Trauma Center Standards

Department of Health
Pamphlet 150-9

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DRAFT Work Product of the Florida Trauma System Advisory Council

PREFACE

The Roy E. Campbell Trauma Act of 1990 established the specific steps for an individual general acute care hospital in Florida to follow when seeking to provide trauma care services. Included in these steps are the requirements that the hospital provide a written application to the Department of Health Division of Emergency Medical Operations, Office of Trauma, for review and approval and that the hospital accept an on-site survey by department staff and contracted out-of-state surveyors with expertise in trauma patient care. This pamphlet, “Trauma center Standards,” details the standards a hospital shall meet to successfully complete the trauma center application process. The hospital shall also maintain these standards to operate as a trauma center.

The contents of this pamphlet are based in part on the standards published in the 1998 version of this pamphlet, in part on the guidelines published in the American College of Surgeons’ *Resources for Optimal Care of the Injured Patient: (2006)*, and in part on the experience gained during site surveys conducted at Florida trauma center applicant hospitals since 1990.

This latest edition of the standards pamphlet contains many changes. Most notable is that this document now contains four chapters: a definitions chapter and a chapter that describes the minimum approval standards for each of the three options available for a hospital seeking to operate as a trauma center.

Chapter One consists of definitions of words, phrases, and acronyms used throughout the document to meet the unique requirements of the Florida program. Some definitions, for example, "trauma team," may not necessarily match definitions in documents published by other organizations or by other states.

In Chapters Two through Four, several individual standards begin with an introduction contained within a shaded box. Also, several standards have general information sections contained within shaded boxes. The information found in these shaded boxes is **not** measurable during the site survey and it is not mandatory for a hospital to comply with these remarks. The requirements described in the body of the standard that follows the introduction or general information sections, however, are mandatory. During a review of a hospital, the state will employ the standards as representing the **minimum** acceptable level of measure.

The standards published in this document are subject to revision at any time through the rule promulgation process. Any hospital granted approval to operate as a provisional trauma center or granted a full seven-year Certificate of Approval shall comply with all revisions published herein, beginning the date the amended rule becomes law.

DEFINITIONS

INTRODUCTION: The following definitions are explanations of words, phrases, and acronyms contained in the text of the subsequent chapters. As the standards found in this document are, in many cases, unique to the Florida trauma system, the definitions found in this chapter may also be unique and may not necessarily match those provided by other states or organizations that develop standards or guidelines for trauma centers.

ATLS	Advanced Trauma Life Support course approved by the American College of Surgeons.
Arrive Promptly	Arriving within 30 minutes, 90% of the time, from inside or outside the hospital to a specified area within the trauma center when summoned (for example, voice page, telephone, or beeper) to provide evaluation, consultation, treatment, or other defined services. The interval between the delivery of the patient at the trauma center and the arrival of the respondent should not have a measurably harmful effect on the course of patient management or outcome.
Board Certified	Physicians certified by a medical specialty board recognized by the American Board of Medical Specialties (ABMS), American Osteopathic Association (AOA), a Canadian board, or other foreign board if recognized by the ABMS as an equivalent.
Continuing Medical Education (CME)	Defined educational activities for practicing physicians, often resulting in approved credit hours from the American Medical Association, state medical society, a medical school, or hospital. For the purposes of this document, the accreditation Council on continuing medical education (ACCME), the American Osteopathic Association (AOA), or an appropriate state medical society recognized by the ACCME or AOA to accredited state programs shall approve all CME.
Clinical Anesthesiology (CA-xx)	Indicates the year of post-graduate medical training (residency program) involvement of an anesthesiology resident, for example, CA–3.
Contact Hour	The term used for continuing education credit, as defined by the Florida Board of Nursing. One contact hour equals 50 minutes of course content.
Continuing Education	Planned educational activities intended to enrich the educational and experiential background of the health professional.
Credentialed	A process in which an individual hospital grants specific medical practice privileges to a physician in recognition of the levels of education, training, or experience.
Critical	This term describes any trauma patient with potentially life-or limb-threatening physiological variations or a decrease or worsening in the level of consciousness.

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Emergency Medical Service (EMS) System	The arrangement of personnel, facilities, and equipment for the effective and coordinated delivery of prehospital emergency medical services required for the prevention and management of incidents. These incidents may occur because of a medical emergency, injury, a natural disaster, or a similar situation.
In-Hospital Trauma Alert	An alert issued by trauma center personnel to all trauma team members to arrive promptly to the trauma resuscitation area for a trauma alert patient not previously identified by EMS.
In-Hospital Trauma Registry	A hospital wide database that integrates medical and system information related to trauma patient diagnosis and the provision of trauma care
Maintenance of Certification (MOC)	The continuous and ongoing process of lifelong learning, self–assessment, and clinical improvement that board certified physicians perform to maintain certification with their respective boards.
Pediatric Patient	A person 15 years or younger, or as otherwise directed by state law
Pediatric Trauma Alert Patient	A person 15 years of age or younger who meets the pediatric trauma alert assessment criteria described in rule 64J–2.005 (2), or (3), or (4), Florida Administrative Code
Post–Anesthesia Recovery/ Post–Anesthesia Care Unit (PAR/PACU)	This is an area designated by the hospital for monitoring and treating patients following anesthesia.
Post–Graduate Year (PGY)	Indicates the year of post–graduate medical training (residency program) involvement of a resident, for example, PGY–2.
Primary Care Specialty	Includes internal medicine, family practice, general surgery, general practitioner, and pediatric medicine.
Quality Management	The utilization of a comprehensive approach, with measurable standards and indicators, to continuously monitor, evaluate, and improve the quality of trauma patient care. Often referred to as Total Quality Management (TQM), Quality Assurance (QA), and Continuous Quality Improvement (CQI).
Trauma Alert	An alert (notification) made by an EMS provider informing a hospital or trauma center that they are in route with a patient meeting department approved triage criteria consistent with trauma alert scorecard criteria as provided in rules 64J–2.004 and 64J–2.005, Florida Administrative Code.
Trauma Call	Block(s) of time within a 24-hour period in which designated trauma team members shall be available to arrive promptly to a specified area within the trauma center when summoned (for example, via voice page, telephone, or beeper) to provide evaluation, consultation, treatment, or other defined services.
Trauma Medical Director	A physician who meets the requirements delineated in Standard II.D.1.
Trauma Program Manager	A registered nurse who meets the requirements delineated in Standard II.D.2.

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Trauma Nursing Core Course (TNCC)	A course developed and presented by the Emergency Nurses Association (ENA) that in part will meet the minimum educational standard for a nurse requiring trauma specific education
Trauma Peer Review Committee	A multidisciplinary committee established to monitor, evaluate, and improve the quality of trauma patient care.
Trauma Registrar	An individual who demonstrates the ability to accurately perform hospital-based coding and injury scaling and who provides trauma-related data to the trauma service.
Trauma Service	A dedicated and defined service within the organizational structure of the hospital designed to coordinate trauma patient care, trauma-related training, and Trauma Quality Management
Trauma Surgeon	A physician who meets the requirements delineated in Standard III.A.2 and 3.
Trauma System	A system of organized patterns of trauma readiness and response services based on public and private agreements and operational procedures, in accordance with approved local trauma plans, as provided in section 395.40 (2) Florida Statutes (2018)
Trauma Systems Committee	A multidisciplinary committee established to monitor trauma systems, operations, and processes across the continuum of care.
Trauma Team	A group of healthcare practitioners available for the resuscitative phase of trauma patient care.

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TRAUMA CENTER STANDARDS

TABLE OF CONTENTS

PREFACE ... 2
DEFINITIONS ... 3
TRAUMA CENTER STANDARDS ... 6
STANDARD I – ADMINISTRATIVE ... 7
STANDARD II – TRAUMA SERVICE ... 9
STANDARD III – SURGICAL SERVICES -- STAFFING AND ORGANIZATION ... 14
STANDARD IV – NON-SURGICAL SERVICES – STAFFING AND ORGANIZATION ... 18
STANDARD V – EMERGENCY DEPARTMENT ... 20
STANDARD VI – OPERATING ROOM AND POST-ANESTHESIA RECOVERY AREA ... 23
STANDARD VII – INTENSIVE CARE UNIT (ICU) AND PEDIATRIC INTENSIVE CARE UNIT (PICU) ... 24
STANDARD VIII – TRAINING AND CONTINUING EDUCATION PROGRAMS ... 25
STANDARD IX – EQUIPMENT ... 27
STANDARD X – LABORATORY SERVICES ... 29
STANDARD XI – ACUTE HEMODIALYSIS CAPABILITY ... 30
STANDARD XII – RADIOLOGICAL SERVICES ... 31
STANDARD XIII – ORGANIZED BURN CARE ... 33
STANDARD XIV – ACUTE SPINAL CORD AND BRAIN INJURY MANAGEMENT CAPABILITY ... 33
STANDARD XV – ACUTE REHABILITATIVE SERVICES ... 35
STANDARD XVI – PSYCHOSOCIAL SUPPORT SYSTEMS ... 36
STANDARD XVII – OUTREACH PROGRAMS ... 37
STANDARD XVIII – QUALITY MANAGEMENT ... 39
STANDARD XIX – TRAUMA RESEARCH ... 41
STANDARD XX – DISASTER PLANNING AND MANAGEMENT ... 43
NOTES ... 45
APPENDIX A – BOARD CERTIFICATION/ELIGIBILITY ... 46

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STANDARD I – ADMINISTRATIVE

INTRODUCTION: From an institutional perspective, the willingness of the hospital's board of directors and administration to commit to allocating adequate resources and personnel to accept and care for trauma patients is essential for the successful operation of a trauma center.

A. There shall be demonstrated commitment to trauma care by the hospital's board of directors, administration, medical staff, and nursing staff to treat any trauma patient presented to the facility for care. Methods of demonstrating commitment to the trauma center and system by the hospital shall include, but not be limited to, the following:
   1. Establishment of policies and procedures for the maintenance of the services essential to a trauma center and system as outlined in this standards document.
   2. Providing patient care data as requested by the department or its agent.
   3. Every trauma center is required to establish well-defined transfer protocols that encompass patient types, anticipated timeframes for the initiation and acceptance of transfers, and pre-identified destination facilities for outbound transfers.
   4. In every trauma center, the choice to transfer an injured patient must be solely determined by the patient's requirements, without considering their health insurance plan or payment status.
   5. In all trauma centers, when transferring trauma patients, the healthcare provider initiating the transfer must establish direct communication with the receiving provider to guarantee a safe transition of care. This communication may take place via a transfer center.

B. In all trauma centers, the institutional governing body, hospital leadership, and medical staff must consistently exhibit unwavering dedication and allocate the essential human and physical resources required to effectively deliver trauma care in alignment with the verified level throughout the verification cycle. Examples of demonstrating this commitment include:
   1. Approval of the establishment of the trauma center by the Hospital Board of Directors or other administrative governing authority
   2. Demonstrated commitment to adhere to the standards mandated for the level of verification.
   3. Committing to provide the essential personnel, facilities, and equipment required to facilitate compliance with the prescribed standards.

C. Hospital administration must display its backing for the research program (Level I and Pediatric centers). Evidence of support for the research program entails documenting aspects such as the following:
   1. Basic laboratory space
   2. Sophisticated research equipment
   3. Advanced information systems
   4. Biostatistical support
   5. Salary support for basic and translational scientists, or seed grants for junior investigators

D. Commitment to postgraduate education
E. In all trauma centers, diversion protocols must receive approval from the Trauma Medical Director and encompass the following elements:
   1. The trauma surgeon's concurrence in the decision to implement diversion.
   2. A procedure for notifying dispatch and EMS agencies.
   3. A diversion log for documenting the reasons for diversions and their duration.
      i Additionally, all trauma centers must ensure that the total duration of diversions does not surpass 400 hours annually.
F. The hospital's Chief Executive Officer (CEO) has overall responsibility for compliance with all trauma center standards. The CEO or his or her designee shall ensure that all staff involved with the care of the trauma patient are aware of their responsibilities as required by the trauma center standards.
G. The hospital shall ensure that the trauma medical director is responsible and accountable for administering all aspects of trauma care. Therefore, the trauma medical director shall be empowered to enforce the trauma center standards with other medical and clinical departments in the hospital. The trauma program manager shall perform under the direction of the trauma medical director and shall interact with all departments on behalf of the medical director.
H. When there are issues that the trauma medical director has been unable to resolve through the hospital's organizational structure, the hospital shall provide a specific mechanism to ensure that the medical staff or CEO address such unresolved issues. This mechanism shall include direct consultation with the affected services, including, but not limited to, trauma and emergency services.
I. When the trauma medical director is unavailable to the trauma service (such as vacation, out-of-town conference, or illness), the medical director shall delegate authority to another trauma surgeon to carry out the above administrative functions.

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STANDARD II – TRAUMA SERVICE

INTRODUCTION: From a personal leadership perspective, the qualifications of the trauma medical director and the trauma program manager should reflect leadership, planning, performance improvement, and trauma care expertise. These individuals lead the trauma care team and are responsible for the organizational integrity of the program. As such, it is desirable that these individuals obtain greater than 50 percent of their continuing education credits outside the hospital. It is also desirable that they participate in the development or operation of a local, regional, and statewide trauma care system and be involved in local or regional EMS services and local or regional trauma agency activities. The hospital might consider providing additional resources, such as a quality improvement staff member and clerical support, to assist with these activities.

A. Organizational Requirements -- The trauma service shall be a dedicated and defined service within the organizational structure of the hospital as evidenced by the following:
   1. A designated medical director contracted to direct and oversee the operation of the trauma service. The medical director position for the trauma service shall be paid by the hospital and documented by a written job description and organizational chart.
   2. A designated trauma program manager for the trauma service. The trauma program manager position for the trauma service shall be paid by the hospital and documented by a written job description and organizational chart.
   3. Designated Performance Improvement Personnel. In all trauma centers, there must be at least 0.5 FTE dedicated performance improvement (PI) personnel when the annual volume of registry patient entries exceeds 500 patients. When the annual volume exceeds 1000 registry patient entries, trauma centers must have at least 1 FTE PI personnel.
      - i The count of entries is defined as all patients that meet NTDS inclusion criteria, and those patients who meet inclusion criteria for hospital, local, regional, and state purposes
      - ii Trauma centers are expected to have the necessary human resources to comply with Standard XVIII.
   4. A trauma registrar for the trauma service. The trauma registrar position for the trauma service shall be paid by the hospital and documented by a written job description and organizational chart.
      - i In all trauma centers, there must be at least 0.5 FTE dedicated to the trauma registry per 250 annual patient entries.
         - (1) The count of admitted patients includes all patients that meet NTDS inclusion criteria as well as those patients who meet hospital, local, regional, and state inclusion criteria.
         - (2) Combined adult and pediatric programs may share resources, but someone must be identified as the lead pediatric registrar.
      - ii In all trauma centers, all registrars shall fulfill all of the following requirements:
         - (1) Complete the most recent version of the AAAM's abbreviated injury scale (AIS) course
         - (2) Complete a trauma registry course that includes the following content:
            - (a) Abstraction
            - (b) Reports/report analysis
            - (c) Data management
            - (d) Data validation
            - (e) HIPAA
         - (3) Completion of an ICD – 10 course or an ICD – 10 refresher course every five years

(4) Completion of at least 8 hours of trauma related CE annually
(5) In all trauma centers, trauma registry data must be collected in compliance with the NTDS inclusion criteria and data element definitions. These records must be submitted to the TQP data center during the most recent call for data

5. Injury prevention professional
   i All trauma centers must have a designated injury prevention professional that prioritizes injury prevention work based on trends identified by the trauma registry and local epidemiological data
      (1) In level I trauma centers, the injury prevention professional must not be the TPM or PI personnel
6. At least one qualified trauma surgeon (as described in Standard III.A) to be in- hospital and on primary trauma call at all times to provide trauma service care.
7. At least one qualified trauma surgeon (as described in Standard III.A) to be on backup trauma call at all times to provide trauma service care.
8. At least one qualified pediatric trauma surgeon for the trauma service (as described in Standard III.A.3.b) for level one and pediatric referral centers.
9. The trauma program must have designated liaisons from the following specialties:
   i Board certified or board eligible emergency medicine physician
   ii Board certified or board eligible orthopedic surgeon
      (1) In level I trauma centers, the orthopedic trauma surgeon liaison must have completed an orthopedic traumatology fellowship approved by the Orthopedic Trauma Association (OTA). In pediatric trauma centers, this requirement may be met by having a pediatric fellowship trained orthopedic surgeon
         (a) Pediatric trauma centers may share the adult orthopedic trauma surgeon liaison from a joined level I or level 2 trauma center to meet this requirement
   iii Board certified or board eligible anesthesiologist
   iv Board certified or board eligible neurosurgeon
   v Board certified or board eligible radiologist
   vi Board certified or board eligible Intensive Care Unit (ICU) physician
   vii Geriatric provider
      (1) In level I and 2 trauma centers, the geriatric liaison may be a geriatrician, a physician with expertise and focus in geriatrics, or an APP with certification, expertise, and a focus in geriatrics
         (a) The role of the liaison is to assist in the development and implementation of geriatric protocols and be available for patient consultation
10. Adult trauma centers that admit pediatric patients
   i Adult trauma centers that care for 100 or more injured children 15 years of age and younger meeting NTDB inclusion criteria must have the following:
      (1) An area within the emergency department that has designated pediatric specialized equipment and appropriate resuscitation equipment, as outlined in the pediatric readiness toolkit.
      (2) Pediatric intensive care area with appropriate resuscitation equipment, as outlined in the pediatric readiness toolkit

B. Administrative Requirements -- The trauma medical director shall ensure that:
   1. Policies and procedures relevant to care of the injured patient are developed and enforced
   2. Providers meet all requirements and adhere to institutional standards of practice
   3. Work across departments and/or other administrative units to address deficiencies in care

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4. Work with liaisons to determine provider participation in trauma care, which might be guided by findings from the PIPS process or an Ongoing Professional Practice Evaluation (OPPE)
5. The trauma medical director is responsible for credentialing and attesting to the medical ability of all personnel who provide trauma services. The Trauma medical Director shall oversee all appointments or removal of personnel from the trauma service pursuant to procedures, policies, or bylaws of the hospital.
6. The trauma medical director shall have oversight responsibility for trauma patient care and shall monitor trauma patient care on an ongoing basis as delineated in Standard XVIII.
7. The hospital shall ensure that the procedures, policies, or bylaws address circumstances in which the trauma medical director may determine that an attending physician's actions compromise the health, safety, or welfare of trauma patients. In these cases procedures, policies, or bylaws shall outline the options such as temporary or permanent removal of the physician from the trauma service, or other appropriate remedial measure
8. The following physicians participating on the trauma service meet and maintain the qualifications, certifications, as required in Standards III.A and B and Standard V.B:
   - i Pediatric and general trauma surgeons.
   - ii Emergency physicians.
9. As surgeons change, the trauma medical director must ensure that the new surgeons have the qualifications delineated in Standard III.A.3 and that they sign the General Surgeons Commitment Statement. The trauma service shall keep a current and up-to-date commitment statement on file in the hospital's trauma center application at all times for Department of Health review.
10. The trauma service maintains morbidity and mortality information, including discussions and actions by the quality management committee described in Standard XVIII.
11. Nursing personnel have completed their trauma-related continuing education requirements as delineated in Standard VIII.
12. Evidence is on file of active membership of the trauma medical director and the trauma program manager in the local or regional trauma agency, or local health planning council or advisory group if no trauma agency exists. Active membership is evidenced by attendance by either person at no less than 75 percent of the scheduled meetings.
13. All trauma centers must participate in the regional and/or statewide trauma system.
14. A written plan is on file that describes the hospital's interaction with the local or regional trauma agency, if one exists, and other county and regional medical response or treatment resources during disaster and mass casualty situations.
15. Every trauma center is required to be actively involved in regional disaster/emergency management committees, healthcare coalitions, and regional mass casualty exercises.
16. The hospital submits trauma data to the state Division of Emergency Medical Operations, Office of Trauma, trauma registry program in accordance with "The Florida Trauma Registry pursuant in Rule 64J-2 Florida Administrative Code".
17. The trauma service has a current and up-to-date trauma center application on file and available at all times for Department of Health review.
18. Level I and pediatric trauma centers shall provide, within the facility, pediatric trauma patient care services, from emergency department admission through rehabilitation, that are separate and distinct from adult trauma patient care services.

C. Medical and Patient Care Requirements -- The trauma medical director shall maintain oversight responsibility for the development, implementation, and ongoing compliance of hospital policies and clinical protocols for trauma care.

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1. All trauma centers must have evidence-based clinical practice guidelines, protocols, or algorithms that are reviewed at a minimum of every three years
2. Level I and II trauma centers must have the following protocols for care of the injured older adult:
   - i Identification of vulnerable geriatric patients who will benefit from the input of a healthcare provider with geriatric expertise prevention, identification, and management of dementia, depression, and delirium
   - ii Process to capture and document what matters to patients, including preferences and goals of care, code status, advanced directives, and identification of a proxy decision maker
   - iii Medication reconciliation and avoidance of inappropriate medications
   - iv Screening for mobility limitations and for early, frequent, and safe mobility
   - v Planning for safe transitions to home or other healthcare facility
3. All trauma centers must have a guideline/policy in place to assess children for non-accidental trauma
4. All trauma centers must have a massive transfusion protocol (MTP) that is developed by the trauma service and the blood bank
5. All trauma centers must have an anticoagulation reversal protocol in place
6. The trauma medical director shall ensure that patient care protocols exist for a minimum of the following departments:
   - i Trauma Resuscitation Area.
   - ii Intensive Care Unit and Pediatric Intensive Care Unit.
   - iii Operating Room and Post-Anesthesia Recovery/Post-Anesthesia Care Unit.
   - iv Medical Surgical Unit.
7. The trauma medical director shall ensure that policies and protocols are developed for a minimum of the following:
   - i Priority admission status for trauma patients.
   - ii Patient transfers into and out of the hospital.
8. The trauma medical director shall approve all trauma-related patient care protocols before implementation.
9. The trauma medical director, in coordination with the trauma program manager, shall monitor compliance with trauma-related protocols through the trauma quality management process.

D. Qualifications of Leadership Staff -- The trauma service shall have evidence on file that describes the qualifications of the trauma medical director and the trauma program manager to provide medical and organizational leadership to the trauma service. At a minimum, this evidence shall include the following:

1. Trauma medical director
   - i Proof of board certification in general surgery, surgical critical care, or pediatric surgery (pediatric centers only) by the American Board of Medical Specialties (ABMS), American Osteopathic Association (AOA), or Royal College of Physicians and Surgeons of Canada (RCPS – C).
     - (1) If a board-certified general surgeon who is not board certified or board eligible in pediatric surgery serves as the pediatric TMD, they must also:
       - (a) Hold current pediatric advanced life support (PALS) certification
       - (b) Have a written affiliation agreement with a pediatric TMD at another verified level I pediatric trauma Center whose role is to assist with process improvement, guideline development, and complex case discussions
   - ii Serve as the medical director of a single trauma program

iii Documentation that the hospital granted the medical director full and unrestricted privileges to provide general surgical and trauma care surgical services for adult and pediatric patients.
iv Participate on the trauma call panel
v Documentation that the medical director manages a minimum of 28 trauma cases per year (average of seven trauma cases per quarter), at least eight of which are pediatric, if the medical director manages pediatric trauma patients. These cases may include operative and non- operative interventions.
vi Documentation of maintenance of certification or evidence of 36 hours of trauma-related CME during the verification cycle. For pediatric TMD, 9 of 36 must be pediatric-specific CME.
  (1) 30 hours of CME every 3 years may be obtained from board certification or recertification.
vii In level I trauma centers, the TMD must be an active member in at least one national trauma organization and attend at least one meeting during the verification cycle at a minimum.
viii A written attestation from the Chief of Neurosurgery indicating that the trauma medical director is capable of providing initial stabilization measures and instituting diagnostic procedures for patients, both adult and pediatric, with neural trauma. This statement shall be on file and available for Department of Health review.
ix Current ATLS instructor certification.

2. Trauma Program Manager
   i Have 1.0 Full-Time Equivalent (FTE) solely dedicatedto the trauma program
   ii Hold current membership in a national or regional trauma organization.
   iii The TPM is responsible for the daily trauma-related processes and PI activities as they relate to personnel involved in the care of trauma patients. The TPM's role includes working with the TMD in the development of policies and oversight of the program
   iv In all trauma centers, the TPM must have a reporting structure that includes, at least, a dotted line to the TMD
   v Documentation of current Florida Registered Nurse licensure.
   vi Documentation of current Emergency Nurses Association Trauma Nursing Core Course (TNCC) training or equivalent.
   vii Maintain specialty certification or provide documentation of a minimum of ten contact hours every year in trauma- related topics, five of which must be in pediatric trauma. The trauma program manager may apply contact hours earned during any given year for the completion of TNCC toward meeting this requirement. (See Note #1.)

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STANDARD III – SURGICAL SERVICES -- STAFFING AND ORGANIZATION

INTRODUCTION: The background of surgeons involved in the provision of trauma patient care should reflect an interest in and a commitment to trauma. Formal trauma fellowships, training in surgery with an active trauma service, or combat experience as a surgeon constitutes examples of such interest. Each trauma surgeon participating on the trauma service should also maintain his or her skills and expertise through continuing trauma-related education. It is desirable that these individuals obtain greater than 50 percent of their continuing education credits outside the hospital. Active trauma surgeon involvement in not only the care of injured patients, but also in the development of trauma protocols, coordination of trauma call schedules, and involvement in trauma rounds is imperative for the successful operation of a trauma center. Each of those elements indicates a commitment to excellence in trauma patient care.

A. General or Pediatric Surgery
   1. Trauma surgery coverage must be continuously available with a minimum of five qualified trauma surgeons, assigned to the trauma service, with at least two trauma surgeons available to provide primary (in-hospital) and backup trauma coverage 24 hours a day at the trauma center when summoned.
      - All trauma centers must have a published backup call schedule for trauma surgery.
      - Primary and backup trauma call
        (1) Must be dedicated to a single trauma center while on call.
            (a) In level 1 centers Primary trauma call must be physically present in-hospital to meet all trauma alert patients in the trauma resuscitation area at the time of the trauma alert patient's arrival.
            (b) In Level 2 centers Primary trauma call surgeon must be available to arrive promptly for trauma activations
            (c) When the trauma surgeon on primary call takes a trauma patient to surgery, the trauma surgeon on backup trauma call shall become the primary trauma surgeon and shall arrive promptly when summoned.
        (2) To perform no elective surgery or procedures, during the on-call period, that would render the trauma surgeon unavailable to become the primary trauma surgeon.
        (3) To refrain from taking general surgery emergency calls or trauma calls at any other facility while on trauma call at the primary facility.
   2. Trauma surgeons who are involved in the care of trauma patients must complete at a minimum the following qualifications:
      - Maintain current ATLS certification
      - Have full and unrestricted privileges in general surgical and trauma surgical services for adult and/or pediatric patients
      - Hold current board certification or board eligibility in general surgery and/or pediatric surgery, or have been approved through the alternate pathway as listed in Appendix A
      - When the number of pediatric surgeons on staff is too few to sustain the pediatric trauma panel, general surgeons who are board-certified or actively participating in the certification process with a time period set by each specialty board may serve on the trauma team.
   3. PGY 3 (Pediatric) PGY4, PGY5 (Level 1 and Level 2 and Pediatric) General Surgical Residents
      - Senior surgical residents) as designated above may fill the in-hospital general surgical requirement if the trauma medical director ensures the following:

(1) A qualified general surgeon (or pediatric surgeon for pediatric patients) is on trauma call and shall arrive promptly at the trauma center when summoned.
(2) The trauma medical director attests in writing that each resident is capable of the following:
    (a) Providing appropriate assessment and responses to emergent changes in patient condition.
    (b) Instituting initial diagnostic procedures.
    (c) Initiating surgical procedures.
    (d) This statement shall be on file and available for Department of Health review for each general surgical resident that fills this requirement.
    (e) .
    (f) Each general surgical resident has current ATLS provider certification.
(3) When a trauma alert (highest level of activation based on hospital guideline) patient is identified, the attending trauma surgeon must summoned and take an active role by participating in patient care during the resuscitation.
(4) The attending trauma surgeon must accompany the senior surgical resident to the operating room

B. Neurosurgery

1. All trauma centers must have board certified or board eligible neurosurgeons continuously available for the care of neurotrauma patients and must have a contingency plan for when neurosurgery trauma capabilities become encumbered or overwhelmed. Neurosurgery capabilities are encumbered or overwhelmed when there is an inability to meet standards of care for patients with time-sensitive injuries.
2. There shall be a minimum of one qualified neurosurgeon to provide in-hospital trauma coverage 24 hours a day at Level I trauma centers and to arrive promptly at Level II and Pediatric centers when summoned. Senior neurosurgical residents, or Neurosurgical APP, may fill the in-hospital neurosurgeon requirement only if the trauma medical director and the Chief of Neurosurgery ensure the following:
    - An attending neurosurgeon is on trauma call and available to arrive promptly at the trauma center to provide stabilization, diagnostic procedures, or definitive operative care
    - Documented Evidence in the EMR of neurosurgical attending involvement
    - The trauma Medical Director and the Chief of Neurosurgery attest in writing that the senior neurosurgical resident or Neurosurgical APP is capable of providing appropriate assessment and responses to emergent changes in patient condition and Instituting diagnostic procedures

    - This attestation must be on file and available for department review for each senior neurosurgical resident and neurosurgical APP that fills the neurosurgeon requirement

3. The hospital must have a guideline that addresses attending provider response criteria that at a minimum in person response must include:
    - Severe TBI (GCS less than 9) with head CT evidence of intracranial trauma
      (1) • Moderate TBI (GCS 9–12) with head CT evidence of potential intracranial mass lesion
      (2) • Neurologic deficit as a result of potential spinal cord injury (applicable to spine surgeon, whether a neurosurgeon or orthopaedic surgeon)
4. Evidence shall be on file that clearly describes the qualifications of each neurosurgeon who takes trauma call. At a minimum, this evidence shall include the following:

- Proof of board certification or actively participating in the certification process with a time period set by each specialty board in neurosurgery, or proof of meeting the criteria of the alternate pathway as listed in the ACS……
- Documentation that the hospital has granted the neurosurgeon privileges to provide neurosurgical and trauma care services for adult and pediatric patients.
- .

5. General trauma surgeons on trauma call may fill the on-call neurosurgeon requirement **only** if the trauma medical director and the Chief of Neurosurgery ensure the following:

   - An attending neurosurgeon is on trauma call and shall arrive promptly at the trauma center when summoned.

   - The Chief of Neurosurgery shall provide written protocols for the general trauma surgeons regarding the initiation of neurologic resuscitation and evaluation for head and spinal cord injuries. The protocols shall also include criteria for immediate summoning of or consultation with the attending on-call neurosurgeon.

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C. Orthopedic Surgery

1. Trauma centers must have board certified or board eligible orthopedic surgeons continuously available for the care of orthopedic trauma patients and must have a contingency plan for when orthopedic trauma capabilities become encumbered or overwhelmed. Orthopedic capabilities are encumbered or overwhelmed when there is an inability to meet standards of care for patients with time-sensitive injuries.
2.
3. The hospital must have a guideline that addresses attending provider response criteria that at a minimum in person must include:
4. :
   - Patients who are hemodynamically unstable attributable to pelvic ring injuries
   - Long bone fractures in patients with multiple injuries (e.g., time to fixation, order of fixation, and damage control versus definitive fixation strategies)
   - Open extremity fractures (e.g., time to antibiotics, time to OR for operative debridement, and time to wound coverage for open fractures)
   - Hip fractures in geriatric patients (e.g., expected time to OR)
5. In all trauma centers, an orthopedic surgeon must arrive promptly when summoned
6. Senior orthopedic residents, or Neurosurgical APP, may fill the in-hospital orthopedic requirement only if the trauma medical director and the Chief of Orthopedics ensure the following:
   - An attending orthopedic surgeon is on trauma call and available to arrive promptly at the trauma center to provide stabilization, diagnostic procedures, or definitive operative care
   - Documented Evidence in the EMR of orthopaedic attending involvement
   - The trauma Medical Director and the Chief of Orthopedic attest in writing that the senior orthopedic resident or Neurosurgical APP is capable of providing appropriate assessment and responses to emergent changes in patient condition and Instituting diagnostic procedures
   - This attestation must be on file and available for department review for each senior neurosurgical resident that fills the neurosurgeon requirement

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D. Surgical service specialties
   1. All specialties required to be available for the care of trauma patients must be board certified, board eligible in their respective specialty, or- deemed comparably competent by the Trauma Medical Director
      - Cardiothoracic surgery* (Hand Surgery*
      - Obstetric/gynecologic surgery*
      - Ophthalmic surgery
      - Oral/maxillofacial surgery
      - Otorhinolaryngologic surgery
      - Plastic surgery
      - Urologic surgery
      - Vascular surgery

E. Capabilities
   1. Level I trauma centers must have the capability for comprehensive soft tissue coverage of wounds, including microvascular expertise for free flaps.
   2. All trauma centers must have the capability to diagnose and manage acute facial fractures of the entire cranial maxillofacial skeleton, including the skull, cranial base, orbit, mid phase, and occlusal skeleton, with expertise contributed by any of the following specialists: otolaryngology, oral maxillofacial surgery, or plastic surgery.
   3. All trauma centers must have replantation capability continuously available or must have in place a triage and transfer process with a replant center.
   4. *For Level II and Pediatric centers that do not have these capabilities a triage and transfer agreement must be in place

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STANDARD IV – NON-SURGICAL SERVICES – STAFFING AND ORGANIZATION

INTRODUCTION: A trauma center should use a coordinated team approach for the optimal care of trauma patients because the complex problems of trauma patients can require the involvement of several specialty areas. However, trauma surgeons should not relinquish the overall responsibility for the trauma patient.

A. In all trauma centers, anesthesia services must be immediately available when requested 24 hours per day. Furthermore, the attending anesthesiologist must be present within 30 minutes of request.

B. Anesthesia services may be composed of the following and be able to begin an emergency operation per hospital policy or credentialing:
   1. Anesthesiologists
   2. CA-3 and CA-4 residents
   3. CRNAs
   4. CAAs

C. Anesthesia -- The anesthesiologist shall be board certified or actively participating in the certification process with a time period set by each specialty board and have privileges from the hospital to provide anesthesia and trauma care services for adult and pediatric patients. A certified registered nurse anesthetist (C.R.N.A.) or a senior anesthesia resident (CA-3 or above) may, however, fill the in-hospital anesthesiologist requirement only if the trauma medical director ensures the following:
   1. A staff anesthesiologist is on trauma call and available to arrive promptly at the bedside trauma center when summoned.
   2. The trauma medical director and the Chief of Anesthesiology attest in writing that each C.R.N.A. or resident is capable of the following:
      i Providing appropriate assessment and responses to emergent changes in patient condition.
      ii Starting anesthesia for any trauma patient that the attending trauma surgeon determines need for operative care (pending the arrival of the anesthesiologist on trauma call).
      iii This statement shall be on file and available for the Department of Health review for each C.R.N.A. or senior anesthesia resident that fills the anesthesiologist requirement.
      iv Evidence is on file that each resident has completed at least 24 months of clinical anesthesiology.

D. Level I and II trauma centers must have all of the following medical specialists continuously available:
   1. Cardiology
   2. Gastroenterology
   3. Infectious disease
   4. Internal Medicine
   5. Nephrology
   6. Pathology
   7. Pediatrics
   8. Psychiatry
   9. Pulmonary Medicine
   10. Radiology

E. Level I and II trauma centers must have all of the following medical specialists available for consultation when called:
   1. Pain management (with expertise to perform regional nerve blocks)
   2. Psychiatry
   3. Hematology
   4. Infectious Disease
   5. Geriatric Provider
F. All specialists staffing the services listed in D.1-10 and E.1-5 above shall be board certified or actively participating in the certification process with a time period set by each specialty board in their respective specialties and granted medical staff privileges by the hospital to care for adult and pediatric patients.

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STANDARD V – EMERGENCY DEPARTMENT

INTRODUCTION: Resuscitation is a vital component of trauma care that requires appropriate organization, personnel, and resources to ensure an effective multidisciplinary approach. Since the trauma team initially comes together during this stressful and fast-paced time, members must maintain the knowledge and skills necessary to quickly assess and manage patients with traumatic injuries. It is desirable that the emergency department medical director and other emergency physicians obtain at least half of their trauma-related continuing education outside the hospital. It is also desirable that emergency nurses assigned to the trauma resuscitation obtain their initial trauma education through a comprehensive trauma core course. The resuscitation, if well planned and organized, should optimize the patient's chances of survival, minimize morbidity, and ensure both efficiency and proficiency of the trauma team. Once organized, resuscitations should undergo constant study, constructive evaluation, and continuous quality improvement.

A. Emergency Department Facility Requirements
   3. There shall be resources, staff, and equipment necessary to treat trauma patients.
      i Level II centers shall have the resources, staff, and equipment necessary to perform initial stabilization for pediatric patients.
   4. The trauma resuscitation area shall be easily accessible, identifiable, of adequate size, and contain adequate trauma care equipment and supplies to simultaneously perform at least two multi- system trauma alert patient resuscitations.
   5. There shall be evidence of security measures in place in the resuscitation area designed to protect the life and well-being of assigned trauma center staff, patients, and families (for example, a silent or overt alarm system or an assigned security guard).
   6. There shall be facilities to accommodate the simultaneous unloading of two EMS ground units.
   7. There shall be a helicopter-landing site in close proximity to the resuscitation area. Close proximity means that the interval of time between the landing of the helicopter and the transfer of the patient into the resuscitation area will be such that no harmful effect on the patient's outcome results. All helicopter landing sites shall also meet the following requirements:
      i The site shall be licensed by the Florida Department of Transportation.
      ii Use of the air space shall be approved by the Federal Aviation Administration.
      iii Documentation shall be on file with the trauma service indicating that the trauma center develops and maintains protocols and provides training during employee orientation regarding the safe loading and unloading of patients from a helicopter, as well as precautions to ensure the safety of staff or bystanders while in the vicinity of the aircraft.

B. Physician Requirements
   3. In all trauma centers, emergency medical directors must be board-certified or board eligible in emergency medicine or pediatric emergency medicine.
   4. Emergency Department Medical Director -- Evidence shall be on file indicating that the trauma center has designated a medical director for the emergency department. Evidence shall also be on file that describes the qualifications of the medical director to provide trauma-related medical and organizational leadership to physician, nursing, and hospital support staffs. At a minimum, this evidence shall include the following:
      i Proof of board certification in emergency medicine.
      ii Documentation that the hospital granted privileges to the emergency department medical director to provide trauma and other emergency care services for adult and pediatric patients.
      iii Maintenance of certification

iv Documentation of a full-time practice in emergency medicine (may include both administrative and patient care hours).

v Current ATLS provider certification.

5. Emergency Physicians -- Evidence shall be on file indicating that at least one emergency physician is on duty in the emergency department 24 hours a day to cover adult and pediatric trauma patient care services. The emergency department medical director shall ensure that the emergency physicians, during their assigned shifts, comply with the following conditions:

   i To be physically present in-hospital to meet all trauma alert patients in the trauma resuscitation area at the time of the trauma alert patient's arrival.

   ii To assume trauma team leadership if the trauma surgeon on trauma call is not physically present at the time of the trauma alert patient's arrival in the trauma resuscitation area.

   iii To transfer the care of the trauma patient to the attending trauma surgeon upon his or her arrival in the resuscitation area.

   iv Evidence shall also be on file that clearly describes the qualifications of the emergency physicians working in the resuscitation area. At a minimum, this evidence shall include the following:

      (1) In all trauma centers, physicians must be board certified, board eligible in emergency medicine or pediatric emergency medicine, or provide proof of meeting the requirements for alternate criteria, as listed in Appendix A

         (a) Physicians who completed primary training in a specialty other than emergency medicine or pediatric emergency medicine prior to 2016 may participate in trauma care

         (b) In pediatric trauma centers, at least one physician must be board certified or board eligible in pediatric emergency medicine

      (2) Documentation that the hospital granted privileges to the emergency physician to provide trauma and other emergency care services for adult and pediatric patients.

         (a) In pediatric centers, documentation that the hospital granted privileges to the emergency physician to provide trauma and other emergency care services for pediatric patients

         (b) Hospitals should use caution when using pediatricians to see adult patients in the emergency department

      (3) Current ATLS provider certification.

GENERAL INFORMATION: In a hospital dedicated to trauma care, nursing personnel occupy a crucial position in the care of injured patients. Encouraging nursing involvement in trauma training programs and research activities, as well as actively integrating nurses into the trauma team or service, should be a high priority of the trauma center.

C. Resuscitation Area Nursing and Support Personnel Staffing Requirements

3. Resuscitation area nursing staff

   i At a minimum, two trauma resuscitation trained nurses, as defined by the trauma center standard/policy, per shift shall be in hospital and taking primary assignment and be immediately available for the trauma resuscitation area.

   ii All resuscitation area nurses shall fulfill all initial and recurring training requirements as delineated in Standard VIII within the time frames provided.

4. Other nursing and technical support staff

   i The number of nursing personnel and technical staff members assigned to provide patient care in the resuscitation area (in excess of the minimum requirement provided in item C.1.i

above) shall be established by each trauma center and shall ensure adequate care of the trauma patient.

ii The trauma center shall have a designated and trained staff member to record pertinent patient information on a trauma flow sheet during each trauma alert (may be one of the nurses specified in item C.1.i above).

5. Resuscitation Area Documentation Requirements
   - i The trauma team shall have a process to document initial patient care and interventions in the resuscitation area.
   - ii At a minimum, this documentation shall include:
     - (1) The time EMS called trauma alert.
     - (2) The time of the trauma alert patient's arrival in the resuscitation area.
     - (3) The prehospital or hospital reason for the trauma alert being called.
     - (4) The time of arrival for each trauma team member and physician consultant.
     - (5) Serial physiological measurements and neurological status.
     - (6) All invasive procedures performed and results.
     - (7) Laboratory tests.
     - (8) Radiological procedures.
     - (9) The time of disposition and the patient's destination from the resuscitation area.
     - (10) Complete nursing assessment.
     - (11) Weight.
     - (12) Immobilization measures.
     - (13) Total burn surface area and fluid resuscitation calculations for burn patients.
6. Emergency Department Responsibilities
   - i The emergency department shall summon the trauma team when the facility is notified of a trauma alert en route that meets state/regional trauma alert criteria.
   - ii 2. The emergency department physician shall evaluate all trauma patients not identified as a trauma alert based on physician discretion and the trauma scorecard methodology (See Rules 64J-2.004 and 64J-2.005, Florida Administrative Code.). Once the emergency department physician identifies the patient as a trauma alert patient, he or she shall call an in-hospital trauma alert and summon the trauma team.
   - iii Prehospital trauma activations must be met and evaluated by the trauma team at a minimum.
   - iv The trauma team, physician consultants, and other support personnel shall arrive when notified of a trauma alert and summoned. The trauma team, physician consultants, and other support personnel shall ensure that their response times are documented in each patient's record on the trauma flow sheet.
   - v The trauma team shall include, at a minimum, the following for the highest level of activation:
     - (1) A trauma surgeon (as team leader).
     - (2) An emergency physician.
     - (3) At least two trauma resuscitation area registered nurses.

     The trauma medical director may also require other disciplines to participate on this team.
7. In all trauma centers, the trauma medical director must define and approve shared roles and responsibilities between trauma surgeons and emergency medicine physicians for trauma resuscitation.

INTRODUCTION: Another key component in the provision of definitive trauma care is the timely availability of surgical facilities. Availability also means that operating rooms and post- anesthesia recovery areas are appropriately staffed with trained nurses and technicians.

STANDARD VI – OPERATING ROOM AND POST-ANESTHESIA RECOVERY AREA

A. Operating Room
   1. The trauma center shall have at least one adequately staffed operating room ready within 15 minutes for adult and pediatric trauma patients 24 hours a day. This standard does not require a separate operating room for adult and pediatric patients.
   2. The trauma center shall have a second adequately staffed operating room ready within 30 minutes when the primary operating room is occupied with an adult or pediatric trauma patient.
   3. In all trauma centers, a back-up OR and team must be available if the first room is in use.
   4. There should be a process to prioritize fracture care of nonemergent orthopedic trauma in all trauma centers.
   5. Trauma centers should have a written policy specifying access to the operating room and should include time parameters related to the level of urgency for cases.
   6. The attending trauma surgeon must be present for portions of the surgical procedure under their responsibility and be immediately available for the duration of the procedure.
   7. The operating team shall consist minimally of the following:
      i One scrub nurse or technician.
      ii One circulating registered nurse.
      iii One anesthesiologist immediately available. (See Standard IV.A.)

B. Post-Anesthesia Recovery (PAR)
   1. Staffing in the PAR area shall be adequate to address the acuity/needs of severely injured persons. The trauma center shall have a documented process for PACU staffing that optimizes outcomes for injured patients 24 hours per day.
   2. Post-anesthesia recovery in the surgical ICU is acceptable.
   3. A physician credentialed by the hospital to provide care in the ICU or emergency department shall be in-hospital and available to respond immediately to the PAR for care of adult and pediatric trauma patients 24 hours a day.

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STANDARD VII – INTENSIVE CARE UNIT (ICU) AND PEDIATRIC INTENSIVE CARE UNIT (PICU)

INTRODUCTION: The critically ill trauma patient requires continuous and intensive multidisciplinary assessment and intervention to restore stability, prevent complications, and achieve and maintain optimal outcomes.

A. The adult ICU must be separate and distinct from the PICU.
B. There shall be immediate access to clinical laboratory services.
C. All trauma centers must have an ICU surgical director who is board certified or board eligible in general surgery and actively participates in unit administration
    1. In level I adult trauma centers, the ICU surgical director must be board certified or board eligible in surgical critical care
    2. In level II adult trauma centers, at least one intensivist must be board certified or board eligible in surgical critical care
    3. In pediatric trauma centers, there must be at least two physicians who are board-certified or board eligible in pediatric critical care medicine or in pediatric surgery or pediatric surgical critical care
        i These two physicians must practice at least part of their time in the ICU where the majority of pediatric trauma patients are
    4. In all trauma centers, the trauma surgeon must retain responsibility for the trauma patient in the ICU up to the point where the trauma surgeon documents transfer of primary responsibility to another service
D. Physician Requirements
    1. In all trauma centers, the ICU must be staffed with physicians (physicians include residents, fellows, or attendings) who are continuously available within 15 minutes of request and whose primary responsibility is to the ICU
E. Nursing Requirements
    1. In all trauma centers, the patient to nurse ratio in the ICU must be 1:1 or 2:1, depending on patient acuity as defined by the hospital policy for ICU nurse staffing
    2. All nursing care for the critically injured patient must be documented in the patient's medical record and available 24 hours per day.

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STANDARD VIII – TRAINING AND CONTINUING EDUCATION PROGRAMS

INTRODUCTION: All healthcare professionals providing trauma patient care should have specific initial and continuing education and training related to that care. Educational offerings attended by staff, both external to the institution and those developed and presented in-hospital, should include didactic and clinical programs. All participants in trauma patient care should acquire and maintain an adequate level of clinical competency and an understanding of the theories supporting a trauma philosophy. The trauma service and the individual department involved, for example, nursing, surgery, intensive care, should mutually manage the educational sessions. Compliance with this standard can include any National Trauma Course including the Emergency Nurses Association Trauma Nursing Core Course, Pediatric Advanced Life Support, and Emergency Nurses Pediatric Course. Nurses are encouraged to seek certification in their specialty, such as Certified Emergency Nurse, Certified Critical Care Registered Nurse, Trauma Certified Registered Nurse, or Certified Operating Room Nurse.

A. Evidence shall be available indicating the completion of trauma-related continuing education in the hours and time frames provided for the personnel listed below. Time frames begin the effective date the hospital earns provisional trauma center status, or the employee's subsequent date of assignment to the indicated trauma care area.

B. Trauma orientation must be provided to new nursing staff involved in caring for trauma patients. Education can include:
   1. Trauma Center developed orientation including process improvement identified opportunities.
   2. Trauma Center specific patient population education

C. Registered nurses assigned to following departments shall obtain the specified number of trauma-related contact hours related to their scope of practice and population that is served (e.g., ATCN, TNCC, PCAR, TCAR, TNATC):
   1. ED/trauma resuscitation area -- 16 contact hours every two years.
   2. Operating room and post-anesthesia recovery -- eight contact hours every two years.
   3. Intensive care unit and pediatric intensive care unit -- eight contact hours every two years.
   4. Medical surgical/step down unit for both adult and pediatric -- eight contact hours every two years.
   5. Rehabilitation unit -- eight contact hours every two years.
   6. Burn unit -- eight contact hours every two years.

D. Licensed practical nurses assigned to the above departments shall complete eight contact hours every two years.

E. Paramedics assigned to the above departments shall complete four contact hours of trauma-related continuing education every two years.

F. Should the nurse or paramedic provide care to both adult and pediatric or only pediatric trauma patients, then at least half of the contact hours mentioned in C.a-f, D., and E. shall be in pediatric trauma.

G. Postgraduate Training and Education (Level 1 & trauma centers with postgraduate training programs only)
   1. A defined trauma curriculum with trauma-specific objectives for junior and senior residents
   2. Rotations for residents need to be available to, at minimum, general surgery, orthopaedic, neurosurgery, and emergency medicine residents.
   3. Residents on the trauma service have to be from an Accreditation Council for Graduate Medicine Education (ACGME) accredited program.

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4. The volume of cases needs to be sufficient to give senior general surgery residents the ability to meet competency requirements for senior general surgery residents in trauma defined by the ACGME.
5. In order to guarantee ample experience and exposure to trauma care, the rotation will need to be continuously available to residents.

H. Advanced Practice Providers (APPs)

1. In all trauma centers, trauma and/or emergency department APPs who are clinically involved in the initial evaluation and resuscitation of trauma patients during the activation phase must have current ATLS certification.
   i This standard is not applicable to the following:
   - APPs for neurosurgery and orthopaedic surgery
   - CRNAs
   - CAAs
   - Scribes
2. In all trauma centers, it is recommended that APPs caring for trauma patients obtain # trauma-related contact hours every 2 years with # in pediatric for APPs who care for pediatric trauma patients.

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STANDARD IX – EQUIPMENT

INTRODUCTION: The rapid resuscitation, emergency management, and subsequent care of trauma patients require specialized equipment and supplies. This equipment may be expensive and unique to the care of trauma patients, so personnel should have appropriate training and orientation in the use, care, and maintenance of this equipment.

A. Medical supplies and equipment requirements for the care of adult and pediatric trauma patients in the treatment areas indicated below shall be readily available and shall include at a minimum the following:

1. Trauma Resuscitation Area
   - i Cerebral monitoring equipment
   - ii Pupillometry equipment
   - iii Airway control and ventilation equipment, including various sizes of laryngoscopes, video laryngoscopy, and endotracheal tubes, bag valve mask resuscitator, mechanical ventilator, oxygen masks and cannulae, and oxygen.
   - iv Cardiopulmonary resuscitation cart, including emergency drugs and equipment.
   - v Doppler monitoring capability.
   - vi Electrocardiograph//defibrillator.
   - vii Monitoring equipment for blood pressure and pulse and an electrocardiogram (ECG).
   - viii Pacing capability.
   - ix Pulse oximetry.
   - x Equipment for rapid infusion of blood and blood products
   - xi Standard devices and fluids for intravenous (IV) administration.
   - xii Sterile surgical sets for airway, chest, vascular access, and burr hole capability.
   - xiii Suction devices and nasogastric tubes.
   - xiv A system to communicate immediately with the trauma team.
   - xv Ultrasound for FAST examination
   - xvi Thermal control devices for patients, IV fluids, and environment.
   - xvii Bidirectional communication, including radio communication, with prehospital transport vehicles (communications shall conform to the State EMS Communications Plan)
2. Operating Room
   - i Cerebral monitoring equipment
   - ii Airway control and ventilation equipment, including various sizes of laryngoscopes, video laryngoscopy, and endotracheal tubes, bag valve mask resuscitator, mechanical ventilator oxygen masks and cannulae, and oxygen
   - iii Anesthesia monitoring equipment.
   - iv Cardiopulmonary bypass equipment must be immediately available in all trauma centers, or a contingency plan must exist to provide emergency cardiac surgical care
   - v Cardiopulmonary resuscitation cart, including emergency drugs and equipment.
   - vi Craniotomy/burr hole and intracranial monitoring capabilities.
   - vii Endoscopes
   - viii Invasive hemodynamic monitoring and monitoring equipment for blood pressure, pulse, and ECG
   - ix Operating microscope
   - x Orthopedic equipment for fixation of pelvic, long bone, spinal fractures, and fracture table

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xi Cardiac pacing capability
xii Equipment for rapid infusion of blood and blood product
xiii Standard devices and fluids for IV administration
xiv Thermal control devices for patients, IV fluids, and environment
xv X-ray capability

3. Post-Anesthesia Recovery
   i Airway control and ventilation equipment, including various sizes of laryngoscopes, video laryngoscopy, and endotracheal tubes, bag valve mask resuscitator, mechanical ventilator oxygen masks and cannulae, and oxygen
   ii Cardiopulmonary resuscitation cart, including emergency drugs and equipment.
   iii Intracranial pressure monitoring.
   iv Invasive hemodynamic monitoring and monitoring equipment for blood pressure, cardiac pacing capability.
   v Pulse oximetry.
   vi Standard devices and fluids for IV administration.
   vii Sterile surgical sets for airway and chest.
   viii Thermal control devices for patients and IV fluids.
4. Intensive Care Unit and Pediatric Intensive Care Unit
   i Pupillometry equipment
   ii Cerebral monitoring equipment
   iii Airway control and ventilation equipment, including various sizes of laryngoscopes, video laryngoscopy, and endotracheal tubes, bag valve mask resuscitator, mechanical ventilator oxygen masks and cannulae, and oxygen
   iv Equipment for rapid infusion of blood and blood products
   v Cardiopulmonary resuscitation cart, including emergency drugs and equipment.
   vi Compartment pressure-monitoring devices.
   vii Invasive hemodynamic monitoring and monitoring equipment for blood pressure, pulse, and ECG.
   viii Orthopedic equipment for the management of pelvic, long bone, and spinal fractures.
   ix Cardiac Pacing capabilities.
   x Pulse oximetry.
   xi Scales.
   xii Standard devices and fluids for IV administration.
   xiii Sterile surgical sets for airway and chest.
   xiv Thermal control devices for patients, IV fluids, and environment.

5. Medical Surgical Unit
   i Cardiopulmonary resuscitation cart, including emergency drugs and equipment.
   ii Standard devices and fluids for IV administration.
   iii Suction devices.

STANDARD X – LABORATORY SERVICES

A. Service capabilities -- The trauma center shall have the following laboratory capabilities for adult and pediatric injured patients available in-hospital 24 hours per day:

   1. Services for the prompt analysis of the following:
      - i Blood, urine, and other body fluids.
      - ii Blood gases and pH determination within five minutes 90 percent of the time.
      - iii Coagulation studies.
      - iv Drug and alcohol screening.
      - v Microbiology.
      - vi Serum and urine osmolality.
      - vii All trauma centers must have a sufficient supply of blood products readily available including platelets, fresh frozen plasma, Packed Red Blood Cells (PRBCs), cryoprecipitate as monitored by the PI process.
   2. An appropriately staffed blood bank.
   3. Blood bank policies and protocols that describe the following shall be in place:
      - i The methods for obtaining additional blood from other sources, for example, a community blood bank or another medial facility, as the need may arise.
      - ii The methods for obtaining blood, platelets, and frozen plasma from the blood bank.
   4. The blood bank shall, at a minimum, be capable of providing the following:
      - i Blood typing, screening, and cross matching.
   5. The trauma center shall have written protocols available ensuring that injured patients receive priority over routine laboratory tests.

B. Staffing Requirements -- A laboratory technician shall be available in-hospital 24 hours per day to conduct laboratory studies for injured patients.

STANDARD XI – ACUTE HEMODIALYSIS CAPABILITY

A. Trauma Centers must have renal replacement therapies and services available for the support of injured trauma patients with renal failure 24 hours a day.

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STANDARD XII – RADIOLOGICAL SERVICES

A. All trauma centers must have the following services available around the clock and accessible for patient care within the specified timeframes (note that the timeframe refers to the duration between the initial request and the commencement of the test/procedure, not necessarily its completion):

1. Conventional radiography
    a. Within 15 minutes
2. Computed tomography (CT)
    a. Within 15 minutes
3. Point-of-care ultrasound
    a. Within 15 minutes
4. Interventional radiologic procedures
    a. Within 1 hour
5. Magnetic Resonance Imaging (MRI)
    a. Within 2 hours

B. All trauma centers are required to establish a system for remotely accessing radiographic images from referring hospitals within their catchment area. These access methods may encompass options such as email, a mobile phone application, a Picture Archiving and Communications System (PACS), and various other suitable means.

C. In all trauma centers, the final interpretation of CT scans must be documented no later than 12 hours after the scan's completion.

D. Service Capabilities - The following radiological service capabilities for trauma alert patients must be available 24 hours a day in all trauma centers:

1. A radiologist must have access to patient images and be available for imaging interpretation, either in person or by phone, within 30 minutes of a request.
2. Angiography of all types, with a maximum response time until the start of the procedure of 60 minutes.
3. Computerized tomography (CT).
4. Routine radiological studies.

E. Staffing Requirements - Radiological personnel required to deliver radiological services for trauma alert patients must be accessible around the clock. At the very least, this should encompass the following:

1. Human and physical resources must be continuously available so that an endovascular or interventional radiology procedure for hemorrhage control can commence within 60 minutes of a request.
2. Radiologists must be board certified or actively engaged in the certification process with a timeline established by each specialty board and must be promptly available 24 hours per day.
    a. Chief radiology residents may fulfill this requirement if the trauma medical director ensures the following:
        i. A staff radiologist is on trauma call and available to arrive promptly at the trauma center when called.
        ii. The trauma medical director and chief of radiology provide written attestation that each participating resident is capable of the following:
            1. authorizing any radiological studies required for trauma alert patients
            2. Conducting appropriate evaluation of radiological studies for trauma alert patients.

3. Radiologists at trauma centers utilizing teleradiology may take call from the site of the off-campus computer terminal if the trauma center assumes all responsibility and liability to ensure that images are of such quality that the patient's outcome is not compromised.

    a. Radiologists working off-campus must arrive promptly the trauma center when summoned.

4. A CT technician must be available in-hospital 24 hours a day.
5. A radiological technician must be available in-hospital 24 hours a day.

F. CT Scanner Requirements

1. There must be at least one CT scanner available for trauma alert patients, and it must be located in the same building as the resuscitation area. CT scanners situated in remote areas of the hospital campus (necessitating patient movement from one building to another), in mobile units, or in other institutions do not meet this requirement.
2. If the trauma center has only one CT scanner, there must be a written plan in place outlining the steps to be taken in case the apparatus is in use or temporarily inoperable. This plan must include agreements for transferring trauma patients.

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STANDARD XIII – ORGANIZED BURN CARE

A. The trauma center shall have written policies and procedures for triage, assessment, stabilization, emergency treatment, and transfer of burn patients. Policies and procedures shall also be written regarding in-hospital management, including rehabilitation, of burn patients.
B. The trauma center is capable of providing specialized care, dedicated beds, and supplies or equipment appropriate for the care of a patient with major or significant burns. when the facility meets one of the following criteria:
    a. Is verified a burn center by the American Burn Association
    b. Demonstrates that the facility and burn center staff meet the following qualifications:
        i. The facility shall admit an average of 60 or more patients with acute burn injuries annually. At least 40 patients shall meet the major or significant burn criteria.
        ii. General surgeons or plastic surgeons who are the primary managing physicians managing burn cases shall obtain a minimum of two burn- related CMEs each calendar year as part of their total CMEs.
        iii. Each general surgeon or plastic surgeon who is the primary managing physician shall participate in the management of burn patient admissions or resuscitations.
        iv. Burn unit nursing staff shall obtain a minimum of two burn-related contact hours each calendar year as part of their total CMEs.
        v. The facility shall provide at least one burn-related community education or prevention program each calendar year.
C. If the trauma center is not capable of providing specialized care, dedicated beds, and supplies or equipment appropriate for the care of a patient with major or significant burns the facility shall establish communication and collaboration with a regional burn center and have a written transfer agreement in place. The burn center should be called for consultation and consideration of transfer for patients with major or significant burn injuries.
    a. Major or significant burn injuries include the following:
        i. Full thickness burns
        ii. Partial thickness ≥10% TBSA
        iii. Any deep partial or full thickness burns involving the face, hands, genitalia, feet, perineum, or over any joints
        iv. Patients with burns and other comorbidities
        v. Patients with concomitant traumatic injuries
        vi. Burn patients with poorly controlled pain
        vii. All patients with suspected inhalation injury
        viii. All pediatric burns may benefit from referral to a burn center
        ix. All chemical injuries
        x. All high voltage electrical injuries (≥1000V)
        xi. Lightning injuries
        xii. Physician discretion

STANDARD XIV – ACUTE SPINAL CORD AND BRAIN INJURY MANAGEMENT CAPABILITY

A. All trauma centers shall have written policies and procedures for triage, assessment, stabilization, emergency treatment, and transfer (either into or out of the facility) for brain or spinal cord injured patients. Policies and procedures shall also be written regarding in-hospital management, including rehabilitation, and the implementation of the preventive ulcer program (See Notes #7), for brain or spinal cord injured patients.
B. The trauma center shall be designated by the Department of Health, Brain and Spinal Cord Injury Program, as a spinal cord injury acute care center or brain injury acute care center, or have a written transfer agreement in place with such a facility, and written medical transfer policies and protocols for when to initiate a transfer to ensure the timely and safe transfer of the brain or spinal cord patient.

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STANDARD XV – ACUTE REHABILITATIVE SERVICES

INTRODUCTION: A trauma service should provide for the rehabilitation of its patients, with the goal of returning to society an individual who functions at the highest possible level consistent with his or her injuries. Early rehabilitation minimizes the risk of secondary complications that may interfere with or limit functional recovery. Members of the trauma service should also work with colleagues to prepare the patient and family physically, psychosocially, and emotionally for the transition to rehabilitation and ultimately for return to the community.

A. All trauma centers need the listed Allied Health services available 7 days per week:
    1. Physical Therapy
    2. Social Work
    3. Occupational Therapy
    4. Nutrition Support
B. All trauma centers need the listed Allied Health Services continuously available:
    1. Respiratory Therapy
C. The Trauma Medical Director shall establish the rehabilitation needs of traumatically injured patients and must be met by all trauma centers as evidence by:
    1. Ensuring protocols/medical best practice guidelines recognize which patients will need rehabilitation services during their acute inpatient hospital stay.
    2. Creating processes with the ability to determine rehabilitation needs, care, and services during their acute inpatient hospital stay
D. Process for confirming that required rehabilitation services are provided in a timely manner
E. Trauma Centers need to have a method for defining the level of care trauma patients will require after discharge, including detailed rehabilitation care services that will be required following discharge with supporting evidence documented in the medical record
F. The trauma medical director or trauma program manager shall ensure that trauma patients meeting the criteria established above have an evaluation by any or all of the following (as appropriate to the patient's injury):
    1. Attending trauma surgeon, neurosurgeon, neurologist, or orthopedic surgeon.
    2. Neuropsychologist.
    3. Occupational therapist.
    4. Physiatrist or medical director of the rehabilitation services department.
    5. Physical therapist.
    6. Speech therapist.
G. The consultant shall document this evaluation in the patient's medical record. Documentation shall include any short- or long-term rehabilitation goals and plan.
H. The physician with primary responsibility for the patient shall review the assessment and recommendations within 48 hours and document the review in the patient's medical record.
I. The trauma center shall have one of the following for long-term rehabilitative services:
    1. A designated rehabilitation unit that is accredited by the Commission on Accreditation of Rehabilitative Facilities.
    2. A documented transfer agreement in place with one of the above stated facility types, and written medical transfer policies and protocols for when to initiate a transfer to ensure the timely and safe transfer of the trauma patient.

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STANDARD XVI – PSYCHOSOCIAL SUPPORT SYSTEMS

INTRODUCTION: Such factors as age and developmental phase, previous and current health problems, family and social support systems, economic status, level of education, and the meaning given to the injury by the patient and family all affect human responses to injury. The trauma center should assure that qualified personnel are available to assess and support the patient and the patient's family or significant others. This should include crisis intervention, acceptance and adaptation to the repercussions of the injury, and facilitation of the transition from the hospital.

A. Trauma Centers must prioritize the mental health needs of all trauma patients. To assist in meeting these needs, the trauma center should have:
   1. Protocols to screen patients, 12 and older, that have an increased risk for psychological ramifications should include:
      i Validated screening tools or the use of routine blood alcohol measurement
      ii Trauma Centers must maintain 80% compliance with screening
B. Referral processes to mental health providers must be in place for those patients needing further behavioral care.
   1. A minimum of 80% of patients screening positive for alcohol abuse must receive a brief intervention by trained personnel before discharge from hospital.
C. The trauma center shall have written policies and protocols to provide mental health services, child protective services, and emotional support to trauma patients or their families. At a minimum, the policies and protocols shall include qualified personnel to provide the services and require that the personnel shall arrive promptly at the trauma center when summoned.
   1. Qualified personnel may include, but are not limited to, the following:
      i Nurses (in addition to resuscitation area personnel).
      ii Pastoral or spiritual care representatives.
      iii Patient advocates or representatives.
      iv Physician consultants.
      v Psychologists or psychiatrists.
      vi Social service workers.
      vii Advanced Practice Providers
D. Child life program
   1. All pediatric trauma centers must have a child life program

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STANDARD XVII – OUTREACH PROGRAMS

INTRODUCTION: Although the trauma center is a key component of acute care for the critically injured trauma patient, an effective trauma system encompasses all phases of care, from prehospital to reintegration into society. By providing multidisciplinary educational opportunities and becoming actively involved in the formulation of community approaches to trauma care, the trauma center will aid in attaining the goal of optimal care for all injured patients. It is desirable that the trauma center coordinate their outreach activities with the local or regional trauma agency, if one exists. Finally, the trauma center should consider developing these programs in response to identified, targeted local problems. Use of national injury prevention programs are recommended to avoid replication and eliminate the need to spend resources to develop a quality program when one has already been developed and tested.

A. The trauma center must implement a minimum of two injury prevention activities per verification cycle, each with specific objectives and deliverables addressing separate mechanisms of injury, specific to trends identified in the trauma center and local epidemiological data.
   1. The trauma center must demonstrate partnerships with other local community organizations in support of injury prevention activities.
   2. Hospital-specific evaluation methods shall be implemented to determine the effectiveness of the injury prevention programs.

B. The trauma center must demonstrate active participation in the training of prehospital personnel.

C. The trauma center must demonstrate a commitment to providing public and professional trauma education.

D. The trauma center must demonstrate the existence of an organ procurement program including, at minimum (this standard pertains to solid organ procurement for trauma patients only):
   1. An Organ Procurement Organization (OPO) affiliation agreement.
   2. A policy directing the requirements for notification of the regional OPO.
   3. Protocols defining the specific clinical criteria and confirmatory testing required for brain death diagnosis.

E. The trauma center must demonstrate a defined process for case review that includes a mechanism for providing feedback to external entities, including:
   1. Feedback to EMS agencies on issues related to patient care and triage accuracy.
   2. Feedback to referring providers on the care and outcomes of patients referred and potential opportunities for improvement in care.

F. The trauma center must demonstrate the participation of an Emergency Physician or Trauma Surgeon in the prehospital PI process to include participation in the development of prehospital trauma patient care protocols.

G. The trauma center shall provide 24-hour availability of telephone consultation with members of the hospital's trauma team for physicians of the community and outlying areas. Scheduled on-site consultations with members of the hospital's trauma team shall be available with physicians of the community and outlying areas. Evidence of these consultations shall be documented.
   1. Evidence of contact with referring physicians regarding patient transfers shall be documented in all cases.

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H. All trauma centers must have a Trauma Systems committee chaired by the TMD or an associate TMD
   1. Combined adult (level I/II) and pediatric (level II) trauma centers must hold separate adult and pediatric trauma multidisciplinary PIPS meetings with distinct minutes
I. There shall be evidence of a minimum of 10 multidisciplinary meetings conducted per year for the purposes of identifying Opportunity for Improvement (OFI), addressing trauma system issues (prehospital and in-hospital), reviewing practice guideline adherence, case management, and providing education for in-hospital and pre-hospital entities
   1. The meeting shall include the review of the following:
      i The local and regional emergency medical service system.
      ii Individual case management
      iii The trauma center or system
      iv Solution of specific problems, including organ procurement and donation.
      v Trauma care education.
      vi Reporting from ancillary departments on trauma center operations
   2. The Trauma Systems committee shall be composed of at least the following persons:
      i Trauma medical director or predetermined alternate (as chairperson)
      ii Trauma program manager
      iii Medical director of emergency department or emergency physician designee.
      iv Trauma surgeon, other than the trauma medical director.
      v Anesthesia liaison
      vi Radiology liaison
      vii Neurosurgeon
      viii Orthopedic liaison
      ix Pediatric physician (if caring for pediatric patients)
      x Pediatric surgeon or pediatric critical care preferred
      xi Representative from administration.
      xii Surgical Services Director or designee.
      xiii Emergency department nursing director or designee.
      xiv Intensive care unit nursing director or designee.
      xv Social Work/Case Management
      xvi Rehabilitation Medicine
      xvii Laboratory
      xviii Prehospital Providers
   3. All participants must attend 50% of meetings annually
   4. Quorum is met when 51% of required attendees are present

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STANDARD XVIII – QUALITY MANAGEMENT

INTRODUCTION: The goals of a trauma quality improvement program are to monitor the process and outcome of patient care, to ensure the quality and timely provision of such care, to improve the knowledge and skills of the trauma care providers, and to provide institutional structure and organization to promote quality improvement. The plan should contain these essential elements for successful implementation: authority and accountability for the program, a well-defined organizational structure for the committee composition and member responsibilities, defined standards to determine quality of care, and explicit definitions for outcomes required by the facility's prescribed standards.

A. The trauma service shall have written evidence on file indicating the governing body's commitment to the trauma quality improvement program. This evidence shall include the following:
   1. The trauma program must have a trauma medical director with the authority and administrative support to implement changes related to the process of care and outcomes across multiple specialty departments. The administrative support commitment must assure that the defined lines of authority guarantee comprehensive evaluation of all aspects of trauma care.
   2. Trauma centers need a written data quality plan, with evidence of compliance to that plan. The plan will need to include a quarterly review of data quality at minimum.
   3. The Trauma PIPS program needs to be independent of the hospital/departmental program yet will need a defined process of reporting to the hospital/departmental PI program.
   4. Trauma Centers need a written PIPS plan that:
      i Defines the organizational Structure of the Trauma PIPs process, with a well-defined relationship to the hospital/departmental PI program.
      ii Identifies the processes for event identification, with the consideration of identification by multiple sources. The range of event review will need to encompass from prehospital care through hospital discharge.
      iii Contains a list of audit filters as defined by the American College of Surgeons: Resources for Optimal Care of the Injured Patient, with a plan for monitoring/reporting out identified trends.
      iv Describes review levels (primary, secondary, tertiary, and/or quaternary), with a description for each level that identifies:
         (1) What cases are to be reviewed
         (2) Who will be performing the review
         (3) When case needs to advance to a different level, or can be closed
      v Identifies the members of the Trauma Peer Review Committee and their responsibilities
      vi Defines the process for identification of priority opportunities areas for PI, based on audit filters, event review, and benchmarking reports
   5. Trauma centers will need detailed evidence of event identification; demonstrated use of audit filters; evidence of loop closure; documented efforts at corrective actions; and plans for sustained improvement measured over time
   6. Trauma centers must partake in the ACS TQIP and the Florida TQIP Collaborative as in Rule 64J-2.006(2), risk-adjusted benchmarking programs, and analyze the report to identify if there are areas of opportunity for improvement in patient care and registry data quality
   7. Population of cases for review -- The trauma medical director and trauma program manager shall review all trauma patient records from the following categories:

- i All trauma alert cases admitted to the hospital (patients identified by the state trauma scorecard criteria in Rules 64J-2.004 and 64J-2.005, Florida Administrative Code).
- ii Critical or intensive care unit admissions for traumatic injury.
- iii All operating room admissions for traumatic injury (excluding same day discharges or isolated, non-life-threatening orthopedic injuries).
- iv Any critical trauma transfer into or out of the hospital.
- v All in-hospital trauma related mortality (including mortality in the resuscitation area) and patients transferred to hospice, with identification of any identified opportunities for improvement
- vi All nonsurgical trauma admission will need to be reviewed by the trauma program
- vii All instances of trauma diversion will need to be reviewed by the Trauma Operations committee

8. Evaluation of cases -- The trauma medical director or trauma program manager shall evaluate each case identified by one of the indicators (Standard XVIII.D.3) and determine whether the case should be referred to the Trauma Peer Review Committee for further review. (The trauma medical director and the trauma program manager shall also present a summary of reviewed cases not referred to the Trauma Peer Review Committee.)
9. Committee discussion and action -- The members of the Trauma Peer Review Committee shall review and discuss each case referred by the trauma medical director or trauma program manager. The members shall recommend or take action on those cases where the committee finds opportunities for improving performance, system process, or outcomes. (The trauma medical director is responsible for monitoring the outcome of each case referred to persons or committees outside the Trauma Peer Review Committee. The medical director is also responsible for providing a comprehensive report to the Trauma Peer Review Committee regarding those referrals.)
10. Resolution and follow-up -- The Trauma Peer Review Committee shall evaluate and document the effectiveness of action taken to ensure problem resolution, improvements in patient care, or improved patient outcomes.

B. The Trauma Peer Review Committee shall meet a minimum of 10 times per year to review trauma cases referred by the trauma medical director or trauma program manager, including cases identified by the indicators listed in XVIII.D.3.and other cases with quality-of-care concerns, systems issues, morbidity, or mortality.

1. Attendance requirements for Trauma Peer Review Committee:
   - i 60% for the Trauma Medical Director (cannot be delegated to the Associate TMD)
   - ii 50% for each Trauma Surgeon
   - iii 50% for Trauma Liaisons (or pre-designated alternate) from Emergency Medicine, Neurosurgery, Orthopaedic Surgery, Critical Care Medicine, Anesthesia, & Radiology
     - (1) Combined adult & pediatric centers will need to have 50% attendance by representative (TMD or pre-designated alternate) from the other program, and they will be responsible for sharing information to the other program

C. The trauma service shall maintain written minutes of all Trauma Peer Review committee meetings for at least three years. The trauma service shall have these minutes available for the Department of Health to review upon request. The minutes shall include at a minimum the following:

1. The names of attendees.
2. The subject matter discussed, including an analysis of all issues related to each case referred by the trauma medical director or the trauma program manager, cases involving morbidity or mortality, and cases with other quality of care concerns for opportunities for improvement
3. Deaths must be identified as:

i Mortality with opportunity for improvement
ii Mortality without opportunity for improvement
4. A summary of cases with variations not referred to the committee.
5. A description of committee discussion of cases not requiring action, with an explanation for each decision.
6. Any action taken to resolve problems or improve patient care and outcomes.
7. Evidence that the committee evaluated the effectiveness of any action taken to resolve problems or improve patient care and outcomes.

D. The trauma service shall maintain a hospital trauma registry.
1. The trauma registry needs to be concurrent, meaning at minimum 80% of patient records are finished within 60 days of patient discharge date.
2. At a minimum, the collected data will include current NTDS inclusion criteria and data element definitions, and will need to be submitted to TQP Data Center in accordance with the most recent call for data

STANDARD XIX – TRAUMA RESEARCH

INTRODUCTION: One of the major responsibilities of a trauma center is to continually expand the body of knowledge in the field of trauma through clinical and basic research programs. It is incumbent on the full-time staff of the trauma center to apply this newly acquired knowledge to the treatment of the injured patient and to disseminate the knowledge throughout the medical community.

A. Level I and pediatric trauma centers must demonstrate the following scholarly activities during the verification cycle:
1. At least 10 trauma related research articles
i Fulfillment of the research requirement must also meet the following criteria:
(1) At least three articles must be authored by adult/pediatric trauma surgeons
(2) Research must include activities performed at the trauma center
(3) Case series publications can be counted if they include more than five patients.
(4) Basic science research must involve pathophysiology of injury
(5) At least three articles must be authored from disciplines other than general/pediatric surgery
(6) All articles must be published or accepted for publication in peer-reviewed and indexed journals
(7) Trauma center must meet accepted authorship requirements of the International Committee of Medical Journal Editors for all publications
(8) One paper from acute care surgery may be included
2. The trauma center must participate as a visiting professor, invited lecture, or speaker at a regional, national, or international trauma conference
3. 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.
4. Support of residents or fellows in any of the following scholarly activities:
i Laboratory experiences
ii Clinical trials
iii Resident trauma paper competitions at the state, regional, or national level
iv Other resident trauma research presentations

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B. Leadership in major trauma organizations. There must be evidence of this leadership for a Level I and pediatric 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.
C. 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.
D. 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.
E. The trauma service shall conduct ongoing clinical and research programs in trauma patient care and a Level I and Pediatric trauma center program must have:
    1. The trauma service shall conduct ongoing clinical and research programs in trauma patient care and a Level I and Pediatric trauma center program must have:
        i The institution will have a designated trauma research director and demonstrate current involvement in and commitment to research in adult and/or pediatric trauma care.
        ii Methods of demonstrating the trauma center involvement and commitment may include, but not be limited to, the following:
            (1) Commitment of resources
            (2) Outcome, mechanism, or process-related studies
            (3) Regular meetings of research group
            (4) Funded studies
            (5) Effort (publications in peer review journal or regional or national presentation)
            (6) Multidisciplinary studies
            (7) Concluded studies
            (8) Proposals reviewed by Institutional Review Board

STANDARD XX – DISASTER PLANNING AND MANAGEMENT

A. The trauma center shall meet the disaster related requirements pursuant to s. 395.1055(1) c, F.S., and the Agency for Health Care Administration, Comprehensive Emergency Management Plan, Chapter 59A-3.078, Florida Administrative Code, and Joint Commission on the Accreditation of Healthcare Organizations' Standards.
B. To ensure a strong surgical response in the event of a disaster, it is imperative to integrate all trauma programs into the hospital's disaster plan.
   1. The hospital's disaster committee must include a trauma surgeon from the trauma panel. This surgeon should be responsible for producing a surgical response strategy for mass casualty events.
      i This surgical response strategy should encompass essential elements such as identifying critical personnel, establishing communication methods, conducting initial surgical triage (including subspecialty triage when applicable), and coordinating secondary procedures.
C. The trauma program should actively participate in hospital drills or disaster plan activations each year. These drills and activations should involve a trauma response and be designed to enhance the hospital's preparedness for mass casualty events.

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NOTES

#1 The time frame for implementing Trauma Center Standards, Department of Health Pamphlet 150-9, January 2008, will be January 1, 2009.

For the purpose of this document, the one-year time frame mentioned in the standards is a calendar year beginning January 1 and ending December 31.

For hospitals earning provisional status on May 1, reduce the one-year time frame for that year to six months and reduce the number of required cases, CMEs, or contact hours by 50 percent.

For trauma centers, reduce the number of cases, CMEs, or contact hours in proportion to the date of staff assignment or appointment, for example:

- Staff employed or assigned on or after October 1 -- 25 percent of requirement.
- Staff employed or assigned on or after July 1 -- 50 percent of requirement.
- Staff employed or assigned on or after April 1 -- 75 percent of requirement.
- Staff employed or assigned before April 1 -- 100 percent of requirement.

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APPENDIX A – BOARD CERTIFICATION/ELIGIBILITY

A. Criteria for Alternate Pathway Approval
   1. Physicians who trained outside the United States or Canada may participate in the trauma program with evidence of meeting alternate pathway criteria.
   2. Surgeons who were inducted as a Fellow of the American College of Surgeons (FACS) prior to January 1, 2017 are exempt from the full alternate pathway process
      i Surgeons must provide evidence of 36 hours of trauma-related CME during the verification cycle.
   3. Previously Approved Alternate Pathway Physicians
      i If the physician is at the same institution where they were approved by the Alternate Pathway, they do not need to reapply
      ii however, they must provide evidence of 36 hours of trauma-related CME during the verification cycle.
      iii If the physician has moved to a new institution (different from where they were approved by the Alternate Pathway), they must reapply at the new institution.
      iv If the physician is covering multiple institutions and was previously approved by the Alternate Pathway at one of the institutions, they do not need to reapply.

B. The following physicians are eligible to be reviewed by the Alternate Pathway:
   1. Trauma surgeons
   2. Neurosurgeons
   3. Orthopaedic surgeons
   4. Emergency medicine physicians
   5. Anesthesiologist liaisons (Note: liaisons only)

C. Alternate Pathway requirements include:

1. Completion of training equivalent to that required by the United States or Canada
2. Evidence of 36 hours (12 hours annually prorated for new hires) of trauma-related CME during the verification cycle. For pediatric trauma care, 9 of 36 hours must be pediatric-specific CME.
3. Hold current ATLS certification
4. Hold active membership in at least one national or regional trauma organization and must have attended at least one meeting during the reporting period
5. Trauma multidisciplinary PIPS committee meeting attendance rate of 50 percent or more during the reporting period
6. Credentialed to provide trauma care
7. Processes and outcomes of care must be comparable to that of other physicians

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