19 CSR 30-40.440 Standards for Pediatric Trauma Center Designation

PURPOSE: This rule establishes standards for pediatric trauma center designation.

(1) General Standards for Pediatric Trauma Center Designation.

(A) (Expanding to Level I, Level II, and pediatric capable)

(B) The hospital board of directors, administration, medical staff and nursing staff shall demonstrate a commitment to quality pediatric trauma care and shall treat any pediatric trauma patient presented to the facility for care. Methods of demonstrating the commitment shall include, but not be limited to, a board resolution that the hospital governing body agrees to establish policies and procedures for the maintenance of the services essential to a pediatric trauma center; assure that all pediatric trauma patients will receive medical care that meets the standards of this rule; commit the institution's financial, human and physical resources as needed for the trauma program; and establish a priority for the pediatric trauma patient to the full services of the institution.

(C) The hospital shall demonstrate evidence of a pediatric trauma program that provides the trauma team with appropriate experience to maintain skill and proficiency in the care of pediatric trauma patients. [Hospitals that pursue verification as pediatric trauma centers must meet the same resource requirements as adult trauma centers, in addition to pediatric resource requirements.] A pediatric trauma center should have sufficient volume of institutional experience with major pediatric injuries to maintain the clinical skills of pediatric trauma team members.

1. A level I pediatric trauma center must annually admit 200 or more injured children younger than 15 years. (free standing or within adult trauma center)

2. A level II pediatric trauma center must annually admit 100 or more injured children younger than 15 years. (free standing or within adult trauma center)

3. A pediatric capable center is an adult trauma center that admits fewer than 100 injured children younger than 15 years.

(D) The hospital shall have a pediatric trauma team activation protocol that establishes the criteria used to rank trauma victims according to the severity and type of injury and identifies the persons authorized to notify trauma team members when a major pediatric trauma patient is en route or has arrived at the pediatric trauma center. That protocol shall provide for immediate notification and rapid response requirements for trauma team members.

(E) There shall be a lighted helipad on the hospital premises no more than three (3) minutes from the emergency department. There shall be a lighted designated helicopter landing area to accommodate incoming medical helicopters. (IV-R)

1. The landing area shall serve as the receiving and take-off area for medical helicopters and shall be cordoned off from the general public when in use to assure its continual availability and safe operation. (IV-R)

2. It is recommended that the landing area shall be no more than three (3) minutes from the emergency department. (IV-R)

(F) The hospital shall appoint a board-certified or board-eligible pediatric surgeon to serve as pediatric trauma medical director (I-R).
1. The pediatric trauma medical director shall document a minimum average of sixteen (16) hours of trauma-related continuing medical education (CME) every year, of which twelve (12) hours over 3 years must be related to clinical pediatric trauma care..
2. There shall be a job description and organizational chart depicting the relationship between the pediatric trauma program director and other services.

(F) The hospital shall appoint a board-certified or board-eligible pediatric surgeon to serve as pediatric trauma medical director (II-R).
1. The pediatric trauma medical director shall document a minimum average of sixteen (16) hours of trauma-related continuing medical education (CME) every year, of which twelve (12) hours over 3 years must be related to clinical pediatric trauma care.
2. There shall be a job description and organizational chart depicting the relationship between the pediatric trauma program director and other services.

(F) The hospital shall appoint a board-certified or board eligible general surgeon credentialed by the hospital to provide pediatric trauma care to serve as pediatric trauma medical director (pediatric capable-R).
1. The pediatric trauma medical director shall document a minimum average of sixteen (16) hours of trauma-related continuing medical education (CME) every year, of which twelve (12) hours over 3 years must be related to clinical pediatric trauma care.
2. There shall be a job description and organizational chart depicting the relationship between the pediatric trauma program director and other services.

((C) The hospital shall demonstrate evidence of a trauma program that provides the trauma team with appropriate experience to maintain skill and proficiency in the care of trauma patients. Such evidence shall include meeting of continuing education unit requirements by all professional staff, documented regular attendance by all core trauma surgeons and liaison representation from neurosurgeons, orthopedic surgeons, emergency medicine physicians, critical care medicine, and anesthesiologists at trauma program performance improvement and patient safety program meetings, documentation of continued experience as defined by the trauma medical director in management of sufficient numbers of severely injured patients to maintain skill levels, and outcome data on quality of patient care as defined by regional emergency medical service committees. Regular attendance shall be defined by each trauma service, but shall be not less than fifty percent (50%) of all meetings. The trauma medical director must ensure and document dissemination of information and findings from the peer review meetings to the non-core surgeons on the trauma call roster.

G) A registered nurse shall be appointed to serve as the pediatric trauma nurse coordinator. (I-R, II-R, pediatric capable-R)
1. The pediatric trauma program nurse coordinator shall be dedicated to the pediatric trauma service in a level I and level II center.
2. The pediatric trauma nurse coordinator shall document a minimum average of twenty-four (24) hours of trauma-related continuing nursing education every year.

3. There shall be a job description and organization chart depicting the relationship between the pediatric trauma nurse coordinator and other services.

(H) By the time of the initial review, pediatric surgeons who comprise the pediatric surgical trauma call roster shall have successfully completed or be registered for a provider advanced trauma life support (ATLS) course.

(I) All members of the pediatric surgical trauma call roster, including anesthesiology, shall document a minimum average of eight (8) hours of trauma-related CME every year.

(J) The hospital shall be able to document active involvement in local and regional emergency medical services (EMS) systems. The hospital can demonstrate involvement in the local and regional EMS programs by participating in EMS training programs and joint educational programs regarding the pediatric patient; providing appropriate clinical experience and EMS system quality assessment and quality assurance mechanisms; and assisting in the development of regional policies and procedures.

(K) The hospital shall have a plan to notify an organ or tissue procurement organization and cooperate in the procurement of anatomical gifts in accordance with the provisions in section 194.233, RSMo.

(L) All pediatric trauma centers shall support and fully participate in the Missouri trauma registry and shall belong to the Missouri poison control network.
(J) A Missouri trauma registry shall be completed on each patient who sustains a traumatic injury and meets the following criteria: Includes at least one (1) code within the range of the following injury diagnostic codes as defined in the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9)-(CM) 800-959.9 which is incorporated by reference in this rule as published by the Centers for Disease Control and Prevention in 2006 and is available at National Center for Health Statistics, 1600 Clifton Road, Atlanta, GA 30333. This rule does not incorporate any subsequent amendments or additions. Excludes all diagnostic codes within the following code ranges: 905–909.9 (late effects of injury), 910–924.9 (superficial injuries, including blisters, contusions, abrasions, and insect bites), 930–939.9 (foreign bodies), and must include one of the following criteria: hospital admission, patient transfer via EMS or air transport ~~out of facility,~~ or death resulting from the traumatic injury (independent of hospital admission or hospital transfer status). The registry shall be submitted electronically in a format defined by the Department of Health and Senior Services. Electronic data shall be submitted quarterly, ninety (90) days after the quarter ends. The trauma registry must be current and complete. A patient log with admission date, patient name, and injuries must be available for use during the site review process. Information provided by hospitals on the trauma registry shall be subject to the same confidentiality requirements and procedures contained in section 192.067, RSMo. The trauma care data elements shall be those identified and defined by the National Trauma Data Standard which is incorporated by reference in this rule as published by the American College of Surgeons in 2008 and is available at the American College of Surgeons, 633 N. St. Clair

St., Chicago, IL 60611. This rule does not incorporate any subsequent amendments or additions. (I-R, II-R, III-R, PI-R)

(2) Hospital Organization Standards for Pediatric Trauma Center Designation.
(A) There shall be a delineation of privileges for the trauma team staff made by the medical staff credentialing committee. (I-R, II-R, pediatric capable-R)

(B) All members of the pediatric surgical trauma call roster shall comply with the availability and response requirements in subsection (2)(D) of this rule. If not on the hospital premises, trauma team members who are immediately available shall carry electronic communication devices at all times to permit contact by the hospital and shall respond immediately to a contact by the hospital. (IR, II-R, pediatric capable-R)

In a Level I Pediatric Trauma Center:
At least 2 surgeons who are board certified or eligible in pediatric surgery

At least 1 board certified or eligible orthopedic surgeon with pediatric fellowship training and one additional board certified or eligible orthopedic surgeon with demonstrated interests and skills in pediatric trauma care

At least 1 board certified or eligible neurosurgeon with pediatric fellowship training and one additional board certified or eligible neurosurgeon with demonstrated interests and skills in pediatric trauma care

At least 2 physicians who are board certified or eligible in pediatric critical care medicine or in pediatric surgery and surgical critical care.

At least 2 physicians who are board certified or eligible in pediatric emergency medicine

Pediatric intensive care unit and pediatric section of emergency department must be staffed by individuals credentialed by the hospital to provide pediatric trauma care in their respective areas

In a Level II Pediatric Trauma Center
At least 1 board certified or eligible pediatric surgeon
At least 1 board certified or eligible orthopedic surgeon with demonstrated interests and skills in pediatric trauma care
At least 1 board certified or eligible neurosurgeon with demonstrated interests and skills in pediatric trauma care

Pediatric intensive care unit and the pediatric section of the emergency department must be staffed by individuals credentialed by the hospital to provide pediatric care in their respective areas

In Level I and II Pediatric Trauma Centers

Other specialists (anesthesiology, neurosurgery, orthopedic surgery, emergency medicine, radiology and rehabilitation) providing care to injured children who are not pediatric-trained providers also should have sufficient training and experience in pediatric trauma care and be knowledgeable about current management of pediatric trauma in their specialty.

The program must make specialty-specific pediatric education available for these specialists

(C) Surgeons who are board-certified or board-admissible or complete an alternate pathway as documented and defined by the trauma medical director using the criteria established by the American College of Surgeons (ACS) in the current Resource for Optimal Care Document in the following specialties and who are credentialed by the hospital for pediatric trauma care shall be on the trauma center staff and/or be available to the patient as indicated. The Resource for Optimal Care Document is incorporated by reference in this rule as published by the American College of Surgeons in 2006 and is available at the American College of Surgeons, 633 N. St. Clair St., Chicago, IL 60611. This rule does not incorporate any subsequent amendments or additions. 1. General surgery—I-R, II-I/A, IIIP/A, PI-R.

A. The trauma surgery staffing requirement may be fulfilled by a pediatric surgical resident who is board certified or eligible in general surgery, including trauma care, and Advanced Trauma Life Support (ATLS) certification and capable of assessing emergency situations in general surgery in a hospital that takes care of children only.

B. The trauma surgeon shall be immediately available ~~and in attendance with the patient~~ when a trauma surgery resident is fulfilling availability requirements. For level I and II pediatric trauma centers, it is expected that the trauma surgeon be in the emergency department on patient arrival with advance notification from the field.

C. In a level I or II center, call rosters providing back-up coverage will be maintained for general trauma surgeons. In a level III center, call rosters providing for back-up coverage for general trauma surgeons will be maintained or a written transfer agreement to a level I or II trauma center provided.

D. Surgeons who are board-certified or board-admissible and/or who are credentialed by the hospital for pediatric trauma care shall be on the trauma center staff.
2. Neurologic surgery—I-IH, II-IA.
A. The neurologic surgery staffing requirement may be fulfilled by a surgeon who has been approved by the chief of neurosurgery for care of patients with neural trauma.
B. The surgeon shall be capable of initiating measures toward stabilizing the patient and performing diagnostic procedures.
C. In a pediatric capable center, have a proven plan, transfer agreement and expedited transfer process for neurologic surgery back-up in a nearby hospital with appropriate hemodynamic support capability for transfer. The plan shall ensure that once the

decision is made to perform surgery, the pediatric trauma patient is in the operating room of the receiving hospital within sixty (60) minutes

3. Cardiac/Thoracic surgery—I-R/PA.

A. have a proven plan, transfer agreement and expedited transfer process for cardiothoracic surgery back-up in a nearby hospital with appropriate hemodynamic support capability for transfer. The plan shall ensure that once the decision is made to perform surgery, the pediatric trauma patient is in the operating room of the receiving hospital within sixty (60) minutes (II-R, PC-R)

4. Obstetric-gynecologic surgery—IR/PA, II-R/PA.

5. Ophthalmic surgery—I-R/PA, IIR/PA.

6. Orthopedic surgery—I-R/IA, II-R/PA, PC-R/PA.

7. Maxillofacial trauma surgery—IR/IA, II-R/PA.

8. Otorhinolaryngolic surgery—I-R/IA, II-R/PA.

9. Pediatric surgery/trauma surgeon credentialed and privileged in pediatric trauma care—I-R/IA, II-R/IA, PC-IA,

10. Plastic surgery—I-R/IA, II-R/PA

11. Urologic surgery—I-R/IA, II-R/PA

12. Emergency medicine—I-R/IH, IIR/IH, PC-R/IH

13. Cardiology—I-R/IA, II-R/PA,

14. Chest pulmonary medicine—IR/IA, II-R/PA,

15. Gastroenterology—I-R/IA, II-R/PA,

16. Hematology—I-R/PA, II-R/PA,

17. Infectious diseases—I-R/PA, IIR/PA,

[18. Internal medicine—I-R/PA, II-R/PA, III-R/PA, PI-R. Delete?]

19. Nephrology—I-R/IA, II-R/PA,

20. Pathology—I-R/PA, II-R/PA, PC-R.

21. Pediatrics—I-R/IA, II-R/PA, PC-R.

22. Psychiatry—I-R/PA, II-R/PA, PC-R.

23. Radiology—I-R/IA, II-R/IA, PC-R/IA.

24. Rehabilitation—I-R/PA, II-R/PA,

25.Anesthesiology—I-R/IH, II-R/IA, PC-R/PA,

A. In a level I or II trauma center, anesthesiology staffing requirements may be fulfilled by anesthesiology residents or certified registered nurse anesthetists (CRNA) capable of assessing emergent situations in trauma patients and of providing any indicated treatment including induction of anesthesia or may be fulfilled by anesthesiologist assistants with anesthesiologist supervision in accordance with sections 334.400 to 334.430, RSMo.

B. In a level III trauma center, anesthesiology requirements may be fulfilled by a CRNA with physician supervision, or an anesthesiologist assistant with anesthesiology supervision.

(A) Pediatric specialists representing the following specialties shall be on staff at the center and shall be board-certified or board-admissible (COT uses "ideally") and credentialed in trauma care and (if not boarded or eligible) shall have sufficient training and experience in pediatric trauma care and be knowledgeable about current management of pediatric trauma in their specialty: anesthesiology, cardiac surgery, emergency medicine, neurologic surgery, ophthalmic surgery, oral surgery-dental, orthopedic

surgery, otorhinolaryngologic surgery, pediatric surgery; plastic and maxillofacial surgery, thoracic surgery and urologic surgery. Obstetric and gynecologic surgeons shall be available on a consultant basis.

(B) The emergency department staffing shall ensure immediate and appropriate care of the pediatric trauma patient. The emergency department pediatrician shall be board certified/eligible in pediatric medicine and shall function as a designated member of the pediatric trauma team. All emergency department physicians shall have successfully completed and be current in ATLS and pediatric advanced life support (PALS) course prior to the initial review and shall document a minimum average of sixteen (16) hours of CME in trauma care every year. There shall be written protocols to clearly establish responsibilities and define the relationship between the emergency department pediatricians and other physician members of the pediatric trauma team (I-R, II-R, PC-R).

(C) The pediatric trauma surgeon on call shall be physically present in-house twenty-four (24) hours a day and shall meet all major trauma patients in the emergency department at the time of the patient's arrival. This requirement may be fulfilled by senior residents in general surgery who are ATLS-certified and able to deliver surgical treatment immediately and provide control and leadership for care of the pediatric trauma patient. When senior residents are used to fulfill availability requirements, the pediatric trauma surgeon shall be immediately available. (I-R)

(D) A neurosurgeon shall be available in-house and dedicated to the hospital's pediatric trauma service. The neurosurgeon requirement may be fulfilled by a surgeon experienced in the care of pediatric patients with neural trauma and able to deliver surgical treatment immediately and provide control and leadership for the care of the pediatric patient with neural trauma.(I-R)

(E) Pediatric specialists representing the following specialties shall be on call and promptly available: cardiac surgery, microsurgery, hand surgery, ophthalmic surgery, oral surgery-dental, orthopedic surgery, otorhinolaryngologic surgery, pediatric surgery, plastic and maxillofacial surgery, thoracic surgery and urologic surgery.

(F) A board-certified or board-admissible pediatrician credentialed in emergency care shall be available in the emergency department twenty-four (24) hours a day. This requirement may be fulfilled by a physician who is board-certified or board-admissible in emergency medicine who demonstrates commitment by engaging in the exclusive practice of pediatric emergency medicine a minimum of one hundred (100) hours per month or has an additional year of training in pediatric emergency medicine.

(G) A board-certified or board-admissible anesthesiologist credentialed in pediatric care shall be available in-house twenty-four (24) hours a day. Senior anesthesiology residents or anesthesiologists not credentialed in pediatric care may fulfill the in-house requirement if the credentialed pediatric anesthesiologist is on call and promptly available.

(H) A pediatric radiologist shall be promptly available twenty-four (24) hours a day.

(I) Pediatric specialists representing the following non-surgical specialties shall be on call and available: cardiology, chest medicine, gastroenterology, hematology, infectious diseases, nephrology, neurology, pathology, psychiatry and neonatology.

(J) Pediatric trauma medical director and the liaisons from neurosurgery, orthopedic surgery, emergency medicine, and critical care medicine must each accrue an average of 16 hours annually or 48 hours in 3 years of verifiable external CME, of which at least 12 hours (in 3 years) must be related to pediatric trauma care. (I-R, II-R)

(I) General surgeons, orthopedic surgeons, neurosurgeons, emergency medicine physicians, and critical care medicine physicians who take trauma call must document acquisition of 16 hours of CME annually or participate in an internal educational process conducted by the trauma program based on the principles of practice-based learning and the PIPS program (PC-R).

(3) Standards for Special Facilities/Resources/Capabilities for Pediatric Trauma Center Designation.

(A) Hospitals shall meet emergency department standards for pediatric trauma center designation.
1. There shall be a minimum of two (2) registered nurses per shift specializing in pediatric trauma care assigned to the emergency department.
A. All registered nurses regularly assigned to pediatric care in the emergency department shall document a minimum of eight (8) hours per year of continuing nursing education on care of the pediatric trauma patient.
B. All registered nurses regularly assigned to pediatric care in the emergency department shall be PALS certified within one (1) year of assignment to the unit and shall maintain a current PALS certification.
2. Respiratory therapy technicians who work with pediatric trauma patients in the emergency department shall be experienced in pediatric respiratory therapy techniques.
3. There shall be a designated trauma resuscitation area in the emergency department equipped for pediatric patients. Equipment to be immediately accessible for resuscitation and to provide life support for the seriously injured pediatric patient shall include, but not be limited to:
A. Airway control and ventilation equipment for all size patients, including laryngoscopes, assorted blades, airways, endotracheal tubes and bag-mask resuscitator;
B. Oxygen, air and suction devices;
C. Electrocardiograph, monitor and defibrillator to include internal and external pediatric paddles;
D. Apparatus to establish central venous pressure monitoring and arterial monitoring;
E. All standard intravenous fluids and administration devices, including intravenous catheters designed for delivering IV fluids and medications at rates and in amounts appropriate for pediatric patients;

F. Sterile surgical sets for standard procedures for the emergency department;
G. Gastric lavage equipment; H. Drugs and supplies necessary for emergency care;
I. Two-way radio linked with EMS vehicles;
J. Equipment for spinal stabilization for all age groups;
K. Temperature control devices for patients, parenteral fluids and blood;
L. Blood pressure cuffs, chest tubes, nasogastric tubes and urinary drainage apparatus for the pediatric patient; and
M. Patient weighing devices.
(N) The pediatric acute care unit shall have the following personnel and equipment: (I-R, II-R, III-R)

1. There shall be a designated medical director who meets the continuing educational requirements in these regulations; (I-R, II-R, PC-R)
2. A physician who is not the emergency department physician shall be on duty or available twenty-four (24) hours a day, seven (7) days a week; (I-R/IA, II-R/IA, PC-R/IA)
3. Registered nurses and other essential personnel on duty twenty-four (24) hours a day, seven (7) days a week; (I-R, II-R, PC-R)
4. Registered nurses shall document a minimum of ? hours of continuing education per year as determined appropriate by the trauma center medical director and as appropriate to the practitioner's level of responsibility; (I-R) (If this is the center's initial designation the center must be able to document at least half of the required continuing education hours, and must provide documentation of compliance to the Department within (1) one year of the date of designation.)
5. Registered nurses shall be credentialed yearly as determined by the hospital; (I-R, II-R, PC-R)
6. There shall be written care protocols for identification and treatment of pediatric trauma patients available to personnel and should be reviewed annually and revised as needed; (I-R, II-R, PC-R)
7. Equipment for resuscitation and to provide supports for the pediatric trauma patient including, but not limited to: (I-R, II-R, III-R)
   A. Airway control and ventilation equipment including laryngoscopes, endotracheal tubes of all sizes, bag-mask resuscitator and sources of oxygen;
   B. Suction devices;
   C. Telemetry, electrocardiograph, cardiac monitor and defibrillator;
   D. All standard intravenous fluids and administration devices and intravenous catheters; and
   E. Drugs and supplies necessary for emergency care;
8. Documentation that all equipment is checked according to the hospital preventive maintenance schedule. (I-R, II-R, PC-R)

(B) The hospital shall meet radiological capabilities for pediatric trauma center designation.
1. There shall be X-ray capability with twenty-four (24)-hour coverage by in-house technicians.
2. There shall be radiological capabilities promptly available, including general, peripheral and cerebrovascular angiography, sonography and nuclear scanning.

3. Adequate physician and nursing personnel shall be present with monitoring equipment to fully support the trauma patient and provide documentation of care during the time that the patient is physically present in the radiology department and during transportation to and from the radiology department.
4. There shall be in-house computerized tomography with a technician available in-house twenty-four (24) hours a day. Mobile computerized tomography services, contracts for those services with other institutions or computerized tomography in remote areas of a hospital requiring transportation from the main hospital building shall not be considered in-house.
5. The pediatric trauma surgeon, neurosurgeon and emergency pediatrician shall each have the authority to initiate computerized tomography.
6. There shall be a continuing review of the availability of computerized tomography services for the pediatric trauma patient.
7. There shall be adequate resuscitation equipment available to the radiology department.

(C) The hospital shall meet pediatric intensive care unit standards for trauma center designation.
1. The medical director for the pediatric intensive care unit (PICU) shall be board-certified or board-eligible in pediatric critical care.
2. There shall be a pediatrician or senior pediatric resident on duty in the PICU twenty-four (24) hours a day or available from inside the hospital. This physician shall maintain a current PALS certification. The physician on duty in the PICU shall not be the emergency department pediatrician or the
on-call trauma surgeon.
3. The PICU patient shall have nursing care by a registered nurse who is regularly assigned to pediatric intensive care.
4. The PICU shall utilize a patient classification system which defines the severity of injury and indicates the number of registered nurses needed to staff the unit. The minimum registered nurse/trauma patient ratio used shall be one to two (1:2).
5. All registered nurses regularly assigned to the PICU shall document a minimum of eight (8) hours per year of continuing nursing education on care of the pediatric trauma patient.
6. Within one (1) year of assignment, all registered nurses regularly assigned to PICU shall be PALS-certified. Registered nurses in pediatric trauma centers designated before January 1, 1989 shall have successfully completed or be registered for a PALS course by January 1, 1991.
7. There shall be immediate access to clinical laboratory services. 8. Equipment to be immediately accessible for resuscitation and life support for seriously injured pediatric patients shall include, but not be limited to:
A. Airway control and ventilation equipment for all size patients including laryngoscopes, assorted blades, endotracheal tubes, bag-mask resuscitator and mechanical ventilator;
B. Oxygen and suction devices;
C. Electrocardiograph, monitor and defibrillator, including internal and external pediatric paddles;

D. Apparatus to establish invasive hemodynamic monitoring, end tidal carbon dioxide monitoring and pulse oximetry;
E. All standard intravenous fluids and administration devices, including intravenous catheters designed for delivering IV fluids and medications at rates and in amounts appropriate for pediatric patients;
F. Gastric lavage equipment;
G. Drugs and supplies necessary for emergency care;
H. Temporary transvenous pacemaker;
I. Patient weighing devices;
J. Cardiac output monitoring devices;
K. Pulmonary function measuring devices;
L. Temperature control devices for the patient, parenteral fluids and blood;
M. Intracranial pressure monitoring devices;
N. Appropriate emergency surgical trays; and
O. Blood pressure cuffs, chest tubes, nasogastric tubes and urinary drainage apparatus for the pediatric patient.

(D) The hospital shall meet post-anesthesia recovery room (PAR) standards for pediatric trauma center designation. Unless the hospital uses PICU to recover pediatric trauma patients, the following PAR standards apply:
1. The post-anesthesia recovery room shall be staffed with registered nurses regularly assigned to pediatric care and other essential personnel on call and available twenty-four (24) hours a day; and
2. Equipment to be accessible for resuscitation and life support for the seriously injured pediatric patient shall include, but not be limited to:
A. Airway control and ventilation equipment for all size patients including laryngoscopes, assorted blades, airways, endotracheal tubes and bag-mask resuscitator;
B. Oxygen and suction devices;
C. Electrocardiograph, monitor and defibrillator, including internal and external pediatric paddles;
D. Apparatus to establish and maintain hemodynamic monitoring;
E. All standard intravenous fluids and administration devices, including intravenous catheters designed for delivering IV fluids and medications at rates and in amounts appropriate for pediatric patients;
F. Sterile surgical sets for emergency procedures;
G. Drugs and supplies necessary for emergency care;
H. Temperature control devices for the patient, parenteral fluids and blood;
I. Temporary transvenous pacemaker; and
J. Electronic pressure monitoring.

(E) The pediatric trauma center shall have hemodialysis capability.

(F) The pediatric trauma center shall have organized burn care or a written transfer agreement.

(G) The pediatric trauma center shall have spinal cord injury management capability or a written transfer agreement.

(H) There shall be documentation of adequate support services in assisting the patient's family from the time of entry into the facility to the time of discharge.

(I) There shall be an operating room adequately staffed in-house and available twenty-four (24) hours a day with a back-up operating room staff on call and promptly available. Equipment for resuscitation and to provide life support for the critically or seriously injured pediatric patient shall include, but not be limited to:
1. Cardiopulmonary bypass capability;
2. Operating microscope;
3. Thermal control equipment for patient, parenteral fluids and blood;
4. Endoscopes, all varieties;
5. Instruments necessary to perform an open craniotomy;
6. Invasive and noninvasive monitoring equipment;
7. Pediatric anesthesia equipment;
8. Cardiac output equipment;
9. Defibrillator and monitor, including internal and external pediatric paddles; and
10. Blood pressure cuffs, chest tubes, nasogastric tubes and urinary drainage apparatus for the pediatric patient.

(J) Clinical laboratory services shall be available twenty-four (24) hours a day. There shall be a comprehensive blood bank and access to a community central blood bank and adequate hospital storage facilities. There shall be provisions to provide and receive the following laboratory test results twenty-four (24) hours a day:
1. Microbiology;
2. Standard analyses of blood, urine and other body fluids;
3. Blood typing and cross-matching;
4. Coagulation studies;
5. Blood gases and pH determinations;
6. Serum and urine osmolality; and
7. Drug and alcohol screening.

(4) **Standards for Programs in Quality Assurance, Outreach, Public Education and Training for Pediatric Trauma Center Designation**.

(A) There shall be a special audit of all trauma-related deaths. There shall be a mechanism in place to review all deaths and identify primary admitted patients versus transferred patients. Transferred patients shall be further identified as transferred after stabilizing treatment or direct admission after prolonged treatment.

(B) There shall be a morbidity and mortality review.

(C) There shall be a regular multidisciplinary trauma conference that includes all members of the trauma team. Minutes of the conference shall include attendance, individual cases reviewed and findings.

(D) There shall be a medical and nursing quality assessment program and utilization reviews and tissue reviews on a regular basis. Documentation of quality assurance shall include problem identification, analysis, action plan, documentation and location of action, implementation and reevaluation.

(E) There shall be twenty-four (24)-hour availability of telephone consultation with physicians in the outlying areas.

(F) The hospital shall demonstrate leadership in injury prevention in infants and children.

(G) The hospital and its staff shall document a research program in pediatric trauma.

(H) There shall be formal continuing education programs in pediatric trauma and rehabilitation provided by the hospital for staff physicians and nurses.

(I) The hospital shall provide programs in continuing education for the area physicians, registered nurses and emergency medical service
providers concerning the treatment of the pediatric trauma patient.

(5) **Standards for the Programs in Trauma Rehabilitation for Pediatric Trauma Center Designation.**
(A) The hospital shall have a rehabilitation facility or a written transfer agreement with a rehabilitation center which is specifically equipped for the care of children.
(B) The pediatric trauma rehabilitation team shall develop and implement a procedure for discharge planning for the pediatric trauma patient.
(C) The pediatric trauma rehabilitation plan developed for the pediatric trauma patient shall be under the direction of a physiatrist or a physician with experience in pediatric trauma rehabilitation.
(D) The hospital shall develop a plan to document that there is adequate post-discharge follow-up on pediatric trauma patients, including rehabilitation results where applicable. This shall include identification of members of the rehabilitation team, discharge summary of trauma care to the patient's private physician and documentation in the patient's medical record of the post-discharge plan.

(5) Standards for the Programs in Trauma Research for Trauma Center Designation.
(A) The hospital and its staff shall support a research program in trauma as evidenced by any of the following: 1. Publications in peer reviewed journals—I-R;
2. Reports of findings presented at regional or national meetings—I-R;
3. Receipt of grants for study of trauma care—I-R; and
4. Production of evidence-based reviews—I-R.

(B) The hospital shall agree to cooperate and participate with the EMS Bureau in conducting epidemiological studies and individual case studies for the purpose of developing injury control and prevention programs. I-R, II-R, PC-R,

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