program**	R	(8.12)　This program shall be a structured process, led by the trauma program, to demonstrate continuous evaluation to improve care for injured patients that is coordinated with the hospital-wide QI program. The components of an organized trauma QI program shall be: (8.13)　a reliable method of identifying trauma patients presenting to and/or admitted to the facility; (8.14)　the infrastructure to abstract patient information from the hospital and prehospital records in order to identify quality of care issues that is reliable

			and consistently obtains valid and objective information necessary to identify opportunities for improvement; (8.15) a clearly defined set of data points and audit filters to be abstracted from the patient's record; (8.16) proper identification and ICD-9, ICD-10 (or newer version), and AIS coding of all injuries; (8.17) selection of facility-specific process and outcome measures that are related to patient care and can be benchmarked to national standards; (8.18) a functional Trauma Registry that supports the QI program; (8.19) validation of data abstraction, injury identification and ISS coding is mandatory; (8.20) a multidisciplinary review process that occurs at frequent, regular intervals and analyzes trauma care in the institution in order to identify opportunities for improvement; (8.21) multidisciplinary involvement as evidenced by both meeting an attendance threshold and submission of case reviews in specialty areas; (8.22) the results of this multidisciplinary review process lead to corrective actions that are documented may include a letter to inform the responsible party with or without response, an educational offering related to the identified issue, a policy change or development of new policy, counseling of the responsible person, or removal from the trauma call panel; (8.23) when a consistent problem or inappropriate variation is identified, corrective actions are taken and documented; (8.24) tracking and trending of identified performance issues is necessary to ensure compliance to process changes; (8.25) the TMD and TPM shall be empowered by the hospital's administration to address issues that involve multiple disciplines and perform loop closure for issues identified; (8.26) the TMD and TPM shall be aware of current national standards of trauma care and hold their call panel physicians to this expectation; (8.27) creation of protocols, guidelines, or pathways based on the findings from multidisciplinary meetings; and, (8.28) the QI program reviews the appropriate referral of patients to the regional organ procurement organization and subsequent organ donation rate.
IV	**Trauma Multidisciplinary Review (TMR) Process**	R	(8.29) This process shall be led by the TMD and the TPM with representation from all surgeons/specialties (if available) and services, participates on the trauma team at the facility, which is authorized by the facility to establish, review, and improve the care of the injured. The TMR process shall: 1. establish trauma treatment protocols; 2. oversee compliance with these protocols; 3. identify opportunities for improvement; 4. develop plans for resolution and assure improvement of identified issues; and, 5. monitor loop closure of issues identified in the process.

			(8.30) While there may be a single multidisciplinary meeting in a facility, this multidisciplinary process shall consist of two distinct parts:
			    1. Trauma Program Operations Review Committee; and,
			    2. Trauma Peer Review Committee.
			(8.31) The minutes of these discussions shall be recorded separately.
			(8.32) The peer review portion shall report through the hospital's trauma QI program to assure protection and continuity of practitioner data for credentialing processes. The conduct of the peer review meeting shall be compliant with state and federal law to ensure confidentiality and patient protection.
			(8.33) Meetings shall occur with a frequency that ensures timely resolution of issues identified through the trauma QI program. Trauma centers with few trauma patients may accomplish this on a quarterly basis while centers with more trauma volume may need to hold such meetings on a weekly basis.
			(8.34) The attendance requirement for physicians (ED director, TMD, and general surgeon liaison (if the facility provides general surgical coverage, even on a part time basis) and mid-level practitioners is at least 50% of the Trauma Peer Review Committee meetings.
			(8.35) Hospitals that have general surgeons, orthopedic surgeons, radiologists (if in-house), neurosurgeons, EM physicians, anesthesiologists or rehabilitation specialists participating in the trauma team in the facility are required to have a liaison from these specialties participate in at least 50% of the Trauma Peer Review Committee meetings, if those providers participate in the care of trauma patients, even if the level of designation does not require that specialty.
			(8.36) The TMD shall provide to the non-liaisons the information from the process and peer review meetings. This process of dissemination of information shall be monitored through the QI program and be verifiable at review.
			If general surgery or orthopedic coverage is less than 33% of the total time, the requirement to have a liaison attend the meetings is waived. The other requirements will remain in force as is the responsibility of the TMD to effectively disseminate information.

	9. Responsibility to the Arkansas Department of Health (ADH)		
IV	**Trauma Registry Data and Submission to the Trauma Registry**	R	(9.1) Timely abstraction of the charts of injured patients who meet inclusion criteria; data shall be entered into the Trauma Registry and closed within 60 days of discharge. (9.2) Data shall be sent to Trauma Registry when requested by the ADH. (9.3) At the time of submission of the designation site survey pre-review questionnaire, the trauma center shall submit all trauma patient records to the Trauma Registry even if the submission is not within the standard reporting period. (9.4) Trauma Registry data are collected and analyzed.

IV	**Accuracy of the Trauma Data Submitted to the Trauma Registry**	**R**	(9.5)　　The trauma center shall create and implement a verifiable process to ensure accuracy and completeness of the data submitted to the Trauma Registry. (9.6)　　Trauma centers are required to document complete and accurate data for all trauma patients meeting state Trauma Registry inclusion criteria.
IV	**Participation in Trauma Regional Advisory Council (TRAC)**	**R**	At least 50% of the required (to be determined by the TRAC) regional meetings shall be attended by the: (9.7)　　TMD or physician designee; and, (9.8)　　TPM or nurse designee.
IV	**Active Participation in the Regional and State Peer Review Process**	**R**	(9.9)　　The TMD (or his/her respective physician designee) and TPM (or his/her respective nurse designee) shall attend 50% of the regional peer review meetings. (9.10)　The TMD (or his/her respective physician designee) and TPM (or his/her respective nurse designee) shall attend 100% of the regional and state peer review meetings when the facility's cases are discussed. (9.11)　The trauma center shall provide adequate clinical patient information for meaningful discussion in these protected QI meetings which have been sanctioned by the ADH. (9.12)　The program shall provide data and participate meaningfully in the regional and state QI meetings as required by the chair of the committee, TRAC MD, or state TMD.
IV	**Community Outreach and Educational Programs in Trauma-specific Opportunities Sponsored by the Hospital**	**R**	(9.13)　The facility shall provide opportunities for staff and community physicians, nurses, allied health personnel, and prehospital providers to receive CME credits. The facility may satisfy this requirement by working independently or with other facilities, the TRAC, regional organizations or an ADH-approved education foundation to provide this education. The facility's contribution to education and outreach shall be verifiable at review.
	10. Other Responsibilities of Basic Trauma Facilities		
IV	**Injury and Violence Prevention (IVP)**	**R**	(10.1)　The facility shall have an identified staff member who is the point of contact for IVP activities and notify the Trauma Section and the TRAC IVP Committee regarding the identity of the designated person. (10.2)　The facility shall demonstrate involvement with the TRAC in regional IVP planning efforts. (10.3)　The facility shall work with the ADH-affiliated IVP programs by participating in evidence-based prevention programs, either alone or in collaboration with other facilities, such as the regional Hometown Health group, local EMS agencies, or the TRAC. (10.4)　The facility shall demonstrate participation in ADH-affiliated IVP programs and shall participate in evaluation efforts for regional IVP programs.

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IV	**Alcohol Screening and Intervention**	R	(10.5) The facility shall have a method to screen admitted trauma patients for risky alcohol use or abuse and to have a plan to assist patients with positive screens. Screening can be in the form of a consumption questionnaire or biological measurements. Assistance can be provision of appropriate referrals or in-house intervention, such as brief motivational interviewing.
IV	**Disaster Management**	R	(10.6) The hospital shall participate in regional disaster planning and drills. (10.7) The hospital shall meet the disaster-related requirements of TJC or an equivalent licensing body. (10.8) A trauma panel surgeon or clinical member of the trauma team shall be involved in the hospital's disaster committee. (10.9) As an emergency response exercise, the hospital shall activate its Emergency Operations Plan twice a year at each site included in the plan. If the hospital activates it's Emergency Operations Plan in response to one or more actual emergencies, these emergencies can serve in place of emergency response exercises. Tabletop sessions, though useful, are not acceptable substitutes for these exercises. (10.10) The trauma center shall have an Emergency Operations Plan described in the hospital disaster manual.
IV	**Organ Procurement Organization (OPO)**	R	(10.11) The trauma center shall have an established relationship with a recognized OPO. (10.12) The facility shall have written policies for triggering notification of the OPO. (10.13) The facility shall track its percentage of referral of eligible patients and track the percentage of successful donors from the pool of referred patients.

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SECTION VIII: PEDIATRIC TRAUMA ~~FACILITY~~ CENTER STANDARDS

A. Purpose

The highest level of pediatric trauma care is provided in a ~~P~~pediatric ~~T~~trauma ~~Resource Facility~~center. This ~~facility~~center shall be capable of providing comprehensive care for all injured infants and children, particularly the most severely injured. A facility may be designated as a pediatric Level I or II trauma center by meeting the criteria outlined in Section VIII. B. or C., respectively. A facility may obtain a dual designation as a trauma center (Level I or II) by: 1. meeting the requirements for a Level I or II trauma center as set forth in Section VII.; and, 2. meeting the criteria for a pediatric trauma center (Level I or II) as outlined in Section VIII. B. or C., respectively. When no pediatric facility is available, infants and children with multisystem injuries may be treated in an adult ~~facility~~trauma center that has demonstrated a significant commitment to pediatric care as determined by the criteria outlined in Section VIII. B. or C.

~~B.   Standards for Pediatric Trauma Facility Designation as a Pediatric Trauma Regional Resource Facility or an Adult Trauma Facility with Pediatric Commitment:~~

~~PEDIATRIC TRAUMA REGIONAL RESOURCE FACILITY~~		~~ADULT TRAUMA FACILITY WITH PEDIATRIC COMMITMENT~~
~~A pediatric surgeon credentialed in trauma care will be immediately available and present in the OR for any and all operative procedures. A general surgical resident at a minimum PGY 3 or higher Resident level may initiate resuscitative care until the attending pediatric surgeon arrives.~~	~~Pediatric Surgeon~~	~~A surgeon must be on call and promptly available and present in the ED at time of arrival of the patient, and will be available to care for pediatric trauma patients in the ICU. The adult trauma surgeon must have special interest in and commitment to care of the injured child.~~
	~~General Surgeon~~	~~E~~
~~Children's hospital or general hospital with a separate pediatric department.~~	~~Hospital~~	~~General hospital with an organized pediatric service.~~
~~Pediatric emergency department with appropriate personnel, equipment, and facilities.~~	~~Emergency Department~~	~~Designated pediatric area in an emergency department staffed with pediatric trauma personnel and appropriate equipment.~~
~~Pediatric ICU with pediatric surgery and other surgical medical and nursing personnel and equipment needed to care for the injured child.~~	~~ICU~~	~~Pediatric ICU with appropriately trained personnel and equipment.~~
~~Pediatric trauma service organized and run by a pediatric surgeon.~~	~~Trauma Service~~	~~Pediatric trauma service administered by the pediatric surgeon and run by his/her designee.~~
~~1. Pediatric Surgeon~~ ~~2. Pediatric Orthopedics~~ ~~3. Pediatric Neurosurgeon~~ ~~4. Pediatric Anesthesiologist~~ ~~5. Pediatric Intensivist~~ ~~6. Pediatric Emergency Physician~~ ~~7. Pediatric Radiologists~~ ~~8. Other Pediatric Surgical Specialists~~ ~~9. Other Medical Pediatric Specialists~~ ~~10. Pediatric Trauma Nurse Coordinator~~ ~~11. Pediatric Trauma Nurse~~	~~Trauma Team~~	~~1. Pediatric Surgeon~~ ~~2. General Surgeon~~ ~~3. Orthopedics~~ ~~4. Neurosurgeon~~ ~~5. Surgical Critical Care Specialist~~ ~~6. Emergency Physicians~~ ~~7. Radiologists~~ ~~8. Pediatricians~~ ~~9. Trauma Nurse coordinator~~ ~~10. Pediatric-trained Trauma Nurses~~

R	Research	D
R	Injury Prevention Program	R
R	Pediatric Trauma Service	R
R	Psychosocial Services	R
R	Rehabilitation	R
R	Emergency Department	R
R	Pediatric Intensive Care	R
R	24 hour a day immediate	R
R	Operating Room availability With in-house anesthesia and Nursing personnel	R
R	Trauma Registry	R

B.   Level I Pediatric Trauma Center:

1. An annual volume of at least 250 admitted pediatric patients (≤15 years of age).

2. The hospital seeking pediatric Level I designation shall meet all the criteria listed for an adult Level I facility. In addition, a hospital seeking a Level I pediatric trauma center designation shall have:

    a. a pediatric trauma service organized and run by a pediatric surgeon;

    b. a pediatric ED with appropriate personnel, equipment, and facilities;

    c. a pediatric ICU with pediatric surgery and other surgical, medical, and nursing personnel and equipment needed to care for the injured child;

    d. a pediatric surgeon credentialed in trauma care immediately available and present in the OR for any and all operative procedures; and,

    e. a general surgical resident at a minimum PGY 3 or higher resident level may initiate resuscitative care until the attending pediatric surgeon arrives.

3. A Level I pediatric trauma center shall have, at a minimum, the following specialists active on the trauma call panel and involved in the Trauma Peer Review Committee and the Trauma Program

Operations Review Committee:

  a. two pediatric surgeons;

  b. one pediatric orthopedist;

  c. one pediatric neurosurgeon;

  d. one pediatric anesthesiologist;

  e. two pediatric intensivists;

  f. two pediatric EM physicians;

  g. one pediatric radiologist;

  h. one pediatric rehabilitation specialist; and,

  i. one child abuse specialist.

4. A Level I pediatric trauma center shall also have the following:

  a. a pediatric TPM;

  b. a trauma registrar;

  c. a separate and distinct trauma QI program;

  d. pediatric-specific clinical care guidelines and pathways;

  e. a pediatric-specific massive transfusion protocol;

  f. a pediatric-specific IVP program;

  g. a child abuse assessment team;

  h. specific credentialing by the hospital with the agreement of the TMD for any physician serving on the trauma call panel not Board-certified/Board-eligible in a pediatric sub-specialty; and,

  i. a pediatric trauma research program with peer-reviewed publications.

C. Level II Pediatric Trauma Center:

1. An annual volume of at least 125 admitted pediatric patients (≤15 years of age).

2. The hospital seeking pediatric Level II designation shall meet all the criteria listed for an adult Level I or II facility. In addition, a hospital seeking a Level II pediatric trauma center designation shall have:

    a. a designated pediatric area in the ED staffed with pediatric trauma personnel and appropriate equipment; and,

    b. a pediatric ICU with appropriately trained personnel and equipment.

3. A Level II pediatric trauma center shall have, at a minimum, the following specialists active on the trauma call panel and involved in the Trauma Peer Review Committee and the Trauma Program Operations Review Committee:

    a. one pediatric surgeon;

    b. one pediatric orthopedist or an orthopedist meeting an alternate pathway if deemed necessary by the ADH;

    c. one pediatric neurosurgeon or a neurosurgeon meeting an alternate pathway if deemed necessary by the ADH;

    d. one pediatric intensivist;

    e. one pediatric EM physician;

    f. pediatricians;

    g. a pediatric TPM;

    h. a trauma registrar; and,

    i. pediatric-trained trauma nurses.

4. All surgeons, intensivists, anesthesiologists and EM providers not formally trained in a pediatric sub-specialty shall:

    a. be credentialed specifically by the facility to care for children of all ages;

    b. have their credentials reviewed and approved by the TMD; and,

      c.   have pediatric trauma-specific CME.

   5.   A Level II pediatric trauma center shall also have the following:

      a.   a separate and distinct trauma QI program;

      b.   pediatric-specific clinical care guidelines and pathways;

      c.   ongoing pediatric trauma education for physicians and nurses;

      d.   a pediatric-specific massive transfusion protocol;

      e.   a pediatric-specific IVP program; and,

      f.   a child abuse assessment team or protocols in place for the assessment and treatment of children with known or suspected child maltreatment.

SECTION IX: **COMPOSITION OF THE TRAUMA FACILITY SITE SURVEY TEAM**

    A.   Purpose

As part of the trauma facility designation process, following a successful application process, an on-site survey of the prospective trauma facility shall be conducted to evaluate the quality of the applicant's compliance with the standards outlined in Section VII or Section VIII.

The review of hospitals for trauma center designation shall include interviews with designated hospital staff, a review of the physical plant and equipment, and a review of records and documents as deemed necessary to assure compliance with the requirements of the rules of this document. The cost of any and all site reviews shall be paid by each applicant hospital or renewing trauma center unless adequate funding is available from the Section of EMS and Trauma Systems to pay for reviews.

    1.   The survey team consists of members of the following, based on the decision of a Trauma Advisory Subcommittee consisting of members from the Trauma Advisory Council and representation from the Section of EMS and Trauma Systems, who are disinterested politically and financially from the facility to be reviewed. Each team member must have past experience and or special training related to trauma designation site review.

      a.   General surgeon (Pediatric surgeon for Pediatric Specialty Facility) who currently works in a designated

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trauma center and who is a fellow of the American College of Surgeons or a member of the American College of Osteopathic Surgeons (ACOS).

b. Emergency physician (Pediatric emergency physician for Pediatric Specialty Facility) who currently works in a designated trauma center and who is board certified in emergency medicine.

c. Trauma Program Manager/Coordinator is a registered nurse with responsibility for monitoring and evaluating nursing care of trauma patients and the coordination quality improvement and patient safety programs for the trauma center in conjunction with the trauma medical director.

d. Section representative – A current employee of the Section of EMS and Trauma Systems who works at the supervisory level and has a regular working relationship with the Trauma Advisory Council.

2. The survey team for a Level I trauma center will consist of a majority of out of state reviewers This does not apply to the Section Representative on the team. A survey team for a Level II facility will have at least one out of state reviewer. Survey teams for Level III-IV centers will consist of in-state reviewers from another region of the state. In the event that in-state reviewers are not available out of state reviewers may be substituted.

3. All team members with the exception of the Section representative shall be active in the management of trauma patients.

4. Additional team members may be assigned at the discretion of the Section.

5. The survey team shall evaluate the quality of each applicant's compliance with the standards set forth in Section VII or VIII by:

a. Reviewing medical records, staff rosters and schedules, quality improvement committee meeting minutes, and other documents relevant to trauma care.

b. Reviewing equipment and the physical plant

c. Conducting interviews with hospital personnel

6.   Findings of the survey team shall be forwarded to the Section within 90 days.

SECTION IX: TRAUMA REGIONAL ADVISORY COUNCILS (TRACS)

A.   All participating health care entities shall have representation on their respective TRAC.

B.   The TRAC shall develop and oversee a regional system plan which consists of by-laws, a QI plan, and an IVP plan.

C.   Each TRAC Chair and/or QI Chair shall serve as ex-officio to the Trauma Advisory Council's QI/TRAC Subcommittee to update and advise the TAC regarding regional concerns.

D.   Each TRAC shall be responsible for a peer review program in its region of the state. The peer review process is a component of the overall state peer review process sanctioned by the Trauma Section. A review of trauma patients will be made according to the TAC's Trauma System State QI Plan. All participating health care entities shall participate in the QI process.

E.   Other operational and reporting actions of the TRAC dealing with QI and patient safety concerns will be handled in accordance with the TAC's Trauma System State QI Plan.

SECTION X: TRAUMA SERVICE REGIONS (TSR's)

A.   Purpose

The Section shall approve the designation of Trauma Service Regions (TSR's).

B.   Standards for establishing Trauma Service Regions

1.   Trauma Service Regions (TSR's) shall be established for descriptive and planning purposes and not for the purpose of restricting patient referral

2.   The state shall be geographically divided into Trauma service Regions as approved by the Section. Regions of the state wishing to form a TSR shall submit a written plan which adheres to the following criteria:

a.   A TSR must contain at least a lead General (Level III) trauma facility.

b. All TSR's shall be multi-county with no fewer than three counties.

c. Counties may be reassigned to areas subdivided as the trauma system demographics change.

d. All TSR's shall establish a Trauma Regional Advisory Council (TRAC) as outlined in Section X.C. The TRAC shall submit a Trauma Service Region system plan to the Section, which includes the organizational structure of the TRAC and the recognized components of a Trauma Service Region as outlined in Section X.D.

C. Trauma Regional Advisory Councils

1. All participating health care entities should have representation on the TRAC.

2. Membership status for hospitals for the first six months shall be provisional.

3. Continuing or renewed membership status for hospitals will be dependent upon a commitment to trauma care, as demonstrated by trauma facility designation or involvement in the designation process as described in Section VI.

4. The Section shall recognize only one official TRAC for a Trauma Service Region.

5. The TRAC is a voluntary entity that functions without the expectation of state funding.

6. The TRAC shall develop and oversee a TSR system plan based on standard guidelines for comprehensive system development as outlined in Section X.D. The system plan is subject to approval by the Section.

7. Each TRAC shall elect a representative to serve as ex-officio to the Trauma Advisory Council to update and advise the Council regarding regional concerns.

8. Each TRAC shall be responsible for a quality improvement program in their region of the state. A review of trauma patients will be made on a yearly basis and a report will be sent to the Trauma Advisory Council following each review.

D.   Components of a designated Trauma Service Region

1.   All counties within the TSR should be included unless a specific county, or portion thereof, has been named within an adjacent system.

2.   All health care entities and interested specialty centers shall be given an opportunity to participate in the planning process.

3.   The following points shall be addressed in the Trauma Service Region system plan:
   a.   Access to the system
   b.   Communications
   c.   Medical oversight
   d.   Prehospital triage criteria
   e.   Diversion policies
   f.   Bypass protocols
   g.   Regional medical control
   h.   Facility triage criteria
   i.   Inter-facility transfers
   j.   Planning for the designation of trauma facilities, including the identification of the lead facility(ies)
   k.   Identification of medical rehabilitation facilities, including capabilities and transfer procedures
   l.   A quality improvement program that the facility may use to evaluate its own outcomes
   m.   A quality improvement program that uses regional aggregate information provided by the Section to evaluate system performance.
   n.   Confidentiality

4.   Section approval of the completed plan shall qualify health care entities participating in the system to receive state funding for trauma care when funding is made available.

5.   Annually, on a form provided by the Section, the TRAC shall file a report with the Section that describes progress toward system development and includes evidence that members of the TRAC are currently involved in trauma care.

SECTION X: REHABILITATION FACILITIES

A.   Purpose

A complete trauma system shall include early integration of rehabilitation services into all phases of acute and primary care.

B. Trauma centers shall demonstrate that rehabilitation services are initiated at the earliest possible point after trauma patient admission. Any spinal cord disabled person and any person having a traumatic brain injury resulting in permanent partial, permanent total, or total disability shall be reported to the Arkansas Spinal Cord Commission within five calendar days of identification of the above by the trauma center. This procedure ensures that these patients can be referred to appropriate rehabilitation facilities in a timely manner.

C. Trauma centers shall demonstrate that appropriate transfer agreements are in place with a rehabilitation facility or facilities.

SECTION XI: REHABILITATION FACILITIES

A. Purpose

A complete trauma system must include early integration of Rehabilitation services into all phases of acute and primary care. Trauma system hospitals shall demonstrate that rehabilitation services are initiated at the earliest possible point after trauma patient admission.

B. Capabilities for trauma rehabilitation in each Trauma Service Region (TSR) and transfer procedures to other rehabilitation facilities shall be described in the TSR system plan. Rehabilitation resources for burns, pediatrics, neuro-trauma and extended care shall be included.

C. Rehabilitation facilities participating in the Trauma Service Region (TSR) shall submit data to the State Trauma Registry in a format approved by the Section.

SECTION XI: TRAUMA REGISTRY

A. Purpose

The ADH shall develop a statewide trauma data collection and evaluation system. This data shall be studied in order to improve both the individual and collective care given to trauma patients. Any hospital that is a designated trauma center or is pursuing trauma center designation shall collect and submit data to the Trauma Registry Section. Hospitals that are not pursing designation may still participate in the Trauma Registry.

B. Data collection, submission, and analysis

1. Data shall be collected on all patients who meet the defined state Trauma Registry inclusion criteria in accordance with the standard data set developed by the Trauma Registry Section.

2. Data shall be submitted to the Trauma Registry Section at least quarterly or as required in accordance with the approved data format and processes.

3. The Trauma Registry Section shall provide, at a minimum, annual summary data to the trauma centers.

4. Trauma Registry data shall be reviewed as part of the trauma center designation process.

5. Data shall be released to the TAC QI/TRAC Subcommittee and the TRAC QI Committee for the purposes of quality or system assessment and improvement of the trauma system. Data released to these entities for QI purposes shall not be subject to disclosure under the Freedom of Information Act of 1967 (Ark. Code Ann. § 25-19-101) [Act 393 of 2009, Ark. Code Ann. § 20-13-819 (a) (1)] and shall be exempt from discovery and disclosure in any legal proceeding [Act 393 of 2009, Ark. Code Ann. § 20-13-819 (b) (1)].

6. For research purposes only, and in accordance in Ark. Code Ann. § 20-8-403, with the written permission of the State Health Officer and pursuant to the provisions of the HIPAA of 1996, as amended, Trauma Registry data may be accessed in order to facilitate the operation of the Arkansas Health Data Initiative.

7. Aggregate, non-confidential data may be provided to the TAC, TRACS, and other entities.

8. The Trauma Registry Section may provide data for the purposes of research and aggregate statistical reporting to research projects approved by the ADH.

C. Data security

1. Data shall be collected in a manner which protects and maintains the confidential nature of patient records.

2. Individual records and reports made pursuant to these rules shall be held confidential within the hospital and Trauma Registry Section and shall not be made available to the public.

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3. Any data provided by the Trauma Registry Section shall be released in accordance with rules promulgated by the Board that provide for appropriate data security and confidentiality.

SECTION XII.   **STATE TRAUMA REGISTRY**

A.   Purpose

The Section shall develop and maintain a statewide trauma Data Collection and evaluation system (ref. Act 559, The Trauma System Act, Section 6.a).

B.   Trauma facility data collection and analysis

1.   Each designated trauma facility shall collect and submit to the Section for analysis, a standard data set developed by the Section.

2.   Data shall be submitted at least quarterly in a format approved by the Section.

3.   The Section shall provide annual summary data to the trauma facilities.

4.   Individual records and reports made pursuant to these Rules and Regulations shall be held confidential within the hospital and Section and shall not be made available to the public (ref. Act 559, The Trauma System Act, Section 6.c). However, for research purposes only, and in accordance with Ark. Code Ann. §20-8-403, with the written permission of the State Health Officer and pursuant to the provisions of the Health Insurance Portability and Accountability Act of 1996 as amended; State Trauma Registry data may be accessed in order to facilitate operation of the Arkansas Health Data Initiative.

C.   Non-Designated Facilities

May obtain funding from the trauma system to participate in trauma registry data collection efforts.

SECTION XII: SEVERABILITY

If any provision of these Rules, or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of these Rules which can give effect without the invalid provisions or applications, and to this end the provisions hereto are declared to be

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severable.

SECTION XIII: APPEAL PROCESS

1.   Any facility that is working with the Section of EMS and Trauma Systems, Arkansas Department of Health to achieve a Level of trauma center designation or maintain an existing Level and fails a trauma designation review process, in which a final order is issued by the Department, may file an appeal under these guidelines.

2.   In the case of each final order issued by the Department, concerning trauma center designation, any affected party may within 30 days of such final order submit a written request for a hearing to the Director of the Department.

3.   The Board of Health or the Department shall reserve the right to refrain from conducting a review until the request for hearing is produced in writing and filed with the Department stating the nature of the request.

4.   Hearings may be conducted before the entire Board of Health, one or more members of the Board, an examiner or referee or one or more members of the Department. The Director of the Department shall recommend to the President of the Board the composition of a hearing committee and a hearing officer to preside at the hearing. The President of the Board shall appoint the hearing officer and other hearing committee members.

5.   In all administrative enforcement and hearing procedures hereunder, in which a final order is issued by the Department, it shall be conducted in accordance with the Arkansas Administrative Procedures Act and Amendments thereto.

SECTION XIII: REPEAL

All Rules and Regulations and parts of Rules and Regulations in conflict herewith are hereby repealed.

SECTION XIV: RULES FOR JOINT TRAUMA SERVICE APPLICATIONS

1.   Facilities may apply for joint trauma service as a Level I, II,or III Trauma Center. Once the decision has been made to work cooperatively to achieve a Level of trauma designation a single application must be made by the facilities seeking the joint trauma Level. The Section of EMS and Trauma Systems will follow the same process of evaluating the application as they would for a single facility application with the exceptions listed below.

2.   In addition to the criteria above, to be considered for joint designation the facilities requesting designation must have the ability

to perform all of the functions of the designated Level and;

a. Cooperative trauma oversight with one trauma director and a joint trauma service being preferred;

b. A cooperative multidisciplinary committee with representation from all of the participating facilities;

c. A coordinated set of policies and procedures to deliver optimal trauma care;

d. A predetermined facility rotation schedule will be made available to the Regional Advisory Council and EMS;

e. Facilities seeking joint designation must serve the same primary service area.

f. A coordinated Quality Improvement program for trauma including joint peer review and joint system review.

g. A Joint Trauma Registry.

SECTION XV: SEVERABILITY

If any provision of these Rules and Regulations, or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of these Rules and Regulations which can give effect without the invalid provisions or applications, and to this end the provisions hereto are declared to be severable.

SECTION XVI: REPEAL

All Regulations and parts of Regulations in conflict herewith are hereby repealed.

CERTIFICATION

This will certify that the foregoing Arkansas Trauma System Rules and Regulations for Trauma Systems were adopted by the Arkansas Board of Health at a regular session of the Board held in Little Rock, Arkansas on the __22nd___ day of __January_____, 200914.

_____   _____
                                                Paul Halverson, DrPH, FACHE
                                                Secretary
                                                Arkansas Board of Health

The foregoing Rules and Regulations, copy having been filed in my office, are hereby approved on this __10th___ day of __February____, ____2009___.

                                                _____
                                                _____
                                                Mike Beebe

Governor

_____
_____   Nathaniel Smith, MD, MPH
                                                Secretary, Arkansas Board of Health
                                                Director, Arkansas Department of Health