Standards of Accreditation
ADULT LEVEL IV

pennsylvania
TRAUMA
SYSTEMS
foundation

Celebrating the PAST.
Advancing the FUTURE.

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Preface

Established by legislation in 1985, the Pennsylvania Trauma Systems Foundation (PTSF) serves as the accrediting body for trauma centers, and creates Standards of Accreditation that mandate how hospitals must function in order to be recognized as accredited trauma centers in the Commonwealth of Pennsylvania. State legislation directs with few exceptions, that at a minimum the PTSF Standards must comply with the current American College of Surgeons Committee on Trauma (ACS-COT) guidelines for trauma centers also known as "Resources for the Optimal Care of the Injured Patient." There have been multiple revisions of the ACS document, with the most recent being: "Resources for Optimal Care of the Injured Patient 2022 Standards." The ACS 2022 Standards focus on the abiding principle that trauma systems are centric to patient safety and optimal outcomes. This includes the spectrum of care from injury-prevention through rehabilitation.

The Pennsylvania Standards of Accreditation are divided into separate documents for Level I, II and III adult centers, Level I and II pediatric centers and Level IV adult centers. The task of oversight and maintenance of the PTSF Standards is the function of the PTSF Standards Committee, comprised of representatives from trauma centers and partnering organizations. On-going revisions will continue to be a collaborative process with final approval of all Standards by the PTSF Board of Directors. It is the goal of the Standards Committee to maintain legally compliant, patient-outcome driven expectations. This aligns with the PTSF mission; "Optimal outcomes for every injured patient" and vision; "We are committed to zero preventable deaths from injury in Pennsylvania." Additional information and resources are located at www.ptsf.org.

- In the event that a hospital needs a temporary or permanent variance from a Standard, please refer to Policy AC-105: Applying for a Variance from a Standard.

- If at any time, an accredited trauma center experiences an operational change, it must be communicated in a timely fashion. Please refer to Policy AC-128 Notification Regarding Changes in Trauma Center Operations for Pursuing & Accredited Trauma Centers.

- PTSF offers both required and optional education for various trauma center roles. For details, please refer to the PTSF Educational Offerings document, located on the PTSF website.

- Information is also available at www.ptsf.org, located within Trauma Accreditation; Standards. This includes a link to submit suggestions for standard revisions or clarifications. Questions about the Standards should be directed to PTSF staff members via email, located on the PTSF website.

Standard 1: Commitment

1. There will be demonstrated commitment, both personal and institutional, by the institution's Board of Directors, administration, and clinical staff to treat any trauma patient presented to the institution for care.

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2. Methods of demonstrating the commitment to the trauma system/center will include but are not limited to:
   - A. A Board and Medical Staff resolution that the institution agrees to meet the Pennsylvania Trauma Systems Foundation (PTSF) Standards for Trauma Center Accreditation.
     - i. This must be reaffirmed every three years.
     - ii. Example of Board Resolution
   - B. Participation in operations and integration of a statewide system including submission of patient care data to the PTSF for systems management, performance improvement and patient safety (PIPS) and operations research. This includes:
     - i. Support and full participation in the Pennsylvania Trauma Outcome Study (PTOS) as specified by the PTSF.
     - ii. Support and full participation in the PIPS Central Site as specified by the PTSF. (See Standard 6: PIPS for additional details)
     - iii. Consideration for participation in the National Trauma Data Bank (NTDB) submission process.
   - C. Established policies and procedures for the maintenance of the services essential to a trauma system/center as outlined in the Standards for Trauma Center Accreditation.
   - D. Assurance that all trauma patients will receive medical care commensurate with the level of the Institution's accreditation.
   - E. Commitment of the Institution's financial, human, and physical resources as needed for the trauma program.
   - F. Established priority admission for the trauma patient to the full services of the institution. This will include adequate resuscitation facilities and personnel.
   - G. Established and maintained formal written transfer plans and protocols with other accredited/designated
     (Level I or II) adult, pediatric and specialty trauma services such as burn and dialysis centers if appropriate.
     - i. These plans must list patient criteria that exceed the capabilities of the trauma center and necessitate transfer.
       - a. Appendix A: Interfacility Transfer and Consultation Requirements for Level III and IV Trauma Centers
       - b. Appendix C: Admission Considerations for Level IV Trauma Centers
     - ii. Formal transfer plans must be reviewed internally at least every three years and updated as required by the terms of the plans.
       - a. The TPMD and TPM must be involved in the review of the transfer plans.
     - iii. The responsibility of insuring prompt access for all patients requiring trauma care is a coordinated effort between the higher level trauma center and the Level IV center.
     - iv. Input from higher level trauma centers must be obtained.
   - H. There must be established trauma PIPS procedures to document and review all transfers-out cases.

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3. The institution must be licensed by the Pennsylvania Department of Health.

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4. The institution will establish, within its organization, a defined trauma program administration team.
   A. This concept embraces both administrative and physical attributes of the individual trauma center. By this means, successful functioning of the trauma program will be assured and its staffing and direction clearly defined.
   B. This includes the roles of a trauma program medical director, trauma program manager and a registrar.
      i. Please see individual standards for additional details.

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5. There will be evidence of strong communication links between the institution's administration, TPMD and TPM to coordinate both long and short term goals of the trauma program.

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6. The trauma program must involve multiple disciplines and transcend normal departmental hierarchies.

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7. Any care that is provided to trauma patients which exceeds the Level IV standards is required to comply with the Standards of Accreditation applicable to the service and is eligible for review during site survey.
   A. Appendix A: Interfacility Transfer and Consultation Requirements for Level III and IV Trauma Centers
   B. Appendix C: Admission Considerations for Level IV Trauma Centers

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8. It is the responsibility of the TPMD in collaboration with the TPM and in association with the designated subspecialty liaisons to direct the trauma PIPS program and to integrate it into the institutions overall PIPS program.
   A. See Standard 6: PIPS for additional details.

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9. The Department of Nursing or designated representative of Nursing Leadership for the institution will maintain a formal relationship with the trauma program.

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10. The trauma program must be actively involved in regional outreach, education and injury prevention.

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11. The Trauma Center must show evidence of on-going mentoring, collaboration and education with a Level I or II Trauma Center(s).

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12. Trauma Resuscitation Management guidelines must be in place. They must include at a minimum ATLS principles and c-spine clearance.

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13. The institution will have a trauma activation policy.
   A. This policy must be reviewed annually at a minimum.
   B. This policy must include adequate personnel and defined role expectations as defined by the trauma program.
   C. The highest level of trauma activation requires the response of the full team within thirty (30) minutes of the arrival of the patient.

i. The Emergency Physician or Advanced Practitioner will be at the resuscitation area on patient arrival. The maximum acceptable response time is 15 (fifteen) minutes, tracked from patient arrival.
   a. Compliance of providers presence at least 80% of the time must be maintained and monitored.

D. If the trauma center has other levels of activations the response time expectations for each level and non-activation trauma patients (such as trauma consults in the ED) must be defined by the trauma program.

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14. For centers whereby the highest-level activation is direct transport to the OR, the second highest activation would apply to the activation criteria.

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15. The following criteria at a minimum must be included in the institutions activation criteria for highest level trauma alerts for patients with mechanism of injury attributed to trauma:
    A. GCS <9 or GCS Motor </= 5 in motor (does not follow commands)
    B. GCS deteriorating by 2 or more points
    C. Intubated patients transferred from the scene
    D. Penetrating injury to the head, neck, chest, abdomen or extremity proximal to the elbow or knee
    E. Respiratory compromise:
       i. In need of an emergent airway
       ii. Intubated patients transferred from another facility with ongoing
    F. respiratory compromise (excluding transfer in intubated patients who are now stable from a respiratory standpoint)
    G. Systolic blood pressure <90 at any time in a patient over 10 years of age
       i. Systolic blood pressure <70 + (2x age in years) at any time in a patient age 10 or less
    H. Transfer patient from another hospital receiving blood to maintain hemodynamic stability
    I. Emergency Physician discretion

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16. The following criteria should be considered for inclusion in the institution's trauma activation criteria at some level, for patients with mechanism attributed to trauma:
    A. Amputation proximal to wrist or ankle
    B. Anticoagulants or Bleeding Disorders
    C. Automobile Crash- High Risk:
       i. Death in same passenger compartment
       ii. Ejection (partial or complete)
       iii. Passenger with compartment intrusion, including roof, of >12 inches on occupant side or >18 inches any site
    D. Automobile vs Pedestrian/Bicyclist thrown, run over or with significant (>20 mph) impact
    E. Chest wall instability or deformity (flail chest)
    F. Crushed, degloved, mangled or pulseless extremity
    G. Falls
       i. Adults: >20 feet (one story is equal to 10 feet)
       ii. Pediatrics: >10 feet or 2-3 times the height of the child
    H. GCS </= 13
    I. Geriatric specific criteria
       i. Ground level fall patients on antithrombotic agents

ii. Systolic blood pressure < 110
iii. Heart rate > 90
iv. Shock index > 1
v. Ground level fall patients not on anticoagulants with GCS < 14 and signs of head trauma

J. Paralysis (spinal cord injury)
K. Partial or Full Thickness Burns ≥ 20% Total Body Surface Area (TBSA) – if not a designated Burn Center.
L. Pelvic fractures
M. Pregnancy >20 weeks
N. Skull Fracture (open or depressed)
O. Tourniquet utilization
P. Two or more proximal long-bone fracture (humerus or femur)

17. Trauma Activation Criteria reference: CDC Guidelines for Field Triage of Injured Patients: http://www.cdc.gov/mmwr/pdf/rr/rr6101.pdf

Table 1 Hospital Commitment

Resolved, that the XYZ Hospital Board of Directors (or other administrative governing authority) approves the **establishment of a Level __ trauma center (or applies for verifcation or reverification of a Level __ trauma center"**). The Board commits to maintain the high standards needed to provide optimal care of all trauma patients. The multidisciplinary trauma performance improvement program has the authority to evaluate care across disciplines, identify opprotunities for improvement, and implement corrective actions.

Medical Staff Support

Resolved, that the Medical Staff or Executive Committee of XYZ Hospital (or other governing body of the medical staff) supports the establishment of a Level __ trauma center (or "supports verification or reverification of a Level __ trauma center"). This statement acknowledges the commitment to provide specialty care as required to support optimal care of trauma patients. The multidisciplinary trauma performance improvement program has the authority to evaluate care across disciplines, identify opportunities for improvement, and implement corrective actions.

Physician Liaison Commitment

Resolved, that XYZ liaison and trauma surgeions acknowledge and commit to the criterion expectations for a **Level __ trauma center. This includes but is not limited to credentialing, certification, continuing education, and adequate involvement in performance improvement.** The multidiciplinary trauma performance improvement program has the authority to evaluate care across disciplines, identify opportunities for improvement, and implement corrective actions.

Standard 2: Capacity & Ability

1. Trauma Center availability for stabilization and transfer of trauma patients must be maintained on a continuous, 24-hour basis. When the trauma center is unable to provide care:
   A. A log of event; including time, duration and cause, must be maintained.
   B. The institution must notify the Public Safety Access Point (PSAP/911) Center within counties they routinely received patients from when going on and when coming off of the event.
   C. The Trauma PIPS program must evaluate every bypass/diversion event.
   D. The TPMD must be involved in the development of the bypass/diversion protocol.
   E. Diversion includes any circumstances where trauma patients who are typically accepted or admitted to the trauma center are not admitted. This includes both diversion of patients from the primary catchment area transported by emergency medical services (EMS), the inability to accept interfacility transfers and the transfer out of patients who would otherwise be admitted under normal circumstances.

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2. The trauma center must assess the clinical capabilities of the institution and have a protocol documented plan which explains the types of patients requiring transfer to a higher-level trauma center.
   A. Transfer guidelines must include:
      i. Process for the initiation of transfer, including roles and responsibilities of the referring facility and referral center (including responsibilities for requesting transfer and communication).
         a. Direct contact of the provider with the physician at the receiving hospital is essential.
      ii. Process for selecting the appropriate facility based on patient injury (i.e. pediatrics, burns, closest higher level facility).
      iii. Process for selecting the appropriate staffed transport service to match the patient's acuity level.
      iv. Process for patient transfer including informed consent.
      v. Plan for transfer of patient medical record and radiology studies.
      vi. Plan for transfer of copy of signed transport consent.
      vii. Plan for transfer of patient personal belongings.
      viii. Plan for provision of directions and referral institutions information to the family.

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3. Agreements with EMS agencies must be established to facilitate timely transportation for trauma patients requiring transfer out for all levels of anticipated care.

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4. A policy(s) for admission of the trauma patient to the institution must be in place. This must include at a minimum: criteria for admission, most common units admitted to, non-trauma service admissions, and special populations such as pediatrics, burns, geriatrics and obstetrics if applicable.

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5. Formal transfer agreements and early transfer consideration is required for the following patients:
   A. American Burn Association Guideline for Burn Patient Referral to a Burn Center:
      i. Immediate Consultation with Consideration for Transfer
         - Partial thickness burns of greater than 10 percent of the total body surface area
         - Deep partial thickness burns that involve the face, hands, feet, genitalia, perineum, or major joints
         - Full thickness burns in any age group
         - All high voltage (≥1,000V) electrical injuries, including lightning injury

- All chemical injuries
- All patients with suspected inhalation injury
- Patients with thermal burns and other comorbidities
- Patients with thermal burns and concomitant trauma injuries. In such cases, if the trauma poses the greater immediate risk, the patient's condition may be stabilized initially in a trauma center before transfer to a burn center.
- All pediatric (≤ 14 years, or <30 kg) burns may benefit from burn center referral due to pain, dressing change needs, rehabilitation, patient/caregiver needs, or non-accidental trauma
- Thermal burns with poorly controlled pain

ii. Consultation Recommendation

- Partial thickness burns less than 10 percent TBSA
- All potentially deep burns of any size
- Patients with signs of potential inhalation injury such as facial flash burns, singed facial hairs, or smoke exposure
- Low voltage (<1,000V) electrical injuries should receive consultation and consideration for follow-up in a burn center to screen for delayed symptom onset and vision problems

B. Dialysis: Patients requiring hemodialysis capability if not available at the institution.
C. Neuro/Spinal Cord/ Spinal Injury: Patients exceeding capabilities.
D. Pediatrics: Patients exceeding capabilities.

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6. All transfer plans must be reviewed at least one time per survey cycle and per terms of the agreement.

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7. The Trauma Center must meet the disaster related requirements of the Joint Commission, regardless if Joint Commission accredited.
   A. Joint Commission resources

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8. The institution must participate in disaster related planning activities.
   A. The TPMD or a Physician identified by the TPMD must participate on the hospital's disaster planning committee.
   B. A formal disaster plan must be in place and include the ability to immediately mobilize qualified nursing resources from inpatient areas for initial multi-resuscitation efforts.
   C. Hospital drills that test the individual disaster plan must be conducted at least twice per year.
   D. Actual plan activations may substitute for drills

Standard 3: Trauma Program Medical Director (TPMD)

1. The Trauma Program Medical Director (TPMD) will have a demonstrated interest and commitment in trauma care. The TPMD will:
   A. Be Board Certified in their field of specialty is desired.
   B. Maintain ATLS Certification. (Provider Level)
   C. Be a licensed physician who routinely provides coverage at this institution for trauma patients.
   D. Maintain external trauma related CME of eight (8) hours annually or twenty-four (24) hours over three years.
      i. Two of those annual hours (6 over three years) must be pediatric related
      ii. Participation in the STN-TOPIC Course or STN-Rural TOPIC Course within one year of appointment.
   E. Participation in the PTSF Site Survey / Accreditation Preparation education within the year prior to their first survey and/or panel review.

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2. The TPMD, in conjunction with the hospital's medical governing board or body, and in collaboration with the Trauma Program Manager will have oversight and authority for all trauma patients and administrative authority and responsibility for the trauma program to affect all aspects of trauma care including:
   A. An organizational chart, depicting the relationship between the TPMD, hospital governance, administration and other services.
   B. Development and evaluation of treatment protocols including but not limited to:
      i. Patient / Clinical Management Guidelines
      ii. Institution Diversion / Bypass Protocols
   C. Coordination of the Trauma PIPS peer-review process.
   D. Participating in the budgetary process for the trauma program.
   E. Determining and validating educational forums and submissions for CME requirements.
   F. Maintaining an effective working relationship with the Trauma Program Manager.
   G. Cooperating with nursing administration to support the nursing needs of the trauma program.
   H. Attendance and participation in local and state trauma related activities.
   I. Evidence of active participation in the resuscitation and/or surgery of multi-system trauma patients.
   J. Maintain 75% attendance at the Trauma PIPS:
      i. Multidisciplinary Peer Review PI Meeting as defined by the hospital.
      ii. Multidisciplinary Trauma Program Operational Meeting.

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3. The TPMD, in conjunction with specialists who actively participate in the resuscitation and inpatient care of trauma patients, will identify representatives from these subspecialties to work with the trauma program and formally participate in the PIPS program.

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4. The TPMD will have authority, in collaboration with the Chief Medical Officer, Division Chiefs, Department Chairs or designee, to:
   A. Recommend or remove trauma team privileges:
      i. This should include the TPMD participating in the annual assessment of the trauma panel providers as indicated by findings of the PIPS process.

Standard 4: Trauma Program Manager (TPM)

1. There will be a Trauma Program Manager (TPM) who is responsible for monitoring, promoting and evaluating all trauma related activities associated with the trauma program in cooperation and conjunction with the TPMD.
   A. The organization must define the structural role of the TPM to include responsibility, accountability and authority.

2. The TPM must have evidence of an effective working relationship with the TPMD.

3. There must be a job description that defines sufficient authority and clearly outlines the responsibilities of the TPM. Qualifications and activities should include the following:
   A. Clinical Activities
   B. Educational Responsibilities
   C. Performance Improvement
   D. Leadership and Administrative Ability
   E. Supervision of the Trauma Registry/Registrars and Performance Improvement Coordinator(s) if applicable
   F. Consultant and Liaison Activities

4. The TPM must:
   A. Be a budgeted position with dedicated hours.
      i. Level IV trauma centers with greater than 500 registry submissions must have at a minimum a 0.5 FTE designated as the trauma program manager.
      ii. The institution must demonstrate that the dedicated trauma FTE allows for timely and complete attention to the trauma program requirements.
   B. Be a Registered Nurse
   C. Have evidence of qualifications including educational preparation, certification and clinical experience in the care of injured patients.
   D. Attend and maintain a 75% attendance at the Trauma PIPS:
      i. Multidisciplinary Peer Review PI Meeting
      ii. Multidisciplinary Trauma Program Operational Meeting

5. The TPM must have evidence of continuing education related to trauma care and the trauma system. This includes:
   A. Eight (8) hours of trauma-related continuing education annually
   B. A minimum of 50% of the required educational hours must be external
   C. Participation in the STN-TOPIC Course or STN-Rural TOPIC Course within one year of appointment.
   D. Participation in the PTSF Site Survey / Accreditation Preparation education within the year prior to their first survey and/or panel review.

6. The TPM must attend and/or participate in local and state trauma related activities.

7. The TPM in conjunction with the TPMD is responsible for determining and validating which educational forums are acceptable in fulfilling continuing education requirements.

Standard 5: Registry

1. The institution will maintain a Trauma Registry which will include, at a minimum, all of the data elements included in the Pennsylvania Trauma Outcome Study (PTOS)
   A. Refer to PTOS Manual found at TraumaHQ powered by IQVIA™ – Library
   B. Demographic Data
   C. Pre-hospital Data
   D. Process of Acute Care
   E. Clinical Data
   F. Outcome Data
   G. Final Anatomical Diagnoses
   H. Procedure Codes
   I. Payer Class
   J. Performance Improvement and Patient Safety Data
   K. Standard Report Utilization

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2. There will be evidence of regular and active interface with the trauma program. The registry must be responsive to the needs of the TPM, TPMD and support the trauma program.

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3. A clearly identified person will have authority, responsibility and accountability for direction and maintaining the trauma registry and its data submission to the PTSF in a timely manner.
   A. The trauma registry, at a minimum, must maintain 85% of the cases submitted within 42 days of discharge.
      i. Refer to TR-110: Timeliness of Submission to the Central Site Policy
   B. Concurrent data abstraction is recognized as best practice.

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4. The Trauma registry will have a staffing plan. This plan must:
   A. Include a workload analysis for all trauma programs supported that defines the personnel needs necessary to comply with PTOS data submission requirements.
   B. At a minimum, 1.0 Registrar FTE per every 500-750 trauma contacts, as defined by the institution, per year
      i. Trauma contacts at a minimum, must equal PTOS volume

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5. The Trauma Registry staff will optimally have a core set of skill requirements including: anatomy and physiology, medical terminology, ICD-9/ICD-10 CM Coding, computer competency, database management and/or degree in health related field/allied health.
   A. Within one year of appointment, the Registrar will complete:
      i. Basic Trauma Registry Course
         a. The PTSF Basic Registry Course is available at https://www.elearningconnex.com/ptsf/
         b. ATS Trauma Registrar Course
         c. Other equivalent courses are acceptable based upon objectives.
         d. Previous completion of the PTSF Intermediate or Advanced Registrar Course fulfills this requirement.
      ii. The Association of the Advancement of Automotive Medicine (AAAM)~ Abbreviated Injury Scaling (AIS) Course corresponding to the AIS coding version utilized within the PTOS submission software.
         a. Registrars must complete an updated AIS Coding Course within 1 year of implementation of a new AIS coding version within PTOS.

6. The Trauma Registrar must have evidence of continuing education related to the trauma registry. This includes:
   A. Four (4) hours of continuing education per year.
      i. This requirement can be fulfilled by attendance at PTSF Registry Conferences, internal, external and/or online opportunities.
   B. Registrars maintaining a Certified Specialist in Trauma Registries (CSTR) certification are not required to maintain continuing education logs.

7. Trauma Registrar job responsibilities include but are not limited to:
   A. Committee work
   B. Database management
   C. Education
   D. Interface with outside agencies
   E. PIPS Participation
      i. Trauma Registry representation should be maintained at multidisciplinary conferences that deal with the review and analysis of trauma registry data
   F. Research
   G. Site Survey Preparation
   H. Technical Skills

8. There must be a plan for ensuring that the data entered into the trauma registry is accurate and reflects the observations made on the patient. (Inter Rater Reliability)
   A. This plan must reflect compliance with PTOS Operations Manual and definitions for data entry
   B. An example of an inter-rater reliability approach is to re-abstract a percentage of patient records

9. Data may be submitted to and in compliance with the National Trauma Data Bank (NTDB). This is not required, but encouraged.

10. The trauma program must ensure that appropriate measures are in place to meet confidentiality requirements of the data.

11. Trauma Centers must create a facility-specific data hierarchy for all required elements in the PTOS Manual, to allow for consistent data abstraction.

Standard 6: Performance Improvement & Patient Safety (PIPS) Program

1. The goals of the trauma performance improvement and patient safety (PIPS) program are to:
   A. Monitor the process and outcome of patient care including adverse and unexpected events.
   B. Ensure the quality and timely provision of such care.
   C. Improve the knowledge and skills of trauma care providers.
   D. Provide the institutional structure and organization to promote performance improvement and patient safety.

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2. The PIPS program must be integrated into the institution's overall performance improvement program and reported to the institution's governing body. This includes:
   A. A clearly defined reporting structure.
   B. A process for provision of feedback.
   C. Authority of the TPMD to set qualifications for the trauma service members, including individuals in specialties that are routinely involved in the care of trauma patients.
      i. The TPMD must have authority to recommend changes for the trauma panel based on the PIPS program. See Standard 3: TPMD.

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3. There must be a comprehensive written Performance Improvement Plan that includes:
   A. Authority and empowerment by the hospital governing body for the TPMD and TPM to lead the PI program and transcend service lines.
   B. Trauma credentialing requirements.
   C. Roles and responsibilities for PI.
   D. Issue identification encompassing all phases of care.
      i. Process of verification and validation of events:
         a. Process of retrospective review.
         b. Process of concurrent review.
   E. Process of data collection, use of indicators, opportunities for improvement (OFI), occurrences, and audit filters.
   F. Levels of review, congruent with the TOPIC curriculum, further defined by the PIPS plan:
      i. Primary: Typically TPM, Trauma PI Coordinator, Registry or designee
      ii. Secondary: Typically TPM, PI Coordinator and TPMD
      iii. Tertiary: Typically multidisciplinary forum
      iv. Quaternary: Typically hospital (high-level) committee, system level or external review
   G. Analysis including forums and meetings.
   H. Utilization of TraumaHQ powered by IQVIA™ to operationalize PI activities.
   I. Classification of events: This includes determination of the effects of events based on an institutional defined system such as but not limited to: TraumaHQ powered by IQVIA™ Judgment status, taxonomy, expected/unexpected, severity levels or other grading system.
      i. The use of the taxonomy must be utilized in the classifications of all deaths at a minimum.
   J. Action plan development, implementation and reevaluation includes problem resolution, improvements of outcomes and/or patient safety (loop closure).
   K. The process for integrating/incorporating benchmark reports such as TQIP into the PI program.

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4. Benchmarking Data is required
   A. The submission to the PTSF PIPS Central Site is required.
      i. Effective January 1, 2017, all death cases will be submitted.
      ii. Cases must be closed and submitted within 90 days of the death date.

a. Cases may be updated and resubmitted if additional information is obtained after the initial submission, such as autopsy results. Resubmitted cases do not count against submission requirements.

iii. Refer to Policy TO-100: Timeliness of Submission to the PIPS Central Site Policy

B. Submission to the National Trauma Data Bank (NTDB) is encouraged, but not required.

C. Participation in the Pennsylvania Trauma Outcome Study (PTOS) is required.

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5. The PIPS plan must be reviewed annually.

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6. TraumaHQ powered by IQVIA™ must be utilized for all trauma related performance improvement activities.

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7. Issues that must be reviewed but are not limited to are:
   A. System and process issues such as documentation and communication.
   B. Clinical care, including identification and treatment of immediate life-threatening injuries (ATLS).
   C. Transfer decisions.

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8. There will be adequate trauma program personnel support to ensure evaluation of all aspects of trauma care and fully implement the PIPS plan.

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9. There should be a PIPS Coordinator Role who is responsible for monitoring, promoting and evaluating all trauma-related PIPS activities.
   A. The FTE of this role requirement is based on volume.
      i. Level IV trauma centers with greater than 500 registry submissions must have at a minimum a 0.5 FTE assigned as the PI Coordinator.
         a. This may be met by identifying one individual as the PIPS coordinator or by combining other role responsibilities of various staff members who specifically have performance improvement components of their job description, as long as the minimal total FTE equals 0.5.
         b. If multiple staff members comprise the PI role:
            - One individual must be identified as the PIPS Coordinator/Liaison.
            - Clear job descriptions and delineations of responsibilities must be present.
            - All participants must maintain the standard requirements including specialized educational courses. The total continuing education hours; however, are not compounded. For example if an RN registrar is functioning as a part of the PI role, they must obtain the eight hours of continuing education, the required Registry Courses and TOPIC. They do not need sixteen hours of continuing education.
      ii. Level IV trauma centers with less than 500 registry submissions may include the PI Coordinator responsibilities within the Trauma Program Manager Job Description.
         a. Trauma programs must assure that PI issues are addressed timely and accurately if this is option is utilized.
   B. This role must be accountable and housed within the organizational structure of the trauma program, reporting directly to the TPM if not the TPM his/herself.
      i. The job description of the PI Coordinator must include: responsibility, accountability and authority.

C. Include evidence of qualifications including educational preparation, certification and clinical experience.
   i. Registered Nurse (RN) licensure.

CI. Have evidence of continuing education related to trauma care and the trauma system.
   i. Including Eight (8) hours of trauma-related continuing education per year.
   ii. Participation in the STN-TOPIC Course or STN-Rural TOPIC Course within one year of appointment.
   iii. Participation in the PTSF PI Part 1: Theory & Overview within one year of appointment.

CII. Attendance and/or participation in local, regional and state trauma-related activities.

CIII. Maintain 75% attendance at the Trauma PIPS:
   i. Multidisciplinary Peer Review PI Meeting.
   ii. Multidisciplinary Trauma Program Operational Meeting

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10. Additional PIPS support FTEs including job description/role responsibility assignments should be allocated based upon trauma contact volume.
   A. Recommend additional 0.5 FTE allocation for every additional 500-750 trauma contacts, as defined by the institution, above 1,000.
      i. Participation in the STN-TOPIC Course or STN-Rural TOPIC Course within one year of appointment.
      ii. Participation in the PTSF PI Part 1: Theory & Overview within one year of appointment.
      iii. Maintain 75 percent attendance at the Trauma PIPS:
         a. Multidisciplinary Peer Review PI Meeting
         b. Multidisciplinary Trauma Program Operational Meeting
      iv. Eight hours of trauma-related continuing education per year.
      v. Recommend participation in PTSF Site Survey /Accreditation Preparation education within the year prior to their first survey and/or panel review.

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11. In trauma programs utilizing a Trauma Program Performance Improvement Medical Director or Trauma Program Associate Medical Director role, the following components must be maintained. This role is optional and not required.
   A. Physician with Board Certification/Board Eligibility in specialty field
   B. A job description which defines roles and responsibilities
   C. Inclusion in the PIPS plan
   D. Demonstration of a collaborative working relationship with the TPMD, reflecting the TPMD has ultimate authority over the PIPS process
   E. Evidence of external trauma related CME of twelve (12) hours annually or thirty-six (36) hours over three years (not exempt from maintaining a CME log)
      i. Participation in the STN-TOPIC Course or STN-Rural TOPIC Course (or equivalent PI Course) within one year of appointment into this role
   F. Maintain 75% attendance at the Trauma PIPS:
      i. Multidisciplinary Peer Review PI Meeting
      ii. Multidisciplinary Trauma Program Operational Meeting

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12. A multidisciplinary forum for (PIPS) Peer review focus is required.
   A. The following aspects will be addressed and trended: deaths, transfers, morbidities, (PIPS) issues, systems issues, clinical management guideline issues, and provider specific issues-including specific morbidities and mortalities.
   B. The goal of this meeting is to have robust case discussion among multidisciplinary peers.

i. The TPMD, in collaboration with the TPM will have a leadership role.
   a. The TPMD and TPM and TPIC (if applicable) must maintain 75% attendance.
ii. The Subspecialist Liaisons must
   a. Maintain a minimum of 50% attendance.
      - This attendance benchmark may be met by the liaison and/or a second identified representative of the Subspecialty Group.
      - If this role is shared, both participants must meet the CME requirements.
      - Fifty percent is the actual attendance rate and does not include excused absences or other reasons for nonattendance.
      - Attendance must be monitored on a continual basis.
      - It is the responsibility of the liaison to communicate critical information to the subspecialty group.
iii. At a minimum, this must include: Emergency Medicine and Radiology and then add additional services as identified with participation in the care of the injured patients such as but not limited to Anesthesiology, General Surgery and Orthopedics.
   a. Advanced Practitioners are to be considered if actively participating in the care of trauma patients.
   b. In a level IV program where trauma patients are regularly admitted to an in-patient unit, a medical service representative/liaison must participate on this peer-review committee.
      - See Standard 10: Physicians for additional liaison requirements.
   c. Other members as identified by the trauma program.
iv. Peer-review meeting attendance may be waived / pro-rated for military deployment, medical leave and missionary work. The center must provide documentation to support the excused absence. Vacation, patient care, illness and contracted-but not working that month, are not excused absences and may not be prorated. TPMD/Liaison providing a review of the meeting minutes to the absent provider cannot be counted as attendance at the meeting. Per Diem providers, providers rotating from another hospital, and Locum Tenens providers may not have attendance expectations prorated based on amount of call taken.

C. Meeting minutes and attendance log must be maintained.
D. Meeting must be scheduled at regular intervals to assure that the volume of case review can occur in a timely fashion.
E. Meeting may be integrated with a hospital-wide quality/safety/performance improvement meeting as long requirements are maintained.
F. Attendance may be met through teleconferencing and/or videoconferencing as long as it facilitates active participation.

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13. If individual subspecialty services/departments have department and/or hospital based peer or case review meetings in addition to the required trauma PIPS peer-review meeting, those meeting minutes or outcomes must be made available to the PIPS program.

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14. A multidisciplinary forum to address trauma program operational issues is required.
   A. The TPMD, in collaboration with the TPM will have a leadership role.
      i. The TPMD and TPM must maintain 75% attendance.
      ii. In trauma programs utilizing a Trauma Program Performance Improvement Medical Director / Associate Medical Director, 75% attendance must be maintained.

B. Attendees should include representatives from all phases of care provided to injured patients, including ancillary personnel, as defined by the PIPS plan.
C. The focus must be on system/hospital related operational issues.
D. Meeting minutes and attendance log must be maintained.
E. This meeting must be scheduled at regular intervals to assure that issue discussion can occur in a timely fashion.
F. This meeting may be a division of the multidisciplinary forum for (PIPS) Peer review meeting as described above or hospital PI/Quality meeting.

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15. PIPS programs should provide education. This can be accomplished by a periodic trauma case review or didactic conference and should include appropriate disciplines.
    A. CME, CE and IEP's should be linked to the PIPS program.

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16. Outside agencies (EMS, first responders, injury prevention, and disaster) and facilities (transferring and ancillary) should be engaged in the PIPS process.

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17. Completed pre-hospital and inter-facility patient care records – PCR must be sought, and when available, present for review by the trauma program as part of the PIPS process.

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18. Complete anatomical diagnosis of injury is essential to assessment of quality of care. A post-mortem examination report (autopsy) should be sought, and when available, present for review in all trauma related deaths.

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19. If the PIPS program identifies a patient tracked event not resolved at discharge, data/information must be requested to track patient outcomes and achieve loop closure.

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20. The PIPS program will seek feedback from facilities where patients are transferred to including:
    A. Anatomical diagnosis, including ISS.
    B. Outcomes.
    C. Opportunities for improvement.

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21. The trauma program must develop, utilize and evaluate evidence based clinical practice/patient management guidelines, protocols and algorithms.
    A. Compliance with these guidelines must be monitored by PIPS.
    B. The required clinical guidelines are listed in Appendix D.

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22. To ensure a culture of trust critical to improving overall quality and equitable trauma care across the state of Pennsylvania, PA Trauma centers submitting to the PIPS Central Site, PA TQIP Collaborative and PTOS must comply with confidentiality requirements established by the PTSF.
    A. These references are located on the PTSF web site: Performance Improvement.

PIPS Indicators

PI Program must monitor the following at a minimum

- Hospital Event and Audit Filters as defined by PTSF PTOS manual
- Trauma Center volumes
- Categorization of level of activation
- Compliance with Activation Criteria *annually
  - By level of response
- Over/Under triage trended rate *quarterly
  - Utilize Matrix Method at minimum
- Transfer In/Out
  - Appropriateness/Rationale of transfer
  - Timeliness of transfer
  - Follow-up communication
    - Compliance with sending and/or receiving follow-up
    - Outcome review
- Diversion Report
- Timeliness of submission to the PTSF Central Site Portal
- PIPS Meetings attendance
- Mortality
  - By ISS subgroup
  - Dead on Arrival: no resuscitation efforts in ED
  - Died in ED despite resuscitation efforts
  - Died in-hospital
  - Total Mortality Rate
  - Mortality Rate by age distribution
- Screening for substance abuse, brief intervention, and referral for treatment
- Level III and IV: Delays in care due to the unavailability of ED physician (specifically when covering in-house emergencies)
- Response time to trauma activations
  - Level I, II and III: Trauma Surgeon
  - Level IV: Emergency Physician
- Delay in response for emergent assessment
  - Anesthesiology
  - General Surgery
  - Neurosurgery
  - Orthopedic Surgery
- Compliance with policies related to timely access to the OR for urgent surgical intervention
  - Operating Room availability
  - Operating Room & PACU: Back-up team response time and utilization
- Unplanned transfer to a higher level of care within the institution
- Delays in response to the ICU for patients with critical needs
- Timeliness of laboratory testing/blood availability
  - Turnaround time for Massive Transfusion Protocol (MTP) activations
- Delay in access to time sensitive diagnostic or therapeutic interventions

  - For example, if responding from outside center: CT, General Radiology, MRI
  - Interventional Radiology
- Radiology errors of interpretations or discrepancies between the preliminary and final reports
- Organ donation rate
- Adult Trauma Centers: Pediatric patients (Every)
  - Appropriateness of transfer or admission
  - Timeliness of care
  - Adequacy of care
  - Trauma Centers admitting more than 100 pediatric trauma patients annually requires a pediatric specific PIPS program

*The PI indicators should be monitored according to the level of accreditation.

Matrix Method

A method for calculating overtriage and undertriage rates

	Not Major Trauma	Major Trauma	Total
Highest level activation	A	B	C
Midlevel activation	D	E	F
No activation	G	H	I

$$\text{Overtriage} = \frac{A}{C} \times 100$$

$$\text{Undertriage} = \frac{(E + H)}{(F + I)} \times 100$$

Calculating Multidisciplinary Peer Review Meeting Attendance

Each mandatory participant must maintain minimum attendance requirements. Attendance must be monitored on a continual basis. All scheduled meetings must be included in the calculation of meeting attendance.

$$\frac{\text{\# of meetings attended}}{\text{\# of scheduled meetings}} \times 100 = \text{\% attendance}$$

Excused absences are limited to military deployment, medical leave, and missionary work, which requires supportive documentation. Absences due to vacation, patient care, and illness are not excused. Providers contracted but not working a particular month are not excused for the month not worked. Per Diem providers, providers rotating from another hospital, and Locum Tenens providers cannot have attendance expectations prorated based on amount of call taken. TPMD/Liaison providing a review of the meeting minutes to the absent provider cannot be counted as attendance at the meeting.

The number of scheduled meetings can be prorated if a participant started or left their position, was appointed, or unappointed as liaison, or had a contract start or end during the calendar year. In these situations, only those meetings after the start date or prior to the end date are included in the number of scheduled meetings.

Examples of how to calculate annual attendance:

1. A Locum Tenens contracted to work January to June is required to attend 3 meetings if there are 6 monthly meetings, even if they only work 1 of the months. If the same Locum Tenens has a 2nd separate contract at the same facility November to December, they would be required to attend 4 meetings of the 8 monthly meetings held during their contracts.
2. Hospital A has 1 Trauma Surgeon on medical leave for 4 months. As a replacement for this Trauma Surgeon, the staffing plan during the 4 months includes utilizing Trauma Surgeons from Hospital B. Each Trauma Surgeon from Hospital B will be required to attend 50% of the meetings at Hospital A, which is 2 of the monthly meetings during the 4-month timeframe.
3. A Health System requires all Trauma Surgeons to be credentialed at every hospital within the system, but each Trauma Surgeon is assigned to 1 Trauma Center. The Trauma Surgeons from Hospital A are not on call for Hospital B, and the staffing plan does not include utilization of Trauma Surgeons from the other Trauma Center. Trauma Surgeons credentialed but not on the primary trauma call roster are not expected to participate in multidisciplinary peer review committee meetings.
4. If Hospital A from example #3 has a change to their staffing plan on May 1st that includes Dr. Smith from Hospital B on the trauma call roster while also remaining on the trauma call roster for Hospital B, Dr. Smith would be expected to participate in 50% of meetings at Hospital A and 50% of meetings at Hospital B. Hospital A will begin tracking Dr. Smith's attendance beginning on his start date on the trauma call roster. Therefore, if both hospitals hold monthly meetings, Dr. Smith would be expected to attend 4 meetings at Hospital A and 6 meetings at Hospital B to meet the Standards.

Standard 7: Continuing Education Programs

1. The trauma PIPS program and registry data should drive and evolve into education.
   A. This should include age-related clinical competency as determined by the trauma program.

2. There will be formal programs in continuing education provided annually by the institution concerning the treatment of trauma patients of all ages to the following internal audiences:
   A. Physicians
   B. Registered Nurses
   C. Allied Health Personnel

3. Prehospital providers (EMS) must be invited to internal educational opportunities as appropriate.

4. Defined providers may participate in an Internal Educational Program (IEP) to meet the continuing education requirements.
   A. See Physician and Advanced Practitioner Standards for applicable providers.
   B. Examples of an IEP may include the following: in-services, case-based learning, educational conferences, grand rounds, internal trauma symposia and in-house publication dissemination of information gained from a local conference or an individual's recent publication (through trained analysis).
   C. IEP's should include presentations and discussions on a quarterly basis at a minimum.
   D. The total hours acquired through an IEP should be functionally equivalent to 8 hours of CME annually.

5. The Rural Trauma Team Development Course (RTTDC) is designed for trauma centers in rural / low volume settings and is considered the benchmark for care.
   A. This course is highly recommended for all Level IV trauma centers pursuing accreditation prior to the first site survey.
   B. https://www.facs.org/quality-programs/trauma/education/rural-trauma-team-development-course/

6. The TPMD and the TPM have ultimate authority to validate educational forums and submissions for CME requirements. This includes the approval of all contact hours.

7. New providers will have education requirements prorated based on start date/calendar year.

Standard 8: Injury Prevention, Public Education & Outreach

1. The institution will demonstrate a leadership role and engage in trauma prevention programs. These programs must be:
   A. Internal and external to the institution.
   B. Reflective of the trauma trends identified through the institution's trauma registry and/or community needs.
      i. Implement at a minimum two programs that demonstrate outcomes annually that address one of the major causes of injury in the community as supported by trauma related data.
   C. May be presented collectively with other institutions and organizations.

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2. The institute must demonstrate collaboration with, or participation in, national, state or local injury prevention programs.
   A. There must be someone in a leadership position that has injury prevention as a part of his/her job description.

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3. The institution must provide a means of referral and access to the trauma centers injury prevention and educational resources.

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4. The Clinical Staff must be familiar with and participate in trauma injury prevention education.

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5. Trauma Patients must undergo screening for suspected or confirmed abuse. The institution must:
   A. Have a policy/procedure/guideline that defines the abuse screening and management of patients with suspected or confirmed child abuse, elder abuse, intimate partner violence, and sex trafficking.
   B. Report abuse in compliance with Pennsylvania law and hospital policy/procedure/guideline.

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6. Providers participating in the care of the injured patients should have access to trauma-informed care training.

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7. Screening for substance abuse (alcohol and drugs) must be performed and documented for 80% of all injured patients (PTOS) age 12 and greater with a hospital stay greater than 24 hours.
   A. The best practice for the Screening, Brief Intervention and Referral for Treatment (SBIRT) process is for all patients to be screened, regardless of length of stay.
   B. 80% of patients who have screened positive must receive a brief intervention by appropriately trained staff, and this intervention must be documented.
      i. At a minimum an intervention must be offered.
   C. Eligible patients must include at a minimum alive and participatory patients, regardless of trauma team activation level including non-activations, and regardless of admitting service.

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8. While it is noted that Neurosurgery / Neurosurgical capabilities are not required for a Level IV trauma program, mild Traumatic Brain Injuries are common and often seen and treated.
   A. The clinical management guideline for the mild traumatic brain injured (TBI) patient must be developed and should include appropriate screening and referral.

9. The institution should have a plan to evaluate, support and provide services for Post-Traumatic Stress Disorder (PTSD).
   A. ACS Diagnostic Criteria and Questionnaire example

10. The institution should be involved in the Stop the Bleed initiative.

Table 2 **Suggestions for Planning Optimal Injury Prevention and Violence Intervention Strategies with the Greatest Impact**

- **Utilize available data:** Identify high rates of injury and the populations in which these injuries occur. Analyze data to determine the mechanisms of injury, injury severity, and contributing factors. Utilize multiple injury and death data sources to reflect the true burden of injury.
- **Target at-risk populations:** Identify, understand, and target efforts toward at-risk populations while being sensitive to generational differences, as well as cultural, religious, and other established customs. Engage target population as a key stakeholder in development, implementation, and evaluation of the intervention.
- **Leverage partnerships:** Make use of other trauma centers, prehospital organizations, public health and violence prevention organizations, law enforcement agencies, schools, churches, and others interested and involved in community injury prevention efforts.
- **Choose effective or well-informed intervention strategies:** New intervention program development, assessment, and implementation are complex and time consuming. Not all proven interventions work in every population. Evidence-informed interventions may still require adaptation for demographic and risk factor differences.
- **Develop a plan:** Logic models are a best-practice method to plan intervention strategies and should be utilized to outline the intervention effort, including delineating risk and protective factors.
- **Evaluate:** Develop surveillance and monitoring tools to assess not only the available performance indicators of the trauma center's prevention efforts but also the prevention effectiveness. Evaluation efforts should start at program inception with a feasibility assessment and include intermediate and long-term outcomes.
- **Communicate:** Partner with local print and broadcast media and be prepared for many opportunities for trauma center leaders to serve as a reliable source of injury prevention information. Understand your stakeholders and the at-risk populations and articulate your prevention message based upon their vantage point.
- **Advocate:** Elected and appointed leaders can help implement prevention efforts if the trauma center understands their goals and ways to work with them to create effective laws promoting prevention.

Table 3 **Suggested Methods for Tracking and Reporting of Injury Prevention Activities**

- Description of the mechanism of injury or root causes and risk factors of injury targeted by prevention programs
- Dates and locations of intervention events
- Trauma center resources
- Personnel hours (paid and volunteered)
- Trauma center expenses
- Community partners and their personnel hours
- Other sources of financial support
- Media exposure
- Involvement of elected and appointed officials
- Public policy initiatives or legislation
- Number of community members reached with prevention message or service
- Available outcome data related to the prevention activity and its target
- Strategic evaluation program, from inception to long-term outcomes

Standard 9: Research: Level I Trauma Centers Only

1. Research is not a requirement for Level IV trauma programs.

Standard 10: Physicians

1. The institution will credential each physician for the appropriate specialty, including trauma care.
   A. Compliance with these criteria and their appropriateness is essential and must be monitored by the trauma PIPS program.
   B. When residents are fulfilling standards requirements, they must be fully qualified by the institution, in conjunction with the trauma program, for trauma care by the appropriate specialty.

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2. Care of the trauma patient will be limited to those with demonstrated skills, commitment and experience.
   A. The TPMD, in conjunction with the hospital's medical governing board or body will utilize the trauma PIPS program to determine each individual attending physician's ability to participate on the trauma team.
      i. This delineation of privileges will include:
         a. Emergency Medicine
         b. Anesthesia (If participating in the care of trauma patients. See Physicians/Anesthesia for additional details).
         c. Any other specialists routinely providing trauma resuscitation or inpatient trauma care.
         d. This must occur at least once per site survey cycle.
   B. Reappointment to the trauma admitting/consulting staff must be coordinated by the TPMD in association with the hospital's medical governing board or body and representatives from specialty services providing resuscitation or inpatient care to trauma patients and based on the following criteria:
      i. Maintenance of good standing in the primary specialty.
      ii. Evidence of the required continuing medical education in trauma.
         a. Physicians who maintain Board Certification/Board Eligibility in their required specialty do not have to maintain additional continuing medical education.
            - Not applicable to the Trauma Program Medical Director
            - Not applicable to Physicians with an Alternate Pathway
            - Not applicable to the Trauma Program Performance Improvement Medical Director / Associate Medical Director
         b. CME credits obtained by completion of the ATLS course may be counted towards yearly CME requirement.
            - ATLS-Instructor hours may be counted as a maximum of ten (10) CME credits in a rolling three year period.
         c. Obtaining Board Certification and/or Re-Certification may count as thirty-three (33) hours of continuing education credit for the year that board certification/re-certification occurred.
      iii. Documentation of attendance at multidisciplinary conferences, morbidity/mortality round and/or institution peer-review conferences that deal with the care of injured patients.
      iv. Satisfactory performance in managing trauma patients based on performance assessment and outcome analysis.

EMERGENCY MEDICINE

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3. It is the responsibility of the institution to ensure that emergency physicians with demonstrated skills, commitment and experience staff the emergency department. This includes:

A. Medical License
B. ATLS Certification
    i. Emergency Physicians board certified in Emergency Medicine must take ATLS at least one time.
    ii. Emergency Physicians not board certified in Emergency Medicine must continuously maintain ATLS.
    iii. Recognized boards are those recognized by the American Board of Medical Specialists, The Bureau of Osteopathic Specialists or Boards of Certification of the Royal College of Physicians and Surgeons of Canada.
        a. Providers with board certification by any other governing board must apply for an alternate pathway per Policy AC-129: Process for Use of Non-Board Certified Physicians: Alternate Pathway
C. Recommend ACLS and PALS Certification
    i. Recommend Emergency Physicians board certified in Emergency Medicine take ACLS and PALS at least one time.
    ii. Recommend Emergency Physicians not board certified in Emergency Medicine continuously maintain ACLS and PALS.
    iii. Equivalent courses are acceptable, see the glossary for additional details.
D. Evidence of being current in the care of the injured patient.
    i. Maintain Emergency Medicine Board Certification/Eligibility OR maintain CME as below.
        a. Acquisition of eight (8) hours of trauma related CME per year or twenty-four (24) hours in three years.
        b. OR Demonstration of completion of the trauma program IEP.
            • See Standard 7: Continuing Education Programs for additional details.
E. ALL providers (Physicians / Advanced Practitioners) participating in the resuscitative phase of care must demonstrate capabilities and competency of management of the difficult / rescue airway as defined by the institution.
F. In Level IV hospitals where residents are employed as Emergency Department Physicians (aka moonlighters), the following additional qualifications must be met:
    i. The resident must be actively participating in an Emergency Medicine Residency Program, PGY 3 or 4, at a higher level accredited trauma center.
    ii. There must be a written plan/policy in place for the resident to have readily available access to a consulting physician if needed. Telephone consultation is acceptable.
G. There must be a designated Emergency Department Physician Director with evidence of active participation in daily emergency department administrative duties.
H. Published on call schedules must be maintained.
I. The initial assessment and resuscitation of the severely injured patient is the responsibility of the Emergency Department Physician.
    i. A physician must be physically present in the emergency department 24-hours a day except in such instances when he/she must occasionally leave the emergency department for periods not to exceed forty-five (45) minutes to address in-house emergencies.
        a. Such cases and their frequency must be reviewed in the PIPS program to ensure that this practice does not adversely affect the care of the patients in the Emergency Department.
J. The Emergency Physician or Advanced Practitioner will be at the resuscitation area on patient arrival.

i. The program must define response times for the Emergency Physician for all activation levels and
non-activation trauma patients.
a. The maximum acceptable response time to highest level activation is 15 (fifteen) minutes, tracked from patient arrival.
b. Non-activation trauma patient response time may be a tiered response time expectation based on triage level (for example, ESI level).
c. Compliance with presence within expected response time, at least 80% of the time, must be maintained and monitored.

K. The Emergency Department Physicians must actively participate in the trauma PIPS program.
i. If the TPMD is not an Emergency Department Physician, then an Emergency Department Liaison must be identified. The Liaison must:
a. Update the subspecialty group on trauma related issues.
b. Attend a minimum of 50% of the multidisciplinary trauma peer review meetings.
- This attendance benchmark may be shared with a second identified Emergency Physician.
- See Standard 6: PIPS for additional details.

ANESTHESIOLOGY

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4. It is the responsibility of the institution to define the extent of Anesthesiology services/involvement/participation with the care of the injured patient and then if applicable, ensure Anesthesiologists with a demonstrated skill, commitment and expertise are available for trauma care. This includes:

A. Published on call schedules must be maintained with 24/7/365 coverage.
i. Requirements may be fulfilled by senior anesthesia residents (PGY-4/CA3) or licensed certified nurse anesthetists (CRNA's) who are capable of assessing emergent situations and providing any indicated treatment for trauma patients.
a. When anesthesia residents and/or CRNA's are used to fulfill availability requirements, the staff anesthesiology on-call will be notified.
b. The staff anesthesiologist may not supervise more than two residents or CRNA's on major trauma cases at one time.
c. CRNA's should reference the Advanced Practitioner Standard for continuing education requirements.

B. The trauma program must have a policy outlining those conditions requiring emergent response of an anesthesiologist/CRNA outside of the resuscitative and operative phases of care based on patient acuity and must monitor response through the PIPS program.
i. The emergent response must be within 30 minutes.

C. The Anesthesia Department Physicians must actively participate in the trauma PIPS program.
i. An Anesthesia Department Physician Liaison must be identified. The Liaison must:
a. Update the subspecialty group on trauma related issues.
b. Attend a minimum of 50% of the multidisciplinary trauma peer review meetings.
- This attendance benchmark may be shared with a second identified Anesthesia Physician or CRNA.
- See Standard 6: PIPS for additional details.

D. Anesthesiology services are not required at Level IV Trauma Centers.

i. Level IV Centers with Anesthesiologists participating in any form of injured patient care, including but not limited to the Operating Room and/or trauma activations, are held accountable to the complete anesthesiology standard.

RADIOLOGY

5. It is the responsibility of the institution to ensure that Radiologists with a demonstrated skill, commitment and expertise, staff the radiology department. This includes:
   A. An attending radiologist capable of diagnostic procedures must be promptly available from inside or outside the trauma center 24-hours a day.
      i. Tele-radiology is acceptable.
      ii. The institution will establish protocols defining the role of the radiologist, emergency medicine physicians and other members of the trauma team regarding radiology needs.
   B. The Radiology Department Physicians must actively participate in the trauma PIPS program.
      i. A Radiology Department Physician Liaison must be identified. The Liaison must:
         a. Update the subspecialty group on trauma related issues.
         b. Attend a minimum of 50% of the multidisciplinary trauma peer review meetings.
            - This attendance benchmark may be shared with a second identified Radiology Physician.
            - See Standard 6: PIPS for additional details.

GENERAL SURGERY

6. It is the responsibility of the institution to define the extent of General Surgery involvement/ participation in the trauma program. The hospital must choose ONE of the following three options:
   A. General Surgery will not participate in the care of the injured patient.
      i. Level IV Centers with General Surgeons participating in injured patient care must determine the level of involvement and ensure compliance with the entirety of 6B or 6C in the general surgery standard.
   B. General Surgeons will participate in the care of the injured patient as a trauma service. General Surgeons are considered a trauma service if they meet at least 1 of the following: participate in trauma resuscitations, provide operative interventions (except wound management), and/or participate in trauma related in-patient care as the admitting service. They must at a minimum:
      i. Maintain ATLS Certification.
      ii. Have evidence of being current in the care of the injured patient.
         a. Maintain General Surgery Board Certification/Eligibility OR maintain CME as below.
            - Acquisition of eight (8) hours of trauma related CME per year or twenty-four (24) hours in three years.
            - OR Demonstration of completion of the trauma program IEP.
               - See Standard 7: Continuing Education Programs for additional details.
      iii. Participation in the major therapeutic decisions must be determined by institutional policy.
         a. If participating in trauma activations, the institutional policy must include presence in the emergency department for major resuscitations.
         b. If participating in operative interventions, the institutional policy must include presence at operative procedures.
      iv. If participating in trauma activations, the surgeon will respond to the patient's bedside within thirty (30) minutes of the trauma activation notification, tracked from patient arrival.

v. The requirement for the attending trauma surgeon's presence should not result in delay for initiating urgently needed operative procedures or transfers.
vi. If participating in operative interventions, the responsible attending surgeon on call must be present in the operating room for major surgical procedures related to their specialty.
vii. Published on-call schedules must be maintained with 24/7/365 coverage.
viii. All general surgery-attending physicians taking trauma call must actively participate in the trauma PIPS program.
    a. Every general surgeon participating on the trauma call roster, regardless of the amount of call, must attend in a minimum of 50% of the multidisciplinary trauma peer review meetings.
    b. Back-up Trauma Surgeons who only serve in this capacity on the back-up call schedule, and not on the primary trauma call roster, are not expected to participate in 50% of multidisciplinary peer review committee meetings.
    c. See Standard 6: PIPS for additional details.

C. General Surgeons will participate in the care of the injured patient as a subspecialist consultant (for example, wound care management, wound debridement, external hematoma management). General Surgeons are considered a subspecialist consulting service if they meet at all of the following: do not provide operative intervention (except for wound management), do not participate in trauma resuscitations, AND do not admit trauma patients to their service. They must at a minimum:
    i. Have evidence of being current in the care of the injured patient.
        a. Maintain General Surgery Board Certification/Eligibility OR maintain CME as below.
        • Acquisition of eight (8) hours of trauma related CME per year or twenty-four (24) hours in three years.
        • OR Demonstration of completion of the trauma program IEP.
            ○ See Standard 7: Continuing Education Programs for additional details.
    ii. Participate in major therapeutic decisions as determined by institutional policy.
    iii. Expectations and appropriateness of the response time is the responsibility of the trauma PIPS program.
    iv. Published on-call schedules must be maintained with 24/7/365 coverage.
    v. The General Surgery Physicians must actively participate in the trauma PIPS program.
        a. A General Surgery Liaison must be identified. The Liaison must:
            • Update the subspecialty group on trauma related issues.
            • Attend a minimum of 50% of the multidisciplinary trauma peer review meetings.
                ○ This attendance benchmark may be shared with a second identified General Surgery Physician.
                ○ See Standard 6: PIPS for additional details.

NEUROSURGERY

7. It is the responsibility of the institution to define the extent of neurosurgery involvement/participation in the trauma program. Neurosurgery is not required. If neurosurgeons participate in the care of the injured patient by taking trauma call, providing trauma resuscitation and/or inpatient trauma care, they must at a minimum:
    A. Have evidence of being current in the care of the injured patient.
        i. Maintain applicable specialty board certification/eligibility OR maintain CME as below.

a. Acquisition of eight (8) hours of trauma related CME per year or twenty-four (24) hours in three years.
b. OR demonstration of completion of IEP.
- See Standard 7: Continuing Education Programs for additional details.

B. Participate in the major therapeutic decisions, presence in the emergency department for major resuscitations and presence at operative procedures as determined by institutional policy.
C. Trauma outcome is often a time-related factor from the time of injury. Expectations and appropriateness of the response time is the responsibility of the trauma PIPS program.
D. Published on-call schedules must be maintained with 24/7/365 coverage.
E. The neurosurgical physicians must actively participate in the trauma PIPS program.
i. A neurosurgeon Liaison must be identified. The Liaison must:
a. Update the subspecialty group on trauma related issues.
b. Attend a minimum of 50% of the multidisciplinary trauma peer review meetings.
- This attendance benchmark may be shared with a second identified neurosurgery physician.
- See Standard 6: PIPS for additional details.

F. Neurosurgery is not required at Level IV trauma centers.
i. Level IV Centers with participating neurosurgeons in any form of injured patient care are held accountable to the complete neurosurgery standard.

ORTHOPEDIC SURGERY

8. It is the responsibility of the institution to define the extent of orthopedic surgery involvement/ participation in the trauma program. The hospital must choose ONE of the following three options:
A. Orthopedic surgery will not participate in the care of the injured patient.
i. Level IV centers with orthopedic surgeons participating in injured patient care must determine the level of involvement and ensure compliance with the entirety of 8B or 8C in the orthopedic surgery standard.

B. Orthopedic surgeons will participate in the care of the injured patient as an operative service. They must at a minimum:
i. Have evidence of being current in the care of the injured patient.
a. Maintain orthopedic surgery board certification/eligibility OR maintain CME as below.
- Acquisition of eight (8) hours of trauma related CME per year or twenty-four (24) hours in three years.
- OR demonstration of completion of IEP.

ii. Participate in the major therapeutic decisions, presence in the emergency department for major resuscitations and presence at operative procedures as determined by institutional policy.
iii. Trauma outcome is often a time-related factor from the time of injury. Expectations and appropriateness of the response time is the responsibility of the trauma PIPS program.
iv. Published on-call schedules must be maintained with 24/7/365 coverage.
v. The orthopedic surgery physicians must actively participate in the trauma PIPS program.
a. An orthopedic surgeon Liaison must be identified. The Liaison must:
- Update the subspecialty group on trauma related issues.
- Attend a minimum of 50% of the multidisciplinary trauma peer review meetings.
  - This attendance benchmark may be shared with a second identified orthopedic surgery physician.

vi. Availability of a minimum of one (1) intra-compartmental pressure monitoring device within the hospital.

C. Orthopedic surgeons will participate in the care of the injured patient as a non-operative consultative service. They must at a minimum:
   i. Have evidence of being current in the care of the injured patient.
      a. Maintain orthopedic surgery board certification/eligibility OR maintain CME as below.
         - Acquisition of eight (8) hours of trauma related CME per year or twenty-four (24) hours in three years.
         - OR demonstration of completion of IEP.
            - See Standard 7: Continuing Education Programs for additional details.
   ii. Recommend identifying an orthopedic surgeon Liaison to attend the multidisciplinary trauma peer review meeting when requested when orthopedic cases are discussed.
   iii. Availability of a minimum of one (1) intra-compartmental pressure monitoring device within the hospital.

OTHER SURGICAL AND NON-SURGICAL SPECIALISTS

8. The trauma program will define the role of additional subspecialist in the trauma program.
   A. Care provided by surgical and non-surgical specialists not specifically required for Level IV trauma centers must be reviewed by the trauma PIPS program and is subject for review during site survey.
   B. Surgical and Non-Surgical Specialists may be asked to participate in the trauma performance improvement process at the direction of the trauma program (Surgery and Medicine).
      i. In a level IV program where trauma patients are regularly admitted to an in-patient unit, a medical service representative/liaison must be identified. This liaison must:
         a. Update the subspecialty group on trauma related issues.
         b. Attend a minimum of 50% of the multidisciplinary trauma peer review meetings.
            - This attendance benchmark may be shared with a second identified medical specialist liaison.
            - See Standard 6: PIPS for additional details.
         c. Best practice is for the medical service who primarily covers in-patient care to maintain ATLS
   C. A patient's Primary Care Physician/Pediatrician may be a valuable resource and considered a member of the trauma team and input into the care of a critically injured or ill patient.
   D. While it is noted that Neurosurgery / Neurosurgical capabilities are not required for a Level IV trauma program, mild Traumatic Brain Injuries are common and often seen and treated.
      i. The clinical management guideline for the mild traumatic brain injured (TBI) patient must be developed and should include appropriate screening and referral.

9. Telemedicine:
   A. Telemedicine is an acceptable method of consultation for non-surgical subspecialties, for non-trauma indications, in admitted patients.
   B. Telemedicine, by itself, is not an acceptable method of consultation for surgical specialties or for trauma indications.
   C. Injured patients must be admitted to an onsite service. The admitting service cannot be a telemedicine service.

10. Regardless of the surgical or admission capabilities, every trauma center must immediately evaluate, stabilize, treat and, if indicated, transfer trauma patients that exceed the capabilities of the trauma center. Every trauma center must have transfer plans in place defining cases that exceed the capabilities of the trauma center and necessitate transfer.

Standard 11: Advanced Practitioners

1. Advanced Practitioners (AP), under the direction of a physician, may have a defined role in trauma patient care.
   A. The extent of the involvement must be determined by the TPMD in compliance with Pennsylvania law and hospital policy.
   B. This includes Physician Assistants (PA), Nurse Practitioners (NP) and Certified Registered Nurse Anesthetists (CRNA).

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2. All APs who have a defined role in trauma patient care must be knowledgeable and current in the role of injured patients. This includes:
   A. A formal, institution specific orientation to the trauma program.
   B. Completion of annual review/performance evaluation including skills proficiency and trauma clinical competence by the TPMD or the Subspecialty Director.
   C. Participation in the PIPS program as defined by trauma program.

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3. AP's prior to functioning as a member of the team caring for trauma activation patients via assessment or interventions must:
   A. Maintain ATLS:
      i. This includes Emergency Medicine and Trauma/Surgery APs responding to activations.
      ii. This excludes:
         a. Neurosurgery, Orthopedic Surgery and other AP Consulting Services
         b. Emergency Medicine APs solely working in the main Emergency Department and/or FastTrack area who do not respond to trauma activations
      iii. Certified Registered Nurse Anesthetists (CRNAs) who respond to care for the injured patient in a
      supportive/subspecialist role (such as airway only) are excluded from ATLS certification expectations.
   B. Recommend maintaining ACLS certification (or equivalent course)
   C. Recommend maintaining PALS certification (or equivalent course))

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4. APs prior to being involved as first responders in any phase of trauma care must:
   A. Recommend maintaining ACLS certification (or ACLS equivalent)
   B. Recommend maintaining PALS for Pediatric ICU responders if pediatrics are routinely admitted to the institution. (or PALS equivalent).
   C. ATLS is required for AP's identified as ICU First Responders (see Standard 19: ICU for details)
      i. Certified Registered Nurse Anesthetists (CRNA) who respond to care for the injured patient in a supportive/subspecialist role (such as airway only) are excluded from ATLS certification expectations.

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5. Additional subspecialty AP credentialing requirements as defined by the trauma program.

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6. The Trauma Nurse Course (TNC) is not required for Advanced Practitioners.

Standard 12: Residency Programs

1. Residency Programs are not required for Level IV trauma programs.

2. If residents are participating in the care of trauma patients, they must be fully qualified by the institution, in conjunction with the trauma program, for trauma care by the appropriate specialty.
   A. If the trauma center utilizes residents for any service, refer to the Level I, II, and III standards for resident qualifications, supervision and rotation details.

Standard 13: Nursing

1. All registered nurses functioning in a department that routinely admits trauma patients must demonstrate compliance with the nursing standards. This includes:
   A. Emergency Department
      i. This includes admission/holding/observation areas used as an extension of the Emergency Department
   B. Intensive Care Units (ICU) for Trauma Patients
   C. Intermediate Care Step-Down Units (IICU) for Trauma Patients
   D. Medical/Surgical Units which regularly receive Trauma Patients
   E. PACU
   F. Operating Room
      i. This applies only to OR RN's who routinely taking care of the trauma patient
   G. Advanced Practitioners: This standard does not apply to AP's. Nurse Practitioners, Physician's Assistants and Certified Registered Nurse Anesthetists should see Standard 11: Advanced Practitioner for additional details.

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2. The institution will ensure that patient care units are staffed by registered nurses who have special capabilities as demonstrated through commitment, continuing education and experience.
   A. This includes, where applicable the ability to operate pediatric equipment.
   B. Trauma care oversight must be done by a Registered Nurse.
      i. Licensed Practical Nurses (LPN's), Aids, Technicians or other ancillary staff may be utilized in care tasks. This must be accomplished by RN oversight of care, procedure and chart entries per institutional policy.
   C. In circumstances where a patient is admitted to the unit under the care of a non-trauma credentialed RN, there must be oversight by a trauma credentialed RN, which must include at a minimum immediate availability as a resource. This must be defined by the trauma program.

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3. A Trauma Nurse Course is required within one year of assignment to the department.
   A. For new applicants, 50% of the nursing staff must complete a trauma nurse course prior to survey.
   B. The RN transferring into a trauma department must complete the requirement within one year of transfer.
   C. For an accredited trauma center that is opening a new nursing unit, 50% of the staff must complete the trauma nurse course prior to the opening of the unit and the remaining 50% (for a total of 100%) must complete the course within the first year of the opening of the new unit.
   D. Examples of acceptable courses are addressed within the PaTNCC:
      i. Other courses as approved.
         a. Please refer to Policy AC-105: Applying for a Variance from a Standard for additional details.
   E. Regardless of which course is utilized, a hospital specific module describing the institution's trauma program is required.

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4. There must be evidence of ongoing skills proficiency / clinical competence appropriate for the institution.
   A. This can be accomplished through such mechanisms as annual reviews and performance evaluations.

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5. Recommend all RN's (with the exception of Medical/Surgical Floor and Operating Room RN's) maintain ACLS provider status (or equivalent course). This should be defined by the institution and compliance monitored by the institution.
   A. Recommend maintaining PALS for nurses participating in the care of the pediatric trauma patient. This should be defined by the institution.

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6. There must be a minimum of one RN in the Emergency Department at all times who is capable of functioning in the trauma resuscitation role.

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7. All RN's participating in the care of trauma patients must have evidence of annual continuing education including eight (8) hours of continuing education.
   A. Education should be driven by the trauma PIPS program and registry data.
      i. This should include age-related clinical competency as determined by the trauma program.
   B. The TPM in conjunction with the TPMD is responsible for determining and validating which educational forums are acceptable in fulfilling continuing education requirements. This includes the approval and appropriation of all contact hours.
   C. Completion of an advanced trauma course, such as ATCN, TNCC, and TCAR may be credited to fulfill up to twelve (12) hours of continuing education requirements over a three (3) year timeframe from the class.
   D. Completion of an advanced non-trauma course such as ACLS, APLS, PALS or ABLS may be counted towards the yearly hours as follows:
      i. Four (4) hours for a two day provider course
      ii. Two (2) hours for a one-day (re-certification) course
      iii. While it is recognized that these courses required additional hourly participation, the intention is to
         a. Acknowledge the trauma related content
         b. Assure that other trauma related education is obtained
   E. Serving as faculty for trauma-related courses may be used to fulfill eight (8) hours of continuing education requirement for a three-year timeframe from the time of the class.
   F. Nurses maintaining one of the following a trauma advanced certifications are not required to maintain continuing education logs: CEN/CPEN, CCRN, TCRN, PCCN, CPN, CFRN, CNRN, CNOR, CPAN, ANCC Medical-Surgical Nursing board certification (RN-BC).
      i. Not applicable to the TPM or PI-Coordinator
   G. New nurses may have education requirements prorated based on start date/calendar year.

Standard 14: Emergency Medical Services (EMS)

1. Medical Command Facility Designation, as recognized by the PaDOH Bureau of EMS, must be maintained.
   A. A facility may submit a request for a waiver to the PaDOH if unable to meet the medical command qualifications. The waiver must then be submitted to the PTSF following Policy AC-105 Applying for a Variance from a Standard for final approval.

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2. The institution must have active involvement in its regional Emergency Medical Services (EMS / Pre-hospital) system.
   A. It is the responsibility of the trauma center to enhance lines of communication with EMS services and Regional EMS Councils to resolve issues related to EMS transportation, transfer and clinical care.
   B. The trauma program should identify an internal liaison to facilitate communication, education and outreach with EMS.

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3. The trauma center must be the local trauma authority and assume the responsibility for providing training for EMS providers.
   A. Physicians, nurses and administrative personnel must be involved in various EMS programs and invite EMS providers to attend internal hospital education forums that are trauma related.

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4. The institution should provide opportunities for appropriate EMS clinical experience.

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5. EMS participation in the PIPS program must be clearly defined by the PIPS plan.
   A. At a minimum this includes, inviting an EMS liaison to the multidisciplinary PIPS meeting.

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6. Completed pre-hospital patient care records (PCR) must be sought, and when available, present for review by the trauma program as a part of the PIPS process.

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7. The trauma center should collaborate with EMS to adopt a universal format for the verbal transfer of care of the trauma patient from EMS to the trauma center.
   A. DMIST communication is recommended.

Standard 15: Helipad

1. There should be a lighted helipad in close proximity to the institution's emergency department.
   A. The Commonwealth of Pennsylvania must license the on-site helipad.
   B. The Federal Aviation Administration, Eastern Region, must approve the on-site air space.
   C. If there is not a lighted helipad on site: There must be access to a designated helicopter landing area within one mile of the Emergency Department.
      i. A policy for transfer of patient to and from the landing area must be in place.
      ii. Emergency vehicles must be readily available to provide proper transport.
      iii. Every transfer by helicopter must be reviewed by the trauma PIPS program specifically for timeliness of transfer and efficient access to the helicopter.
      iv. Any variance from the 1.0 mile requirement must have an approved Standard Variance. Please refer to Policy AC-105: Applying for a Variance from a Standard for additional details.

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2. The transport system to/from the helipad and/or ambulance entrance to and from the resuscitation unit must not adversely affect the timely intervention of definitive care. Methods will include:
   A. A diagram of the ground and air transport systems including the distance from the point of origin (i.e. helipad and/or ambulance entrance) to the trauma resuscitation rooms.
   B. Policies and procedures of the transport and transfer system for patients arriving or departing by the air transport system.
   C. Listing of the air transport systems used, consistent with the scope of care delivered.

Standard 16: Emergency Department

1. It is the responsibility of the institution to ensure that the Emergency Department is continually staffed by registered nurses who have demonstrated skill, commitment, continuing education and experience.
   A. The Emergency Department will have a staffing plan that reflects the trending, severity of injury, arrival of multiple trauma patients, and staffing/skill mix required to ensure the appropriate care of trauma patients.
   B. This includes a minimum of one RN at all times who:
      i. Actively functions in trauma resuscitation.
      ii. Maintenance of ACLS certification is recommended.
      iii. Has completed the trauma nurse course (or equivalent).
   C. See Standard 13: Nursing for additional details.

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2. There will be a designated trauma resuscitation area in the Emergency Department which will:
   A. Remain open 24-hours a day.
   B. Be of adequate size to accommodate the full trauma resuscitation team.

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3. There must be a policy defining the expectation for frequency of vital signs.
   A. There must be hourly vital sign documentation beginning with ED arrival for trauma alert patients (all trauma activations, does not include trauma consults).
      i. At a minimum, hourly vital signs must be monitored through post-ED transport time or at the time a physician/provider order extends vital signs to an adjusted, longer frequency.
   B. The policy must include expected vital sign frequency for non-trauma alert patients. May be a tiered expectation based on triage level, such as emergency severity index levels.
   C. Vital signs include respiration, blood pressure, and pulse at a minimum.

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4. Equipment will be available in the appropriate array of sizes for resuscitation and life support of the critically or seriously injured trauma patient. Staff must be competent in use of this equipment. This will include but is not limited to:
   A. Airway control and ventilation equipment including laryngoscopes, endotracheal tubes, rescue airway devices, bag-valve mask resuscitators, and sources of oxygen.
      i. This equipment must be easily accessible
      ii. A mechanical ventilator is not required, but recommended.
   B. Continuous cardiac monitoring, electrocardiograph and defibrillator with pediatric and adult external paddles
   C. End-tidal CO2 determination
      i. Waveform Capnography
   D. High volume rapid infuser is not required, but recommended.
   E. Intravenous fluids and administrative devices including intravenous catheters and IO devices
   F. Intra-compartmental pressure monitoring device
      i. Orthopedic Surgery participating in the care of the injured patient: one per hospital required
      ii. Orthopedic Surgery not participating in the care of the injured patient: not required, but recommended
   G. Pediatric Capabilities:
      i. Resuscitation equipment including pediatric airway equipment
      ii. Reference materials for pediatric medications, dosages and cardiac resuscitation must be displayed or immediately available

iii. Pediatric (ranging in age from neonate to adolescent) instrumentation i.e.: blood pressure cuffs, chest tubes, nasogastric tubes and urinary drainage apparatus.

H. Portable or over-head x-ray equipment
I. Pulse Oximeter
J. Medications and supplies necessary for emergency care, including pediatric medication doses
K. Naso/Oro Gastric tubes
L. Skeletal immobilization devices
M. Suction devices
N. Surgical Sets for standard emergent procedures
   i. Airway access/Cricothyrotomy
   ii. Central line insertion
   iii. Chest tube insertion
O. Temperature control and warming devices for
   i. The Patient
   ii. Parenteral fluids
   iii. Blood
   iv. The Trauma Resuscitation area
P. Tourniquets (commercial)
Q. Two-way communication with emergency transport system vehicles
R. Ultrasound is not required, but recommended

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5. Adequate physician and nursing personnel must be available to accompany the trauma patient during transports.
   A. Personnel and patient population must be defined by the hospital, at minimum patient population must include highest level activations during resuscitative phase of care.
      i. Providers must be appropriately trained and to fully monitor and resuscitate the trauma patient in
      all areas.
   B. Documentation of care during the time that the trauma patient is physically present in the department and during transportation to and from the Radiology Department must be available.

Standard 17: Operating Room

1. The institution must have a staffing plan for the Operating Room to meet the need of surgical patients as defined by the trauma program.

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2. The operating room will be adequately staffed.
   A. When an on-call team is utilized, a 30-minute response time should be maintained.
      i. The trauma program must define the parameters of immediate response based on level of acuity.
   B. The trauma program must define the participants for minimal staffing.

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3. The institution will ensure that the operating room is staffed by RN's who have demonstrated skills, commitment, continuing education and expertise.
   A. See Standard 13: Nursing for additional details.

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4. Equipment will be available in the appropriate array of sizes for resuscitation and life support of the critically or seriously injured trauma patient. This will include but is not limited to:
   A. Airway control and ventilation equipment including laryngoscopes, endotracheal tubes, bag-valve mask resuscitators, sources of oxygen, and mechanical ventilator
   B. Continuous cardiac monitoring, electrocardiograph and defibrillator with adult and pediatric paddles.
   C. End-tidal CO2 determination
   D. High-volume rapid infuser is desired
   E. Monitoring equipment
   F. Orthopedic equipment (appropriate for institutional capabilities)
      i. Intra-compartmental pressure measuring device is desired. If Orthopedic Surgery is participating in the care of the injured patient, one per hospital required
   G. Pediatric / Age appropriate devices including anesthesia equipment
   H. Thermal control and warming devices for:
      i. The patient
      ii. Parenteral fluids
      iii. Blood
      iv. The room

Standard 18: Post Anesthesia Care Unit (PACU)

1. The institution must define the scope of involvement of the PACU within the trauma plan based on utilization of the Operating Room.
    i. Intensive care unit(s) are acceptable in lieu of the PACU for post-op care.

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2. It is the responsibility of the institution to ensure that the post-anesthesia care unit is staffed by RN's who have demonstrated skills, commitment, continuing education and experience:
    A. See Standard 13: Nursing for additional details.

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3. Equipment will be available in the appropriate array of sizes for the resuscitation and life support of the critically or seriously injured trauma patient including but not limited to:
    A. Airway control and ventilation equipment including laryngoscopes, endotracheal tubes, bag-valve mask resuscitators, sources of oxygen, and mechanical ventilator
    B. Continuous cardiac monitoring, electrocardiograph and defibrillator with adult and pediatric paddles.
    C. End-tidal CO2 determination
    D. Intravenous fluids including devices and intravenous catheters
    E. Medications and supplies necessary for emergency medications including pediatric medication doses
    F. Monitoring capabilities for continuous monitoring of temperature, hemodynamics and gas exchange (non-invasive)
    G. Pediatric / Age appropriate devices
    H. Pulse oximeter
    I. Suction devices
    J. Surgical sets for emergency procedures such as thoracotomy
    K. Temperature control and warming devices for:
        i. The patient
        ii. Parenteral fluids
        iii. Blood
        iv. Physical space/location/room

Standard 19: Intensive Care Units (ICU)

1. If the institution regularly admits patients to the ICU, resources will be concentrated in a single unit and compliance with this standard is required.
    i. The trauma program must define the scope of ICU utilization.

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2. There will be a commitment to the priority dedication of ICU beds for trauma care.

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3. It is the responsibility of the institution to ensure that physicians who have demonstrated skills through commitment, continuing education, and experience care for the trauma patients staff the ICU.
    A. Arrangements for 24-hour coverage of all trauma patients are necessary for emergencies and routine care.
        i. A tiered medical response must be established to ensure immediate interventions for unplanned situations. While the ultimate responsibility for the treatment plan is that of the primary admitting physician, on-site assessments and initial interventions must be planned in a systematic and documented approach.

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4. The institution will ensure that the ICU is staffed by registered nurses who have demonstrated skill, commitment, continuing education, and experience.
    A. See Standard 13: Nursing for additional details

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5. The ICU will have a staffing plan that reflects the trending, severity of injury, arrival of multiple trauma patients and staffing/skill mix required to ensure the appropriate clinical care of trauma patients or the workload of the nurse which will indicate the number of nursing staff needed.
    A. A planned maximum nurse-patient ratio of 1:2 on each shift is required.
        i. This should be reflective of the acuity and care needs of the patient.
        ii. Any planned variance from this standard must obtain a variance approval. Please refer to Policy
        AC-105: Applying for a Variance from a Standard for additional details.

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6. Equipment will be readily available in the appropriate array of sizes for resuscitation and life support of the critically or seriously injured trauma patient including, but not limited to:
    A. Airway control and ventilation equipment including laryngoscopes, endotracheal tubes, bag-mask resuscitators, sources of oxygen, and mechanical ventilator
    B. Arterial lines
    C. Central venous pressure monitoring devices
    D. Continuous cardiac monitoring, electrocardiograph and defibrillator with adult and pediatric paddles.
    E. Electronic hemodynamic monitoring
    F. End Tidal CO2 determination
    G. External pacemaker
    H. Intravenous fluids and administration devices, including intravenous catheters
    I. High-volume rapid volume fluid infuser is desired
    J. Medications and supplies necessary for emergency care
    K. Naso/Oro gastric tubes and suction
    L. Pulse oximeter
    M. Suction Devices

N. Surgical sets for emergency procedures such as thoracotomy, cut-down etc.
O. Temperature control and warming devices for:
    i. The patient
    ii. Parenteral fluids
    iii. Blood
    iv. Patient Room

7. The PIPS plan must review all ICU and Intermediate ICU admissions and transfer of ICU patients to ensure that appropriate patients are being selected to remain at the trauma center vs being transferred to a higher level of care.

Standard 20: Intermediate Care / Step-Down Units

1. The institution must define the areas considered Intermediate Care /Step-Down Units if utilized.

2. The institution will ensure that the Intermediate Care / Step-Down Unit (IICU) is staffed by registered nurses who have skills, commitment, continuing education and experience.
   A. See Standard 13: Nursing for additional details.

3. The Intermediate Care / Step-Down Unit will have a staffing plan that reflects the trending, severity of injury, arrival of multiple trauma patients, and staffing/skill mix required to ensure the appropriated clinical care of trauma patients or the workload of the nurse which will indicate the number of nursing staff needed.
   A. The maximum planned nurse-patient ratio of 1:4 on each shift to adequately provide patient care.
   B. Any planned variance from this standard must obtain a variance approval. Please refer to Policy AC-105: Applying for a Variance from a Standard for additional details.

4. Equipment will be available in the appropriate array of sizes for resuscitation and life support of the critically injured trauma patient.
   A. Availably of equipment will be dependent on the acuity level of trauma patients cared for in the Intermediate Care /Step-Down units.

5. The PIPS plan must review all ICU and Intermediate ICU admissions and transfer of ICU patients to ensure that appropriate patients are being selected to remain at the Level IV center vs being transferred to a higher level of care.

Standard 21: Medical / Surgical Unit (General)

1. The institution will ensure that the general Medical/Surgical units that regularly receive trauma patients are staffed by registered nurses who have skills, commitment, continuing education and experience.
   A. This includes, where applicable, the ability to operate pediatric equipment.
   B. See Standard 13: Nursing for additional details.

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2. The Medical/Surgical units shall have a staffing plan that reflects the trending, severity of injury, arrival of multiple trauma patients, and staffing/skill mix required to ensure the appropriate clinical care of trauma patients or the workload of the nurse which will indicate the number of nursing staff needed to adequately provide patient care.

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3. Equipment must support the current status of trauma patients of all ages
   A. Location/Availability of the equipment is dependent upon the patient's condition, age and immediacy with which equipment is accessible.
   B. Equipment must include, but is not limited to:
      i. Airway control and ventilation equipment, including laryngoscopes, endotracheal tubs, bag-valve mask resuscitators and sources of oxygen
      ii. Continuous cardiac monitoring, electrocardiograph and defibrillator.
         a. External defibrillator paddles must be promptly available (Pediatric paddles only where applicable).
      iii. Intravenous fluids and administration devices including intravenous catheters
      iv. Medications and supplies necessary for emergency care
      v. Suction devices

Standard 22: Laboratory & Blood Bank

1. There will be provisions to provide and receive the following laboratory test results 24-hours a day:
   A. Blood gases and pH determinations
   B. Blood typing and cross matching
   C. Coagulation studies
   D. Drug and alcohol screening
   E. Standard analysis of blood, urine and other body fluids

2. A protocol must be in place stating that the trauma patient receives priority in laboratory request handling.

3. There will be comprehensive blood bank or access to a community central blood bank and adequate storage facilities.

4. There will be an evidenced-based driven massive transfusion policy that will be collaboratively reviewed by the Blood Bank and the trauma program.
   A. Blood product supplies should be determined by the trauma program based on utilization and frequency.

5. The Laboratory/Blood Bank must participate in the trauma PIPS program as defined by the trauma program.

6. Prothrombin Complex Concentrate (PCC) must be available.
   A. A guideline/policy for utilization must be present

7. The trauma program, in collaboration with the blood bank, should consider utilization of Whole Blood.

Standard 23: Radiology

1. Conventional radiological services will include 24-hour in-house technicians.

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2. Diagnostic information must be communicated in a written form and in a timely manner:
   A. Critical information that is deemed to immediately affect patient care must be verbally communicated to the trauma team.
   B. The preliminary diagnostic imaging report must be permanently recorded.
   C. The final report must accurately reflect the chronology and content of communications with the trauma team, including changes between the preliminary and final interpretation.
   D. Changes in interpretation, including missed injuries, must be monitored through the PIPS program.

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3. The following protocols/policies/guidelines must be in place:
   A. Trauma Patient Priority Requests
   B. Incidental Findings
   C. Discrepant Radiology Findings
      i. Changes in Interpretation
      ii. Missed Injury / Delay in Diagnosis

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4. The emergency physician or general surgeon, all of whom have been properly credentialed by the institution, will have ability to initiate CT Scans.

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5. Computerized Tomography Scanning (CT) must be available for the trauma patient.
   A. CT Technicians must be available and on-call 24-hours a day.
      i. CT Technicians may be out of house with a maximum response time of 30 minutes.
         a. The PIPS program must monitor compliance with response time and effects on patient care.
   B. A protocol must be in place to give the trauma patient priority and immediate access to the CT scanner for initiation of studies in a timely manner.
   C. A policy for the bypass or transfer of trauma patients when CT capability is unavailable due to planned
      maintenance or mechanical failure is required.
   D. A minimum of one 64-slice CT capability scanner in hospitals where vascular imaging occurs or a minimum of one 16-slice CT capability scanner where vascular imaging does not occur.
   E. CT scanner does not include mobile services, guaranteed service contracts with other institutions in-house CT scanners, or CT scanners in use at remote buildings or areas of the institution requiring transportation of the patients from the main building to the CT scanner.

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6. Adequate physician and nursing personnel must be available to accompany the trauma patient during transport and while in the Radiology Department.
   A. Personnel and patient population must be defined by the hospital, at minimum patient population must include highest level activations during resuscitative phase of care.
      i. Providers must be appropriately trained and to fully monitor and resuscitate the trauma patient in
      all areas.
   B. Documentation of care during the time that the trauma patient is physically present in the department and during transportation to and from the Radiology Department must be available.

7. Trauma Centers must have a mechanism in place to provide radiographic imaging to referring hospitals when transferring patients.
   A. The PIPS program will review transfer reports for issues with radiograph imaging.

8. The Radiology Department must work to optimize the technical parameters of each examination so that the lowest radiation dose possible is used for each patient while still producing high-quality diagnostic images.
   A. Important consideration in the pediatric population is the use of non-radiation imaging.
   B. PTSF Imaging Statement

MEDICAL RECORDS

1. A copy of the discharge summary of trauma care will be made available to the patient's primary care provider.

NUTRITIONAL SERVICES

2. The Nutritional requirements of all trauma patients must be screened and evaluated with appropriate feedback and recommendations to the admitting provider.
   A. This must be completed within 72 hours of admission.

ORGAN AND TISSUE DONATION

3. The institution will comply with Pennsylvania law regarding organ and tissue donation request, procurement and documentation.
   A. A policy must be in place triggering the timely notification of the Organ Procurement Organization (OPO).
   B. The Trauma Center must review its organ donation data annually.

REHABILITATION SERVICES

4. All trauma patients will be screened for short and long term recovery/rehabilitation and treatment plans/goals. Where appropriate, a documented, comprehensive, trauma recovery plan will be an integral part of the patient's medical record.
   A. The plan will be in place within seventy-two (72) hours of the patient's admission.
   B. A referral will be made to the physiatrist or other appropriate medical specialist when indicated.
   C. A physician with a special interest and training in Physical Medicine and Rehabilitation most often assumes leadership of the rehabilitation team.
      i. This does not proscribe physicians in other disciplines, such as general surgery, neurosurgery or orthopedic surgery from having a leadership role providing they have the skill, training, dedication and are recognized by the institution as an expert in rehabilitation.
   D. If the trauma patient is transferred to another institution for rehabilitation, outcome and follow-up must be formally requested.
   E. Additional specialty services have defined roles in the recovery and rehabilitative care of the trauma patient. This includes but is not limited to:
      i. Family Support Programs
      ii. Physical Therapy
      iii. Occupational and Speech Therapy are desired.
      iv. Psychosocial
   F. The clinical management guideline for the mild traumatic brain injured (TBI) patient must be developed and should include appropriate screening and referral.

RESPIRATORY THERAPY

5. A Respiratory Therapist must be available in-house 24-hours a day.

SPIRITUAL COUNSELING / PASTORAL CARE

6. The opportunity for spiritual counseling/pastoral care should be available.
   A. This can be accomplished by providing a listing of spiritual leaders promptly available to the institution.
   B. Ideally, spiritual counseling/pastoral care will have a defined role in the trauma program.

ACUTE PAIN MANAGEMENT

7. The utilization of a pain management resource as a consultant for trauma care is recommended.
   A. This may be a formal pain management service, a representative from pharmacy, or an identified liaison from the trauma program.

Standard 25: Social Services

1. Social work intervention will be available to all trauma patients and their families from the time of admission to the facility until the time of discharge. This is to include evidence of appropriate social work intervention, involvement and coordination of post-discharge plan development and rehabilitation.
   A. This may be provided in conjunction with existing hospital staff.

2. The institution will define the protocol to ensure that there are adequate social work capabilities available to assist in the support of the patient's family and significant others during this time. This may include but is not limited to:
   A. Assisting with the process of organ donation in the event of death.
   B. Contacting family and providing crisis intervention counseling upon arrival and throughout the hospitalization.
   C. Coordinating resource referrals.
   D. Facilitating the information flow between the trauma team, patient and family.
   E. Identifying the trauma patient.
   F. Intervention and involvement in post-discharge plan development.
   G. Locating family or legal next-of-kin.
   H. Providing grief counseling, when appropriate.
   I. Screening, reporting and interventions for suspected or confirmed abuse including but not limited to:
      child abuse, elder abuse, intimate partner violence, and sex trafficking.
   J. Timely access to information related to insurance verification and financial resource availability.

Standard 26: Case Management

1. Case Management is not required for Level IV trauma programs.

Standard 27: Geriatric Patient Care

1. Geriatrics is defined as age sixty-five (65) and over for the purposes of PTOS.
   A. Trauma Centers may define geriatrics for their individual institutional protocol purpose.

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2. Trauma Center personnel should have continuing education, driven by registry data and the PIPS Program specific to geriatric patients.
   A. All providers with continuing education requirements must have evidence of geriatric trauma-related hours/credits and age-related clinical competency as determined by the trauma program.

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3. Every geriatric trauma patient must be screened for suspected or confirmed abuse. The institution must:
   A. Have a policy/procedure/guideline that defines the abuse screening and management of patients with suspected or confirmed elder abuse, intimate partner violence, and sex trafficking.
   B. Report abuse in compliance with Pennsylvania law and hospital policy/procedure/guideline.
   C. Forward the results of any abuse screening to the receiving institution if a patient is transferred.

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4. The trauma program must develop multidisciplinary geriatric trauma patient management guidelines (protocols) that include resuscitation, critical care and rehabilitation.

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5. The trauma program should show evidence of routine interdisciplinary approach in the care of the geriatric trauma patient.
   A. This may include a trauma team representative, geriatrician or medicine liaison, nursing, social work/case management and as available physical therapy and pharmacy.

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6. The trauma program must use its trauma registry to identify the pattern, frequency and risks for injury to the geriatric population group within the community and use this as a guide (along with community resources) to formulate geriatric trauma prevention programs – for example osteoporosis.

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7. There must be geriatric specific audit filters as defined by the trauma program.

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8. A frailty screening tool should be used in the evaluation of the geriatric trauma patient.
   A. The Trauma-Specific Frailty Index is a validated screening tool.
   B. ACS COT Best Practices Guidelines Geriatric Trauma Management (https://www.facs.org/media/ubyj2ubl/best-practices-guidelines-geriatric-trauma.pdf)

Standard 28: Pediatrics

1. Pediatrics is defined as a patient less than 15 years of age (14 or younger) for purposes of PTOS submission.
   A. Trauma Centers may define pediatrics for their individual institutional protocol purpose.

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2. Trauma Center personnel should have continuing education, driven by registry data and the PIPS Program specific to pediatric patients.
   A. All providers with continuing education requirements should have evidence of pediatrics trauma-related hours/credits and age-related clinical competency as determined by the trauma program.

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3. Every pediatric trauma patient must be screened for suspected or confirmed abuse. The institution must:
   A. Have a policy/procedure/guideline that defines the abuse screening and management of patients with suspected or confirmed child abuse, intimate partner violence, and sex trafficking.
   B. Report abuse in compliance with Pennsylvania law and hospital policy/procedure/guideline.
   C. Forward the results of any abuse screening to the receiving institution if a patient is transferred.

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4. The trauma program must develop pediatric trauma patient management guidelines (protocols) that focus on resuscitation.

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5. The trauma program should use its trauma registry to identify the pattern, frequency and risks for injury to the pediatric population group within the community and use this as a guide (along with community resources) to formulate pediatric trauma prevention programs.

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6. Capacity & Ability:
   A. All institutions which receive pediatric trauma patients must provide, at a minimum, emergency resuscitation and stabilization capabilities for the pediatric trauma patient.
   B. The institution will assess its pediatric capabilities and establish appropriate guidelines for the transfer of severely injured children to accredited Pediatric Trauma Centers.

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7. Performance Improvement:
   A. Every pediatric patient should be reviewed by the PIPS program for:
      i. Appropriateness of transfer or admission
      ii. Timeliness of care
      iii. Adequacy of Care
   B. There must be pediatric specific audit filters as defined by the trauma program.

TERM	DEFINITION
AACN	American Association of Critical Care Nurses is the world's largest nonprofit specialty nursing organization comprised of acute and critical care nurses. The AACN supports the education and certification process for the in Acute/ Critical Care Nursing
AANN	American Association of Neuroscience Nurses is a professional organization that provides educational resources and programs to nurses who specialize in caring for patients with neurologic disease, including traumatic brain, and/or spinal injuries. The AANN supports the education and certification process for the Certified Neuroscience Registered Nurse.
ABLS	Advanced Burn Life Support is a program offered by the American Burn Association. The program provides knowledge for immediate care of the burn patient up to the first 24-hours post injury.
ACGME	Accreditation Council for Graduate Medical Education is a non-profit organization that sets the standards for US graduate medical education (residency and fellowship) programs, and the institutions that sponsor the programs. ACGME also renders accreditation decisions based on compliance with their standards.
ACLS/PALS Equivalent	Advanced resuscitation educational program builds on the foundation of Basic Life Support curriculum. An example of an equivalent course to Advanced Cardiac Life Support (ACLS) is the Advanced Resuscitation Training (ART) program. The ART program integrates the same principles as ACLS and is designated as a Best Practice Model by the Joint Commission, is recognized by the Society of Hospital Medicine, and the National Association of Public Hospitals. A Neonatal Resuscitation Program and Pediatric Resuscitation Program are examples of age specific curriculum supported by the World Health Organization and the American Academy of Pediatrics guidelines.
Adequate Notification from the Field	The time of communication by emergency personnel in the field to the trauma center with the injured patient's mechanism of injury, complaint, and estimated time of arrival. This communication aids trauma team preparation for the receipt of injured patient(s).
Admission	The formal acceptance by a hospital to lodge a patient in the hospital's inpatient unit. Upon admission, the patient receives care by a physician, dentist, or allied health professional.
Advanced Practitioner	A nonphysician healthcare provider who has earned an advanced degree and certification to perform some of the responsibilities of the physician. Examples include Physician Assistant, Certified Registered Nurse Practitioner, Certified Registered Nurse Anesthetist, and Certified Nurse Midwife.

Glossary

TERM	DEFINITION
Allied Health Professional	Specialty trained individuals who represent a broad field of clinicians and are typically licensed or certified but are not physicians, dentists, or nurses. Examples include physical therapists, radiology technologists, or phlebotomists.
Alternate Pathway	The required process for which non board certified physicians or non-US/non-Canadian trained physicians in a trauma center can be approved to care for trauma patients. This applies to only those physicians who, by PTSF Standards of Accreditation, are required to be Board Certified. See Policy AC-129: Process for Use of Non Board Certified Physicians: Alternate Pathway
American Burn Association	A worldwide organization that dedicates its efforts and resources to promote and support burn related care, prevention, education, and research. The organization includes multidisciplinary membership, governed by a Board of Trustees, which provides policies, oversight and guidance on burn injuries that should be referred to a burn center.
ANCC Medical-Surgical Nursing Certification (RN-BC)	American Nurses Credentialing Center's Medical-Surgical Nursing Certification awards the credential RN-BC, Registered Nurse-Board Certified. Other ANCC specialty certifications awarding the RN-BC are not applicable. The ANCC credentials both organizations and individuals who advance nursing.
AORN	Association of Operating Room Nurses is an organization that provides nursing education, standards, and services that enable optimal outcomes for patients who undergo operative and other invasive procedures.
ATCN	Advanced Trauma Care for Nurses is an advanced course designed for registered nurses who want to increase their knowledge in the management of multiple trauma patients. This course is sponsored by the Society of Trauma Nurses
ATLS Course	Advanced Trauma Life Support Course provides instruction on the fundamental, systematic approach in the immediate care of injured patients. This course is sponsored by the American College of Surgeons.
Board Certified Physician	A physician who has passed the acceptable specialty exam certified by the appropriate specialty boards. Recognized Boards are those recognized by the American Board of Medical Specialties, the American Osteopathic Association, or Royal College of Physicians and Surgeons of Canada.
Board Eligible Physician	A physician who has graduated from medical school, completed residency, trained under supervision in a specialty, and is eligible to take a specialty exam by the American Board of Medical Specialties, the American Osteopathic Association, or Royal College of Physicians and Surgeons of Canada.

Glossary

TERM	DEFINITION
Burn Unit	A specialty care unit that possesses the facilities, equipment, and personnel specifically designed for the care of burn patients. Burn Units adhere to the established standards of the American Burn Association (ABA).
Bypass/Diversion	A procedure put into effect by a trauma center when the facility is unable to provide the level of care designated by the trauma center accreditation. Patients are bypassed/diverted to other accredited trauma centers.
Case Management	A collaborative process which assesses, plans, implements, coordinates, monitors, and evaluates the options and services to meet an individual's health needs, using communication and available resources to promote quality cost effective outcomes.
CCRN	The certification in Acute/Critical Care Nursing is a specialty certification issued by the American Association of Critical Care Nurses for nurses who provide direct care to acutely/critically ill adult patients regardless of their physical location. Nurses interested in this certification may work in areas such as intensive care units, cardiac care units, combined ICU/CCUs, medical/surgical ICUs, trauma units or critical care transport/flight.
CEN	A Certified Emergency Nurse is a specialty certification issued by the Board of Certification for Emergency Nursing (BCEN) for nurses who have demonstrated knowledge and expertise in the care of emergency department patients.
CFRN	A Certified Flight Registered Nurse is a specialty certification issued by the BCEN for nurses who have demonstrated knowledge and expertise in the care of patients in flight.
CME	Continuing Medical Education consists of American Medical Association authorized educational activities that serve to maintain, develop, or increase the knowledge, skills, professional performance and relationships that a physician uses to provide services for patients, the public or profession.
CNOR	Certified Perioperative Nurse is a specialty certification for nurses working in perioperative services, with most of their time spent intra-operatively, issued by Competency and Credentialing Institute.
CNRN	Certified Neuroscience Registered Nurse is a specialty certification for nurses working in the neurosciences specifically caring for patients with neurotrauma, chronic illnesses, tumors, infections, seizures, and other neurological conditions issued by the American Board of Neuroscience Nursing and supported by the AANN.
Continuing Education	Prepared instruction intended to enrich the educational and experiential background for healthcare professionals.
Continuous Basis	Constitutes ongoing maintenance of required education/certification(s) without time lapse between initial date and renewal.

Glossary

TERM	DEFINITION
CPAN	Certified Post Anesthesia Nurse is a specialty certification for nurses who care for patients who experienced anesthesia or procedures that require sedation and analgesia predominantly in the post operative anesthesia care unit issued by the American Board of Peri anesthesia Nursing Certification Inc.
CPN	Certified Pediatric Nurse is a specialty certification for nurses who demonstrate expertise in the care of children from birth through young adulthood. CPN is issued by the Pediatric Nursing Certification Board.
Credentialed	A recognition process in which individual institutions consider appropriate education, certifications, and training for physicians, advanced practitioners, allied health professionals, and registered nurses with specialized skills.
CRNP	A Certified Registered Nurse Practitioner is a professional nurse with an advanced graduate degree who, while functioning in the expanded role as a professional nurse, performs acts of medical diagnosis, prescription of medical therapeutic, or corrective measures in collaboration with a licensed physician who is certified by the State Board of Nursing.
Demonstrated Capacity	Documentation of an institution's ability, dedication, and capacity to provide care at the level stated, including the methodology for prioritization of services throughout the institution to meet patient needs.
Demonstrated Commitment	Documented evidence, visible and written, which clearly exhibits the institution's dedication to trauma care.
Desired/Should	Constitutes recommended processes, or items, ideal for incorporation in an accredited trauma center's program. Desired/Should is not a trauma center accreditation requirement.
DMIST	A formalized protocol developed by the Pennsylvania Department of Health Bureau of Emergency Medical Services (EMS), Pennsylvania Emergency Health Services Council, and Pennsylvania Trauma Systems Foundation as a method to standardize the verbal transfer of care process from EMS to the Trauma Center • D - Demographics • M - Medical Complaint / Mechanism • I - Inspections / Injuries • S - Signs (vital signs) • T - Treatment
Emergency	A sudden generally unexpected occurrence or set of circumstances that require immediate attention.
ENA	Emergency Nurses Association is an organization for emergency nurses who want to advance their career, knowledge, and improve their practice in emergency patient care.

Glossary

TERM	DEFINITION
ENPC	Emergency Nursing Pediatric Course sponsored by ENA provides health care professionals who are new to Emergency Severity Index (ESI) or new to pediatric emergency nursing with a strong foundation and comprehensive review of the core principles of the ESI triage system as it relates to the pediatric patient. This course highlights the differences between pediatric and adult triage, as well as some of the nuances of the ESI system that may challenge novices.
Equivalent to	Identical in value, measure, or function
Essential/Must	Indicates a standard is required for trauma center accreditation
Excused Absence (PI Attendance)	Peer-review meeting attendance may be excused/waived / pro-rated for military deployment, medical leave, and/or missionary work. The trauma center must provide documentation to support the excused absence. Vacation, patient care, illness, and contracted but not working status are not excused absences. A TPMD/Liaison may provide a review of meeting minutes to the absent provider; however, it cannot be counted as attendance at the meeting. Per Diem providers, providers rotating from another hospital, and locum tenens providers cannot have attendance expectations prorated based on amount of call taken.
First Responder	The first provider (physician or advanced practitioner) contacted for emergencies, 24 hours a day, in any admitted unit/floor. Institutions designate the provider assigned the first responder role.
General Surgical Accredited Residency Program	A program approved by either the Accreditation Council for Graduate Medical Education or the American Osteopathic Association
General Surgical Trauma Call Roster	A published list of attending level surgeons assigned to trauma care, including dates of coverage and back-up surgical physician (s).
Geriatric Patient	For the purposes of PTOS submission: trauma patients equal to or greater than sixty-five (65) years of age. Trauma Centers should determine the age definition of a geriatric trauma patient for their individual institutions.
ICD	The “International Classification of Diseases” is a standard medical coding system that includes all injuries and disease processes mandated by the U.S Department of Health and Human Services (HHS) for all patients covered under the Health Insurance Portability Accountability Act (HIPAA).
ICP	Intracranial pressure, often monitored in patients with severe injuries to the brain
In-House CT Scanner	In-house computerized tomography (CT) scanner refers to the trauma center’s dedicated CT Scanner and does NOT include mobile services, guaranteed service contracts with other institutions with in-house CT scanners, or CT scanners in use at remote buildings or areas of the institution requiring transportation of the patient from the main building to the CT scanner.

TERM	DEFINITION
Injury Severity Score (ISS)	Internationally recognized scoring system that correlates with mortality, morbidity, and other measures of severity. The ISS assesses the combined effects of the multiply injured patient and is based on an anatomical injury severity classification, the Abbreviated Injury Scale (AIS). ISS is the sum of the squares of the AIS scores of the three most severely injured body regions.
Intermediate Care Step Down Unit(s)	A unit that provides higher level acuity care than a regular Medical/Surgical unit but does not include the higher level of monitoring and care provided in the Intensive Care Unit.
Internal Educational Process (IEP)	IEPs are an institutional specific educational option for designated trauma providers to meet continuing education requirements. Examples of an IEP may include the following: in-services, case-based learning, educational conferences, grand rounds, internal trauma symposia, and in-house publication dissemination of information gained from a local conference or an individual's recent publication (through trained analysis).
Intervention (Substance Abuse)	Occurs after a patient screens positive for substance use/abuse. A healthcare professional approaches the patient to discuss their substance use/abuse and includes offers to seek treatment/help with their addiction.
Liaison	A physician with credentials and expertise in their field who represent their specialty department (e.g., Neurosurgery, Orthopedics, Emergency, etc.) in the care of trauma patients. This physician is assigned by the specialty department to respond to performance improvement inquiries by the trauma program.
Licensed Helipad	The landing and takeoff areas for medical helicopters. Helipads used by trauma centers in Pennsylvania require formal approval and licensure by the Bureau of Aviation, Pennsylvania Department of Aviation to operate. The Federal Aviation Administration approves air space operation.
Major Uni-system/Multi-system Trauma patient	Trauma Patients with injuries, the extent of which may be difficult to ascertain, but the injuries generally have the potential for mortality or major disability.
Mechanism of Injury	The method by which trauma and its associated forces directly, or indirectly, impact the human body. It implies a specific transfer of energy from one source to another.
Monitoring Equipment	Invasive and noninvasive devices designated by the trauma program for the continuous, intermittent observation, or measurement of biologically vital clinical data from traumatically injured patients. Such equipment includes, but is not limited to, a cardiac monitor, end tidal CO2 monitor, glucose monitor, intracranial pressure monitor, and continuous cardiac output monitor.
Morbidity	A complication or undesirable side effect following an injury, disease, medical or surgical intervention.

TERM	DEFINITION
Mortality	The state or condition of being subject to death. For PTOS inclusion, mortality refers to dead on arrival, died in ED or inpatient, and withdrawal of life sustaining care.
Orientation	The time period provided to acquaint new personnel with the physical facilities, philosophies, policies, role expectations, procedures, and skills required in the new environment.
PaTNCC	Pennsylvania Trauma Nursing Core Curriculum was developed by the PTSF to meet the educational needs and responsibilities of registered nurses in providing care to trauma patients across the continuum of care.
PA Trauma Registrar Basic Training Course	A required, online, course designed by the PTSF to provide new Pennsylvania Trauma Registrars with a basic understanding of trauma registry functions. All trauma registrars are required to complete the course within their first year in their role. It is acceptable to substitute this course for other basic registry options, however, the core content of the basic education must consist of: • Introduction • History and Insight (PA Trauma System, PTSF Operations, PTSF Accreditation Process) • Abstraction • Data Management • Reports/Report Analysis • Data Validation • HIPAA Tool Box #1 – What is Trauma, Why is Trauma Important, Trauma Registry Introduction and State vs. Facility Registry, Where to Find Documentation Required for Abstraction, Types of Injuries, and PTOS vs NON-PTOS Tool Box #2 – Patient Log Tool Box #3 – Reference documents to assist in abstraction: Standards, Benchmarking Reports, Website, PTOS Manual, ICD-10 CM/PCS Books, AIS Coding Book, and Registry Software User Guides Tool Box #4 – Registry Software Introduction Tool Box #5 – ICD-10-CM/PCS Coding Basics Tool Box #6 – AIS Coding Basics Tool Box #7 – Diagnosis Coding Tool Box #8 – Interfaces with PI Software, NTDS/TQIP Submission Tool Box #9 – Timely Submissions (How to Submit) Tool Box #10 – Performance Improvement Introduction
Participation	The act of an individual(s) sharing or receiving information, with active involvement.

Glossary

TERM	DEFINITION
Pastoral Care/Spiritual Counseling	The delivery of spiritual or religious support usually by qualified spiritual leaders such as ministers, priests, rabbis, etc.
Patient/Practice Management Guidelines (PMG)	Standardized clinical care pathways developed by the trauma program, based on current evidenced-based practice, for the assessment and treatment of trauma patients. PMGs aim to provide guidance for managing patient populations or injury types with special considerations to trauma care providers.
PATNAC	Pennsylvania Trauma Nurse Advisory Council is a voluntary committee comprised of Trauma Program Managers (and occasionally other trauma program staff) from various hospitals across Pennsylvania. PATNAC empowers Trauma Program Managers/Coordinators throughout the Commonwealth of Pennsylvania to knowledgeably interpret PTSF Standards, support them in operationalizing the Standards for Accreditation, and collaborate with PTSF and other professional trauma organizations to enhance Pennsylvania's trauma system.
PCCN	Progressive Care Nursing is a specialty certification issued by the AACN for nurses who provide direct care to acutely ill adult patients regardless of their location. This may include nurses working in an intermediate care unit, direct observation, stepdown, telemetry transitional care, or emergency departments.
Pediatric Intensive Care Unit (PICU)	An Intensive Care Unit that provides care to pediatric patients and utilizes the services of board certified Pediatric Critical Care Medicine (PCCM) specialists in collaboration with Pediatric Trauma Surgeons. A PICU is a distinguishing characteristic of trauma care at a Pediatric Trauma Center.
Pediatric Trauma Patient	For the purposes of PTOS submission: trauma patient less than 15 years of age (equal to or less than 14). Trauma Centers may define pediatrics for their individual institutional protocol.
Pennsylvania Trauma Outcome Study (PTOS)	A centralized, statewide, registry organized to compile and maintain statistics on mortality and morbidity for major uni-system or multi-system trauma patients in Pennsylvania.
Performance Improvement and Patient Safety Program (PIPS)	PIPS serves as the foundation of the trauma program. It is the formalized process that identifies adverse events and implements subsequent corrective action plans which are measurable through patient outcomes. Problem resolution, outcomes improvement, and assurances of patient safety ("loop closure") are essential components of structured PI initiatives. Although integrated into the hospital's overall quality improvement program, the trauma center's PIPS program is independent of the institution. The PIPS process is outlined in a comprehensive written PIPS Plan which must be updated annually.

Glossary

TERM	DEFINITION
PGY	Post Graduate Year is a classification system for residents in post-graduate training. The number indicates the *year* the resident is in during their post-medical school residency program; for example, PGY-1 is one *year* after graduation from medical school.
Phases of Care	Patient progression through pre-hospital, resuscitative care, operative care, post-anesthesia care, critical care, post resuscitative care (intermediate care/step-down unit, medical surgical unit), and rehabilitative care.
PHTLS	Pre-hospital Trauma Life Support was developed by the National Association for Emergency Medical Technicians in cooperation with the American College of Surgeons Committee on Trauma to promote excellence in trauma patient management by all providers involved in the delivery of prehospital care . The PHTLS is accredited by the Commission on Accreditation for Pre-Hospital Continuing Education (CAPCE), which maintains the standards for the delivery of EMS continuing education.
PSNA	Pennsylvania State Nurses Association
Rehabilitation	Services that prepare a trauma patient for the fullest physical, psychological, social, vocational, and educational level of function possible given their impairments and environmental limitations.
Response Time	The interval between the notification and arrival of personnel on call, for example, when a provider arrives to perform an in-person trauma evaluation/intervention.
Resuscitation	The intense period of patient assessment and aggressive medical care to preserve tissue perfusion of life or limb. For purposes of educational requirements of responding staff – this resuscitative period is in the trauma bay.
Rural Trauma Team Development Course (RTTDC)	The course (RTTDC) emphasizes a team approach to the initial evaluation and resuscitation of the trauma patient at a rural facility. More than 60 percent of the country's trauma deaths occur in rural areas. RTTDC assists health care professionals in determining the need to transfer the patient to a higher level of care. The one-day course includes interactive lectures on both medical procedures and communication strategies and three team performance scenarios.
SBIRT	Screening, Brief Intervention, and Referral to Treatment for substance use/abuse includes screening for substance use/abuse, a brief intervention focusing on increasing the insight and awareness of a patient's substance use/abuse and offers of treatment to the patient.
STN	Society of Trauma Nurses is a professional, nonprofit, organization that developed the "Trauma Outcomes and Performance Improvement Course" (TOPIC). STN's mission is to ensure optimal trauma care to all people locally, regionally, nationally, and globally through initiatives focused on trauma nurses related to prevention, education, and collaboration with other healthcare disciplines.

Glossary

TERM	DEFINITION
TCRN	Trauma Certified Registered Nurse is an advanced certification that indicates expertise and knowledge in trauma nursing across the continuum of care. The Board of Certification for Emergency Nursing provides this credential.
Trauma Center	A specialized hospital facility distinguished by the immediate availability of specialized surgeons (level IV exempt), physician specialists, anesthesiologists, nurses, resuscitation area(s), and life support equipment on a 24-hour basis for severely injured patients. Pennsylvania's accredited trauma centers must comply with the PTSF Standards of Accreditation.
Trauma Contact	All patients who meet PTOS inclusion criteria, NTDS inclusion criteria (not already counted in the PTOS inclusion), and those patients who meet inclusion criteria for hospital, local, and regional purposes. TQIP is based on NTDS inclusion criteria.
Trauma Credentialed Nurse	Professional registered nurse who has successfully completed the Trauma Nurse Course and fulfills education requirements mandated by the PTSF standards for trauma center accreditation. The nurse must demonstrate and maintain clinical proficiency by integrating knowledge and skills in the care of trauma patients.
Trauma Fellowship	A formalized post-residency, specialty training program, designed to educate graduate residents in the care of injured patients. Graduated, post-residency physicians, who participate in specialized training programs are referred to as fellows.
Trauma-Informed Care	An approach to care that health care organizations and care teams must have to encompasses the care of the entire patient, including their past and present life situations. This approach provides effective health care services with a healing orientation. There are four basic components to trauma informed care: • Understanding the widespread impact of trauma on individuals and the paths for recovery • Recognizing the signs and symptoms of trauma in patient, families, and staff • Integration of knowledge about trauma into policies, procedures, and practices • Actively avoid re-traumatization There are six core principles of trauma informed care: • Safety • Trustworthiness and Transparency • Peer Support • Collaboration • Empowerment • Humility and Responsivenes

TERM	DEFINITION
Trauma Injury Prevention Program	Internal institutional and external community outreach educational programs designed to increase awareness of methods for prevention and/or avoidance of trauma-related injuries with a focus on the most common causes of injury in the community.
Trauma Nurse Core Courses (TNCC)	A course sponsored by the Emergency Nurses Association. Not to be confused with the PaTNCC (Pennsylvania Trauma Nursing Core Curriculum). The TNCC prepares nurses with the knowledge, critical thinking skills, and training needed to provide high-quality, trauma nursing care using the latest evidenced based practice.
Trauma Outcomes and Performance Improvement Course (TOPIC)	Required course developed by the STN to educate and provide a better understanding of the PI process. TOPIC must be taken by the TPM, TPMD, TPIC and/or the TPIMD within one year of their appointment.
Trauma Program Manager	A registered nurse who monitors, promotes, and evaluates all activities associated with the trauma program in cooperation and conjunction with the TPMD. TPMs may have management and other administrative or performance improvement responsibilities.
Trauma Program Medical Director	Board certified, or board eligible, physician designated to work in conjunction with the hospital's medical governing body, and in collaboration with the Trauma Program Manager (TPM), to oversee and authorize the care of trauma patients and the functionality of the trauma program.
Trauma Registry	A database maintained by specialty trained registrars for the abstraction of trauma patients' electronic medical records. The database is used to provide an in-depth analysis and evaluation of patient outcomes for research and the database aids in the assessment of the quality of patient care. The trauma registry also includes information for analysis and evaluation of the quality of patient care, including epidemiological and demographic characteristics of trauma patients.
Trauma Resuscitation Area	A designated space within the emergency department for the initial evaluation/treatment of injured patients. The area must include adequate space to accommodate a full trauma resuscitation team and the necessary medical equipment/resources required to treat injured patients. The area must be readily available and accessible 24/7/365.
Trauma Resuscitation Team	A multidisciplinary team of health care providers, led by an attending physician, who are trained to work in synergy to rapidly assess and provide treatment to injured patients.
Trauma System	A network of trauma hospitals and additional services including EMS, rehabilitation facilities, and trauma prevention organizations. Research shows that death rates are drastically reduced in states where there is a trauma system in place.

Glossary

Appendix A: Inter-Facility Transfer & Consultation Requirements For Level III & IV Trauma Centers

General Guidelines

To facilitate transfer, timely consultation is required with a higher-level receiving trauma center. Consultation with an attending surgeon is required in the determination of the necessity of transfer and the circumstance of transfer, including but not limited to additional diagnostic/therapeutic issues, availability of resources, and weather conditions. The development of mutually agreed upon written guidelines for the transfer of trauma patients between institutions is essential. These agreements should define which patients should be transferred and the process for doing so. Refer to Standard 2: Capacity and Ability; for transfer guideline requirements.

When transfer is necessary, the patient must be transferred to a higher-level trauma center. If the patient's condition exceeds the institution's capabilities, the patient should ideally be transferred to the closest higher-level trauma center.

In the event that patients meeting the mandatory transfer requirements below are not transferred, evidence must be presented to the site survey team on survey day showing review of those cases through the Performance Improvement process, including appropriateness of care and patient outcome.

MANDATORY TRANSFER is required for Level III and IV trauma centers caring for the critically injured adult and pediatric trauma patient with any of the following conditions:

HEAD/C-SPINE

1. Carotid of vertebral artery injury
2. Penetrating injuries or open fracture of the skull
3. Abnormal CT as defined as an acute finding consistent (or highly suspicious) of an acute traumatic injury.
4. GCS </= 14
    a. Exceptions
        i. Patients who are at their normal baseline health status/GCS (e.g. this can be less than 14 if it is the patient's baseline)
        ii. Patients with an altered GCS due to substance use/abuse
    b. In these patients it is highly recommended that a minimal phone consultation with a neurosurgeon (who is able to view CT imaging) is completed prior to consideration for admission.
5. Spinal fracture or spinal cord deficit

CHEST

6. Cardiac rupture
7. Torn thoracic aorta or great vessel
8. Bilateral pulmonary contusion with PaO2/FIO2 ratio less than 200
9. Level III: 2 or more rib fractures with the presence of a pulmonary contusion
10. Level IV: Rib fractures with the presence of a pulmonary contusion
11. Rib fracture(s) with the presence of flail chest

12. Significant torso injury with advanced comorbid disease (such as coronary artery disease, chronic obstructive pulmonary disease, type 1 diabetes mellitus, or immunosuppression)
13. Non-occult pneumothorax which must be further defined by the trauma program

PELVIS/ABDOMEN

14. Major abdominal vascular injury
15. Grade IV or V liver injuries
16. Any patient requiring damage control laparotomy
17. Hemodynamically unstable pelvic fracture
18. Complex pelvis/acetabulum fractures

SPINE

19. Any level of spine fracture with neurologic deficit
20. Neurologic deficit without spine fracture

EXTREMITIES

21. Fracture or dislocation with loss of distal pulses

PEDIATRICS*: Age < 15 (less than or equal to 14) who:

22. Require admission to an ICU.
23. Exhibit signs of traumatic brain injury (structural abnormality on x-ray or CT, sustained GCS < 15 for greater than 2 hrs, or neurological deterioration.)
24. Are being treated non-operatively for solid organ injuries.

*When transfer is necessary, pediatric trauma patients should be preferentially transferred to a Pediatric Trauma Center unless, in the judgment of the referring physician, transfer would excessively delay life-saving care that could be provided at a closer Level I or II.

Consideration for Transfer: In addition to the above mandatory transfer criterion, consideration is indicated in the following circumstances:

1. Patients receiving anticoagulant therapy which places the patient at significant risk for intracranial hemorrhage or intracranial bleeding.
2. Pediatric considerations for transfer include:
   Pediatric trauma patients <14 years of age injured seriously enough to require hospital admission should be considered for transfer to a Level I or Level II Pediatric Trauma Center.

Appendix B: Transfer Guidelines: Adult Trauma Centers (Level I and II) To Pediatric Trauma Centers

Pediatric trauma patients less than or equal to 14 years of age may benefit from resources and care available at Pediatric Trauma Centers (PTCs). PTCs incorporate specialized pediatric resources typically available in children's hospitals and are therefore usually located in such hospitals. "Children's hospital" is understood to mean a free standing children's hospital or a separate administrative entity within a larger hospital organization such as a children's hospital within a hospital or a full service general hospital with comprehensive pediatric inpatient subspecialty services.

Pediatric Surgeons are a requirement for the care of injured children in PTCs. The presence of a modern pediatric intensive care unit (PICU) utilizing the services of pediatric critical care medicine (PCCM) specialists in cooperation with pediatric trauma surgeons is also a distinguishing characteristic of trauma care at PTCs. PTCs should be used to the fullest extent feasible within the trauma system. Adult Trauma Centers must have transfer agreements in place with pediatric trauma centers. (Reference: ACS, Resources for Optimal Care of the injured Patient: 2014)

For some injured children transfer would be mandatory, barring extenuating circumstances such as weather, transport capabilities and the regional deployment of resources pertaining to the needs of multiple injured patients. Each decision to transfer takes into consideration the enhanced care provided at institutions with dedicated resources for the care of injured children and the inconvenience to families when they are geographically remote from their place of residence and support structures.

A. Pediatric trauma patients, less than or equal to 14 years of age, who meet the following criteria should be transferred to a pediatric trauma center:

   The decision to transfer should be consistent with the best practices of trauma care and under some circumstances may require immediate onsite neurosurgical treatment such as decompression of an expanding epidural hematoma, thoracic, abdominal, and pelvic or extremity procedures required to control hemorrhage, such as laparotomy for hemoperitoneum with hemodynamic instability.
   1. Persistent physiologic derangements, shock, hemodynamically unstable, ongoing transfusion needs.
   2. Traumatic brain injury (significant structural abnormality on x-ray or CT, sustained GCS less than or equal to 13 for greater than two hours, or neurologic deterioration.
   3. Intubation and mechanical ventilation not expected to be weaned and extubated within 24 hours.
   4. Children with special needs and those with other co-morbid conditions such as congenital heart disease, chronic lung disease or other disease processes that will benefit from the multidisciplinary care available at a pediatric trauma center.

B. Pediatric trauma patients who meet the following criteria should be considered for transfer to a pediatric trauma center:
   1. Non-operative management of solid organ injuries.
   2. Any assessment of "negative points" on the Pediatric Trauma Score ("negative points are assigned for: less than 10 kg, airway unmaintainable, systolic blood pressure less than 50 mmHg, coma, major open or penetrating wound, open or multiple fractures.)
   3. Injury Severity Score > 9
   4. Victim or non-accidental injury that requires additional resources including a child protection team.
   5. When it is anticipated that the complexity of ongoing care will exceed the capabilities of the local resources at the adult trauma center.

C. See Inter-Facility Transfer & Consultation Requirements for Level III and IV Trauma Centers for additional details

Appendix C: Admission Considerations for Level IV Trauma Centers

The following conditions may be appropriate for admission to a Level IV Trauma Center:

- Neurotrauma:
  - GCS 15 with normal (baseline) CT
  - GCS less than or equal to 14 with a normal (baseline) CT and an in-house Neurosurgical consultation
  - Neck Strain with no neurological deficits
- Facial Injury:
  - Isolated, non-displaced facial/nasal fracture
- Orthopedic Trauma:
  - Multiple distal orthopedic injuries with intact neurovascular examination in a patient without significant concomitant head, thoracic-abdominal or proximal lower extremity injuries
  - Closed proximal orthopedic injury with intact neurovascular examination in a patient without concomitant significant head or thoracic-abdominal injuries
  - Isolated clavicle fracture
  - Simple, non-operative pelvic fractures
- Truncal Trauma:
  - Rib fractures without presence of pulmonary contusion or flail chest
    - Age > 14 (age 15 or greater)
    - Oxygen saturation > 93% on room air
    - Minimal hemothorax
    - Pneumothorax (isolated injury and asymptomatic)
    - A clinical management guideline which must include pain management, respiratory therapy involvement, admission acuity guideline (med/surg, stepdown, intensive care, etc.), and provider-specific credentialing for chest tube insertion and management
- Superficial abrasions and contusions

Appendix D: Guideline and Policy Reference Tool

The following lists identify operational and clinical guidelines as referenced throughout the standards of accreditation.
Each policy/guideline should be reflective of the scope of practice of the institution

REQUIRED OPERATIONAL POLICIES:

1. Trauma Activation Criteria
2. Trauma Team Member Identification and Role Definition
3. Trauma Activation, Trauma Consult and Non-Activation Provider Response Time Expectations
4. Admission Criteria
5. Level I, II and III: Transfer In
6. Transfer Out
7. Diversion / Disaster
    a. Bypass for transfer when CT capability is unavailable due to planned maintenance or mechanical failure
8. PIPS Plan
9. Screening, Brief Intervention and Referral for Treatment (SBIRT) of Substance Abuse
10. Level I, II and III: ED physician staffing, including defining daily periods of peak utilization
11. Level I and II: Back-up trauma attending expected response time parameters
12. Level III: Back-up trauma attending plan
13. Transfer To and From the Helipad
14. OR staffing availability, immediate response parameters and participants for minimal staffing
15. Level I and II: If cardiopulmonary bypass is not available at the facility: Management/transfer of patients requiring cardiopulmonary bypass
16. Priority Laboratory
17. Priority Radiology
18. Discrepant Radiology Reports (process for changes in interpretation, missed injury/delay in diagnosis, notification, and PI tracking)
19. Incidental Radiology Findings
20. Response time expectations for radiology personnel (CT, MRI) when not in-house
21. Social work capabilities
22. Level I and II: Case management capabilities when there is no identified case manager

REQUIRED CLINICAL GUIDELINES / POLICIES:

1. Anti-coagulant reversal
2. Burn Management
3. C-spine clearance
4. Determination of Brain Death Criteria
5. DVT Prophylaxis
6. First Responder identification, parameters and indications for response
7. Long Bone Fracture Management
8. Adult Trauma Centers: Management of Geriatric Trauma Patient including critical care and rehabilitation
9. Management of Pediatric Trauma Patient including resuscitation, critical care and rehabilitation
10. Massive Transfusion Protocol
11. Level III and IV: Mild Traumatic Brain Injury (TBI)
12. Open Fracture Management

13. Prothrombin Complex Concentrate (PCC) protocol
14. Resuscitation Management: (Adult, Pediatric, and Geriatric (n/a for Pediatric Trauma Center)
15. Screening for and management of suspected or confirmed child abuse, elder abuse, intimate partner violence, and sex trafficking
16. Timeliness of response to emergency situation / patient criteria for: Anesthesia (outside of the trauma resuscitation area), Radiology (interventional), Orthopedics and Neurosurgery as applicable
17. Timely notification of Organ Procurement Organization (OPO)
18. Unstable Pelvic/Acetabular Fracture Management

**Note, this appendix may not be all inclusive.

RECOMMENDED RESOURCES:

EAST Guidelines: https://www.east.org/education/practice-management-guidelines

TQIP Guidelines: https://www.facs.org/quality-programs/trauma/tqip/best-practice

Appendix E: Standards of Accreditation Revision Log

January 1, 2019		
Standard	**Levels**	**Edit**
1: Commitment	All Levels	Clarification within the minimal trauma alert criteria. F. i. was updated as age 10 was not previously accounted for in either category. Age 10 and younger belongs in the pediatric systolic blood pressure category. F. i. was changed to reflect: Systolic blood pressure <70 + (2x age in years) at any time in a patient 10 and younger.
5: Registry	All Levels	Clarified that Trauma Contacts at a minimum must equal PTOS volume.
5: Registry	All Levels	Clarified that an example of inter-rater reliability is to re-abstract records.
5: Registry	All Levels	Registrars maintaining CSTR are not required to maintain continuing education logs.
6: PIPS	Level IV	Clarified that NTDB submission is encouraged but not required for Level IV centers.
6: PIPS And 10: Physicians	Level IV	New Standard: Compliance Date of October 1, 2019: In a level IV program where trauma patients are regularly admitted to an in-patient unit, a medical service representative/liaison must participate on the peer-review committee. Liaison expectations apply.
8: Injury Prevention	Pediatrics	Clarified that all PTOS (pediatric) patients must undergo a screening for abuse and this must be documented. Positive screenings must result in evaluation/investigation of the cause of abuse.
11: Advanced Practitioners	All Levels	Clarified that Certified Registered Nurse Anesthetists (CRNAs) functioning in a supportive/specialist role (such as airway) are exempt from ATLS certification requirements.
13: Nursing	All Levels	Clarified/New standard: Compliance date of October 1, 2019 Units requiring compliance with Nursing standards includes admission/holding/observation areas used as an extension of the Emergency Department.

Standards of Accreditation Revision Log

January 1, 2019		
Standard	**Levels**	**Edit**
13: Nursing	All Levels	Nurses maintaining a trauma advanced certification are not required to maintain continuing education logs. Not applicable to the TPM or PI Coordinator. • Effective immediately.
22: Laboratory and Blood Bank	All Levels	New standard: Expected compliance October 1, 2019. Prothrombin Complex Concentrate (PCC) must be available and a guideline/policy for utilization must be present.

April 1, 2019		
Standard	**Levels**	**Edit**
6: PIPS	Adult Level I, II and III Pediatric Level I and II	Clarified that Any RN fulfilling any component of the PI Role/FTE must maintain 75% attendance at the Trauma PIPS meetings. • Expected compliance of 1.1.2020
7: Continuing Education	ALL	Clarified that internal audience continuing education programs must occur annually.
7: Continuing Education	Adult Level I and II	Clarified that there will be programs in continuing education provided by the institution concerning the treatment of trauma patients of all ages for each of the following external audiences. This may be fulfilled by multidisciplinary programs.
10: Physicians	Adult Level I, II and III Pediatric Level I and II	Clarified that an Emergency Medicine physician must respond to the highest level of trauma alert. In an Emergency Department where a trauma surgeon is present in the ED at all times, the EM Physician is not required to respond to highest level activations.
13: Nursing	ALL	Added that in circumstances where a patient is admitted to the unit under the care of a non-trauma credentialed RN there must be oversight by a trauma credentialed RN, which must include at a minimum immediate availability as a resource. • Expected compliance of 1.1.2020

Standards of Accreditation Revision Log

April 1, 2019		
Standard	**Levels**	**Edit**
13: Nursing	ALL	Added to the list of advanced certifications that exempt a nurse from completing a continuing education log: CNOR, CPAN, and ANCC Medical-Surgical Nursing board certification (RN-BC). See Glossary for details.
13: Nursing	Adult Level I, II, III and IV	Affirmed that the PaTNCC is transferable between Level I, II and III trauma center, however the transferring nurse must complete a hospital-specific module within one year of hire. RNs transferring from a Level IV trauma center must complete the higher-level trauma center PaTNCC RNs transferring from a pediatric trauma center to an adult trauma center must complete a geriatric module if not completed at the previous trauma center. • Expected compliance of 1.1.2020.
13 Nursing	Pediatric Level I and II	Affirmed that the geriatric module of the PaTNCC is optional. The PaTNCC is transferable between pediatric Level I and II trauma centers, however the transferring nurse must complete a hospital-specific module within one year of hire. RNs transferring from an adult Level I, II, or III trauma center can transfer the PaTNCC, at the discretion of the trauma program RNs transferring from a Level IV trauma center must complete the PaTNCC. • Expected compliance of 1.1.2020.
23: Radiology	ALL	Added CT scanner slice capability requirements: Level I & II: A minimum of one 64-slice CT capability scanner Level III & IV: A minimum of one 64-slice CT capability scanner in hospitals where vascular imaging occurs or a minimum of one 16-slice CT capability scanner where vascular imaging does not occur. • Expected compliance of 1.1.2020

Standards of Accreditation Revision Log

April 1, 2019		
Standard	**Levels**	**Edit**
Glossary	ALL	Added: Excused Absence (PI Attendance) and temporary variance: Peer-review meeting attendance may be waived / pro-rated for military deployment, medical leave and missionary work. CNOR: Certified operating room/perioperative nurse CPAN: Certified Post Anesthesia Nurse ANCC Medical-Surgical Nursing certification (RN-BC): American Nurses Credentialing Center's Medical-Surgical Nursing Certification awarding the credential RN-BC, Registered Nurse - Board Certified. RN-BC credentialing. Other ANCC specialty certifications awarding the RN-BC are not applicable.
Appendix A	ALL	Added Flail Chest, and Non-occult pneumothorax defined by the trauma program to the list of conditions that require transfer to a higher-level of care. • Expected compliance of 1.1.2020
Appendix C	ALL	Added Pneumothorax (isolated injury and asymptomatic) and a clinical practice guideline for chest tube insertion and management to the list of conditions that are appropriate for admission to a Level IV trauma center. • Expected compliance of 1.1.2020

Standards of Accreditation Revision Log

August 1, 2019		
Standard	**Levels**	**Edit**
2: Capacity & Ability	Adult Level I, II and III Pediatric Level I and II	Added clarification that communication from Level IV referring hospitals may be by a physician or advanced practitioner.
10: Physicians	ALL	Added clarification to Other Surgical Specialties that regardless of the surgical or admission capabilities, every trauma center must immediately evaluate, stabilize, treat and if indicated transfer trauma patients that exceed the capabilities of the trauma center.
10: Physicians	Level IV	Added that best practice is for the medical service who primarily covers in-patient care to maintain ATLS.
11: Advanced Practitioners	ALL	Added that AP's involved as first responders in any phase of trauma care must have ACLS/PALS (as applicable) • Expected compliance of 1.1.2021
14: Emergency Medical Services	ALL	Added the suggestion to collaborate with EMS to adopt a universal format for the verbal transfer of care of the trauma patient, recommending the standard DMIST communication format.
17: Operating Room	Adult Level I, II and III	Added End-Tidal CO2 Determination to the list of required equipment. • Expected compliance of 5.1.2020
17: Operating Room	Level IV	Added Monitoring equipment to the list of required equipment. • Expected compliance of 5.1.2020
23: Radiology	Adult Level I, II and III Pediatric Level I and II	Added clarification of an MRI log to monitor compliance with response times expectations.

Standards of Accreditation Revision Log

August 1, 2019		
Standard	**Levels**	**Edit**
Glossary	ALL	Added: DMIST • D - Demographics • M - Medical Complaint / Mechanism • I - Inspections / Injuries • S - Signs (vital signs) • T - Treatment This process was formalized by the Pennsylvania Department of Health Bureau of EMS, Pennsylvania Emergency Health Services Council and Pennsylvania Trauma Systems Foundation as a method to standardize the verbal transfer of care process from EMS to the trauma center.
Appendix D	All Levels	Clarified that all Clinical Guidelines/Policies listed are required, and should be reflective of the scope of practice of the institution.

January 1, 2020		
Standard	**Levels**	**Edit**
1: Commitment	Adult Level I, II and III	New Standard per Legislation: New Level I, II and III must be 25 miles from an accredited trauma center. Waiver process in place to waive the 25 mile restriction.
1: Commitment	Adult Level IV	New Standard: Expected compliance January 1, 2021. The Emergency Medicine Physician and/or Advanced Practitioner response to highest level activation is 15 minutes.
2: Capacity & Ability	Adult Level I, II and III	New Standard per Legislation: Level II must have 600 PTOS patients.
2: Capacity & Ability	Adult Level I, II and III Pediatric Level I and II	Added clarification that communication from Level IV referring hospital to a higher level center may be completed by a physician or advanced practitioner.

Standards of Accreditation Revision Log

January 1, 2020		
Standard	**Levels**	**Edit**
6: Performance Improvement & Patient Safety Program	Adult Level I, II, III and IV Pediatric Level I and II	New Standard for programs utilizing the optional role of a PI Medical Director/Associate Medical Director. Expected compliance January 1, 2021. The individual functioning in this role must meet the following requirements: be a physician with Board Certification/Eligibility in specialty field, have a job description, be included in the PIPS plan, maintain a CME log, attend TOPIC course, and attend 75% of the multidisciplinary peer review PI meeting and trauma program operational meeting.
10: Physicians	Adult Level I, II, III and IV Pediatric Level I and II	Clarified that Board Certified and Board Eligible physicians are not required to maintain a CME log.
10: Physicians	Adult Level IV	Clarified that trauma programs with Orthopedic Surgery, Neurosurgery, and/or Anesthesiology involved in the care of the trauma patient at any time must maintain on-call coverage 24/7/365.
Appendix C	Adult Level I, II, III and IV Pediatric Level I and II	Changed Appendix title to Admission Considerations for Level IV Trauma Centers. Removed INR <2 from Neurotrauma, Facial Injury, and Truncal Trauma sections of the of the admission considerations.

May 1, 2020		
Standard	**Levels**	**Edit**
1: Commitment	Adult Level IV	Added clarification that the trauma program must define the response expectations for non-activation trauma patients. See Standard 10 below.
2: Capacity & Ability and Appendix A	Adult Level I, II, III and IV Pediatric Level I and II	Added clarification that patients must be transferred to higher-level trauma centers.
3: Trauma Program Medical Director	Adult Level I, II and III Pediatric Level I and II	Added clarification that years of experience can include years in Fellowship but not years in Residency.

Standards of Accreditation Revision Log

May 1, 2020		
Standard	**Levels**	**Edit**
8: Injury Prevention	Adult Level I, II, III and IV Pediatric Level I and II	New Standard as a recommendation Providers participating in the care of the injured patient should have access to trauma-informed care training. Definition of trauma-informed care added to Glossary.
10: Physicians	Adult Level IV	Added clarification that the trauma program must define response times for the Emergency Physician for all activation levels and non-activation trauma patients. Response time expectations for non-activation trauma patients may be a tiered response time expectation based on triage level, such as ESI levels.
10: Physicians	Adult Level I, II and III Pediatric Level I and II	Added clarification that the Orthopedic Attending or designee must be able to respond at bedside when consulted.
10: Physicians	Adult Level III and IV	New Standard: Effective immediately The second representative from Anesthesia for the PIPS meeting may be a CRNA.
11: Advanced Practitioners	Adult Level I, II, III and IV Pediatric Level I and II	Clarified that APs must complete ATLS prior to participating independently in activations and prior to functioning independently as a first responder.
27: Geriatrics	Adult Level I, II, III and IV Pediatric Level I and II	New Standard: Expected compliance May 1, 2021 The institution must have a policy/procedure/guideline that defined the abuse screening and management of geriatric patients with suspected for confirmed elder abuse, intimate partner violence, and sex trafficking. Reporting of abuse must be in compliance with Pennsylvania law and hospital policy.

Standards of Accreditation Revision Log

August 15, 2020		
Standard	**Levels**	**Edit**
3: Trauma Program Medical Director	Adult Level I, II, III and IV Pediatric Level I and II	Clarified that Trauma Program Medical Directors are not eligible to participate in an Alternate Pathway if not appropriately Board certified.
10: Physicians	Adult Level I, II Pediatric Level I and II	Clarified that Other Surgical Specialties for Level I and II centers must be available at the bedside when requested.
13: Nursing	Adult Level I, II, III and IV Pediatric Level I and II	Added the requirement for all PACU nurses to maintain ACLS provider status, this is in addition to completing the trauma nursing education and annual continuing education. • Upgraded expectation. Compliance due by 5.1.2021.
Appendix A: Inter-Facility Transfer & Consultation Requirements For Level III & IV Trauma Centers	Adult Level I, II, III and IV Pediatric Level I and II	Added an exception to the mandatory transfer of Head/C-Spine patients with a GCS </= 14: patients at their normal baseline GCS less than 14 are not required to be transferred. Revised rib fracture in the presence of pulmonary contusion clarification differences for Level III and Level IV centers.
Appendix C: Admission Considerations for Level IV Trauma Centers	Adult Level I, II, III and IV Pediatric Level I and II	Revised the suggested rib fracture admission considerations details for Level IV centers.
Glossary	Adult Level I, II, III and IV Pediatric Level I and II	Clarified the definition of a First Responder: A physician, or advanced practitioner that is the first provider contacted for emergencies 24 hours a day in any admitted unit/floor. The institution defines which provider is designated the first responder.

Standards of Accreditation Revision Log

January 1, 2021		
Standard	**Levels**	**Edit**
5: Registry	Adult Level I, II, III and IV Pediatric Level I and II	Clarified that the AIS coding course should be the AIS coding version utilized within the PTOS submission software. When a new AIS coding version is implemented in the PTOS submission software, a registrar will have 1 year to complete the updated AISU Coding Course. Currently, the PTOS submission software utilizes AIS 08. PTSF expects to update to AIS15 following the update of Collector to version 5, approximately in January 2022. For AIS15, the AAAM is offering an abbreviated, less expensive "update course" for registrars who have taken the AIS 08 course within the last five years. Upgraded expectation, compliance due 1 year after AIS 15 implementation in PTOS Registry – date to be determined.
5: Registry	Adult Level I, II, III and IV Pediatric Level I and II	Clarified that the trauma registry staffing plan must include a workload analysis for all trauma programs supported that defines the personnel needs necessary to comply with PTOS data submission requirements, this includes (for example) a centralized registry model. • Compliance due by 9.1.2021.
10: Physicians	Adult Level I, II and III Pediatric Level I and II	Clarified that Level I, II and III trauma centers must have a minimum of two physicians in the Emergency Department during daily periods of peak utilization. The trauma program must define peak hours, supported by data, and review it annually.
13: Nursing	Adult Level I, II, III and IV Pediatric Level I and II	Added CPN (Certified Pediatric Nurse) to the list of approved trauma advanced certifications.
22: Laboratory & Blood Bank	Adult Level I, II, III and IV Pediatric Level I and II	Added the recommendation for trauma programs, in collaboration with the blood bank, to consider utilization of Whole Blood. This is optional and not a requirement.

Standards of Accreditation Revision Log

April 1, 2021		
Standard	**Levels**	**Edit**
1: Commitment	Adult Level I, II, III and IV Pediatric Level I and II	Clarified that all programs must have Trauma Resuscitation Management guidelines that include at a minimum ATLS principles and c-spine clearance. This is consistent with the existing required guidelines and policies listed in Appendix D.
5: Capacity & Ability	Adult Level I, II, III and IV Pediatric Level I and II	Clarified that all programs must have policy(s) for admission of the trauma patient to the institution that includes at a minimum: criteria for admission, most common units admitted to, non-trauma service admissions, and special populations such as pediatrics, burns, geriatrics and obstetrics if applicable. This is consistent with the existing required guidelines and policies listed in Appendix D.
6: PIPS	Adult Level I, II, III and IV Pediatric Level I and II	The PIPS indicator section at the end of Standard 6 has been reformatted to clearly identify the required PI indicators that must be monitored by the Trauma Program at a minimum and additional PI indicators that are recommended for consideration by the Trauma Program to monitor. Screening for Substance Abuse, Brief Intervention, and Referral for Treatment (SBIRT) was added to the list PI indicators that are required to be tracked consistent with the Standards.
10: Physicians	Adult Level I, II and III Pediatric Level I and II	Clarified the language of one of the required Orthopedic Surgery practice management guidelines that must be in place is unstable pelvis and acetabular fractures. This is consistent with language of the existing required guidelines listed in Appendix D.
Appendix D	Adult Level I, II, III and IV Pediatric Level I and II	This appendix has been updated to include additional policies and guidelines existing within the Standards. The goal of the revision is to clearly identify the required operational and patient care policies and guidelines from the Standards.

Standards of Accreditation Revision Log

August 1, 2021		
Standard	**Levels**	**Edit**
1: Commitment	Adult Level I, II, III and IV Pediatric Level I and II	Added "Tourniquet utilization" to the list of criteria that is recommended for hospitals to consider including in any level of trauma activation criteria.
3: Trauma Program Medical Director 4: Trauma Program Manager 6: PIPS	Adult Level IV	Added STN-Rural TOPIC course as an option for Performance Improvement process education for Level IV TPMD, TPM and other PI Personnel. Level IV Personnel can take either traditional TOPIC or Rural TOPIC. Level I-III: Note that Rural TOPIC is not an approved Performance Improvement process course.
8: Injury Prevention, Public Education & Outreach	Adult Level I, II, III and IV Pediatric Level I and II	Clarified the SBIRT Standard. Specifically clarified that 80% of all injured patients (PTOS), regardless if activated or not activated, and regardless of admitting service must be screened. Specifically clarified that 100% of those patients that screen positive must have a brief intervention offered to them. Patients refusing resources counts as the hospital offering an intervention.
10: Physicians	Adult Level I, II and III Pediatric Level I and II	Revised the expectation for Board Eligible physicians to become Board Certified. PTSF no longer has a time-frame for achieving Board Certification. Board eligibility will be determined by the appropriate Board, and only when no-longer Board Eligible the provider would be unacceptable for inclusion on the trauma team until an alternate pathway is approved.
16: Emergency Department 23: Radiology	Adult Level I, II, III and IV Pediatric Level I and II	Clarified that hospitals must define the patient population that requires monitoring during transport and while in Radiology, but at a minimum this population must include those patients activated at the highest level of trauma alert during the resuscitative phase of care. Clarified that hospitals must define the appropriate personnel to accompany and monitor the patient during transport and while in Radiology.

Standards of Accreditation Revision Log

August 1, 2021		
Standard	**Levels**	**Edit**
27: Geriatrics	Adult Level I, II, III, and IV	Clarified that multidisciplinary geriatric trauma patient management guidelines (protocols) that include resuscitation, critical care and rehabilitation are required. • Expected compliance by 6.1.2022
28: Pediatrics	Adult Level I,II, III, and IV	Clarified that pediatric trauma patient management guidelines (protocols) are required. At Level I, II and III trauma centers the protocol must include resuscitation, critical care and rehabilitation. At Level IV trauma centers the protocol must include resuscitation. • Expected compliance by 6.1.2022
Appendix D	Adult Level IV	Added the following to the list of required clinical management guidelines at Level IV trauma centers, with the expectation that the guideline will be consistent with the hospital's capabilities and provides guidance on patient management prior to transfer to higher-level trauma center for further management. 1. Unstable pelvic and acetabular fractures 2. Long bone fracture management 3. Open fracture management • Expected compliance by 6.1.2022

October 15, 2021		
Standard	**Levels**	**Edit**
6: PIPS	Adult Level I, II, III and IV Pediatric Level I and II	Clarified that registrars functioning in the PI role must be an RN.

Standards of Accreditation Revision Log

October 15, 2021		
Standard	**Levels**	**Edit**
6: PIPS 10: Physicians Glossary	Adult Level I, II, III and IV Pediatric Level I and II	Clarified Multidisciplinary Peer Review Meeting attendance requirements. All Trauma/General Surgeons must attend 50% of meetings, regardless of the amount of call. Back-up Trauma Surgeons who only serve in this capacity on the back-up call schedule, and not on the primary trauma call roster, are not expected to participate in 50% of multidisciplinary peer review committee meetings. The definition of excused absences was expanded to included situations that are not excused and included within Standard 6. Excused Absences definition: Peer-review meeting attendance may be waived / pro-rated for military deployment, medical leave, and missionary work. The center must provide documentation to support the excused absence. Vacation, patient care, illness and contracted but not working that month are not excused absences and may not be prorated. TPMD/Liaison providing a review of the meeting minutes to the absent provider cannot be counted as attendance at the meeting. Per Diem providers, providers rotating from another hospital, and Locum Tenens providers cannot have attendance expectations prorated based on amount of call taken. A new reference for calculating meeting attendance is available on the last page of Standard 6. The reference includes examples of unique provider situations that can affect meeting attendance tracking.
10: Physicians 11: Advanced Practitioners 12: Residency Programs 13: Nursing 16: ED 19: ICU	Adult Level I, II, III and IV Pediatric Level I and II	PTSF acknowledges the value of ACLS and PALS (or equivalents) in the care of patients. However, as the accrediting body for Trauma Centers, the scope of PTSF must be specific to Trauma Center operations and trauma patient care. Therefore, the Standards have been revised to reflect that PTSF will not include within its purview the maintenance of ACLS and PALS. Hospitals should define which clinicians require maintenance of ACLS and/or PALS and monitor their compliance.

Standards of Accreditation Revision Log

October 15, 2021		
Standard	**Levels**	**Edit**
24: Collaborative Services	Adult Level I, II, III and IV Pediatric Level I and II	Added a new subcategory to this standard: Acute Pain Management. The utilization of a pain management resource as a consultant for trauma care is recommended. This may be a formal pain management service, a representative from pharmacy, or an identified liaison from the trauma program. A protocol for multimodal analgesia (MMA) regimens and limited duration prescriptions is recommended.

April 15, 2022		
Standard	**Levels**	**Edit**
8: Injury Prevention, Public Education & Outreach	Adult Level I, II, III and IV Pediatric Level I and II	Reduced the minimum requirement for completion of brief interventions to 80% of patients who screened positive for substance use. • Effective Immediately
13: Nursing	Adult Level I, II, III and IV Pediatric Level I and II	Clarified that new nurses may have education requirements prorated based on start date/ calendar year.

Standards of Accreditation Revision Log

June 15, 2022		
Standard	**Levels**	**Edit**
10: Physicians	Adult Level IV	Revised the General Surgery Standards to be dependent on the level of participation in the care of the injured patients. The hospital will determine if General Surgeons will not participate, will participate as a Trauma Service, or participate as subspecialty consultants. General Surgeons are considered a Trauma Service if they meet at least 1 of the following: involved in trauma activations, admitting injured patients, and/or performing operative care to injured patients. General Surgery as a Trauma Service must have 24/7/365 coverage, and each General Surgeon must maintain board certification/ eligibility, ATLS, and 50% attendance at the Multidisciplinary Peer Review meeting. General Surgeons are considered a subspecialty consultant service if they meet all of the following: not involved in trauma activations, not admitting injured patients, and not performing operative care to injured patients. General Surgeons can be consulted for wound management, wound debridement, and external hematoma management. General Surgery as a subspecialty consultant service must have 24/7/365 coverage, assign 1 Liaison to attend 50% of the Multidisciplinary Peer Review meeting, and each General Surgeon must maintain board certification/eligibility. • This is an optional addition, effective immediately

Standards of Accreditation Revision Log

June 15, 2022		
Standard	**Levels**	**Edit**
10: Physicians	Adult Level I and II Pediatric Level I and II	Clarified that Other Surgical Specialties (#12) and Other Non-Surgical Specialties (#13) must have 24/7/365 call schedules without gaps in coverage. Clarified the expectation for the surgical specialist Oral/Maxillofacial Surgery. Revised the verbiage to: Craniofacial Expertise. Clarified that Level I Trauma Centers must have Craniofacial Expertise capable to diagnose and manage acute facial fractures of the entire craniomaxillofacial skeleton, including the skull, cranial base, orbit, midface, and occlusal skeleton. Clarified that Level II Trauma Centers must have Craniofacial Expertise and may transfer highly complex/low-volume patients. Clarified if highly complex/low-volume patients will be transferred from Level II Trauma Centers, a transfer plan and PIPS review of all patients transferred must be in place. Clarified that call coverage can be a combination of a single specialty or multiple specialties from the following specialists: Otolaryngology, Oral Maxillofacial Surgery, and Plastic Surgery. Added the surgical specialty of Replantation Expertise. Level I and II Trauma Centers must have either 24/7/365 coverage of Replantation Expertise or have a triage and transfer plan in place with a Trauma Center with Replantation Expertise. Physicians providing Replantation Expertise must be capable of replanting a severed limb, digit or other body part (for example, ear, scalp, or penis), including critical revascularization or care of a mangled extremity. The triage and transfer plan should ensure optimal care with a view toward minimizing time to replantation. • Effective Immediately

Standards of Accreditation Revision Log

June 15, 2022		
Standard	**Levels**	**Edit**
10: Physicians 23: Radiology	Adult Level I and II Pediatric Level I and II	Revised the response expectation for Intervention Radiology to 60 minutes from the time of request to arterial puncture in endovascular or interventional radiology procedures for hemorrhage control. Added that interventional procedures can be performed by Neurosurgeons, Neurologists and Cardiologists who are credentialed and capable to function in the role. • Expected compliance by 1.1.24. Prior to 1.1.24 either parameter will be accepted: 30 minutes from time of request to time of arrival at the bedside 60 minutes from time of request to time of arterial puncture to signify the start of the procedure On and after 1.1.24 the only acceptable parameter will be 60 minutes from time of request to time of arterial puncture to signify the start of the procedure.
10: Physicians 16: Emergency Department 17: Operating Room	Adult Level IV	Added that trauma centers with Orthopedic Surgery involved in the care of the injured patient must have at least 1 intra-compartmental pressure monitoring device in the hospital. • Expected compliance by 6.1.2023.
23: Radiology	Adult Level I, II, and III Pediatric Level I and II	Revised the expectation for Magnetic Resonance Imaging (MRI) response for emergent tests. An emergent MRI test is expected to be initiated within 2 hours of request. The Trauma Program must define the parameters of an emergent test based on level of acuity and monitor compliance. Removed the expectation to have Nuclear Scanning available 24-hours a day with a maximum response time of 30 minutes for emergent/ immediate response. • Effective Immediately
24: Collaborative Services	Adult Level I, II, and III Pediatric Level I and II	Added the requirement to have an affiliation with an organ procurement organization (OPO). • Effective Immediately

Standards of Accreditation Revision Log

October 1, 2022		
Standard	**Levels**	**Edit**
2: Capacity & Ability	Adult Level I, II and III Pediatric Level I and II	Added that every bypass/diversion event must be reviewed at the trauma operations committee. • Expected compliance by 1.1.24

Standards of Accreditation Revision Log

October 1, 2022		
Standard	**Levels**	**Edit**
3: Trauma Program Medical Director	Adult Level I, II and III Pediatric Level I and II	Revised the board certification requirements for TPMDs. TPMDs must be a board certified or board eligible general surgeon. TPMDs can no longer be a general surgeon who is an ACS Fellow with special interest in trauma care. • Effective immediately Clarified that the TPMD must be credentialed by the hospital to provide trauma care. • Effective immediately Added that Pediatric TPMDs who are board certified in general surgery but not board certified/board eligible in pediatric surgery must maintain Pediatric Advanced Life Support (PALS) certification and have a written affiliation agreement with a pediatric TPMD who is board certified in pediatric surgery from an accredited Level I pediatric trauma center. • Effective Immediately Added that Level I TPMD must hold active membership in at least one national trauma organization and have attended at least one meeting during the survey cycle. Membership in the Pennsylvania COT is not equivalent to membership in a national trauma organization. • Expected compliance by 1.1.24 Added that Level II-III TPMD must hold active membership in at least one regional, state, or national trauma organization and have attended at least one meeting during the survey cycle. • Expected compliance by 1.1.24 Revised that the 36 hours of CME in a 3-year period for Pediatric TPMDs must include 9 hours of pediatric-specific content. • Expected compliance by 1.1.24 Clarified that TPMDs must have authority to ensure providers meet all requirements and adhere to institutional standards of practice, and correct deficiencies across departments and other administrative units. • Effective immediately.

Standards of Accreditation Revision Log

October 1, 2022		
Standard	**Levels**	**Edit**
		Added that TPMDs at hospitals pursuing trauma accreditation undergoing an initial site survey must have 12 hours of trauma-related CME during the reporting period. • Expected compliance by 1.1.24 Clarified that TPMDs must have authority to ensure providers meet all requirements and adhere to institutional standards of practice, and correct deficiencies across departments and other administrative units. • Effective immediately
6: PIPS	Adult Level I, II and III Pediatric Level I and II	Clarified the following, which are effective immediately: • The trauma PI program must be independent of the hospital PI program with an organizational chart showing the relationship and bidirectional flow of information between the two programs. • The trauma PI program must have a means to report events and actions to the hospital PI program and the hospital PI program must provide feedback and loop closure to the trauma PIPS program. • The trauma PI program must be empowered to identify opportunities for improvement and develop actions to reduce the risk of patient harm, irrespective of the department, service, or provider. • The trauma program must use the results of benchmarking data (such as TQIP) to determine whether there are opportunities for improvement in patient care and registry data quality. • Pa V5 Outcomes must be utilized for documenting event identification, analysis, verification, corrective actions, loop closure and strategies for sustained improvement measured over time. • Trauma Centers with both adult and pediatric accredited programs must have separate adult and pediatric trauma multidisciplinary PIPS meetings with distinct minutes.

October 1, 2022		
Standard	**Levels**	**Edit**
		Revised the requirements for the trauma PI Plan. Expected compliance by 1.1.24. • Added that there must be an organizational chart demonstrating the structure of the trauma PI process, with a clearly defined relationship to the hospital PI program. • Clarified the trauma PI program must identify events from all phases of care from prehospital care to hospital discharge. • Clarified the use of PI indicator, opportunities for improvement, hospital events and audit filters definitions in the PTOS Manual and Outcomes Manual. • Added that each level of review must be defined, including which cases are reviewed at that level, who performs the review at that level and when cases can be closed or advanced to the next level of review. • Added that the Multidisciplinary PIPS Committee must be defined, including membership and responsibilities. • Clarified that action plan development and issue resolution (loop closure) must each be distinctively included in the trauma PI Plan. • Added the outline of an annual process for identification of priority areas for PI, based on audit filters, event reviews, and benchmarking reports, with the requirement that priority focus areas be data driven.

Standards of Accreditation Revision Log

October 1, 2022		
Standard	**Levels**	**Edit**
		Added PI specifics for Non-surgical admissions (NSA). NSA with surgical consultation, an ISS ≤ 9, or without other identified opportunities for improvement may be closed in primary review, however NSA without surgical consultation, an ISS > 9, or identified opportunities for improvement must, at a minimum, be reviewed by the TPMD in secondary review. Includes the recommendation of utilization of the Nelson tool to review NSA. • Expected compliance by 1.1.24 Added that all traumatic injury related mortality (DOA, died in ED or inpatient, and withdrawal of life-sustaining care) must be reviewed, and classified for potential opportunities for improvement (OFI). Best practice is for review at tertiary level, however at a minimum those with OFI must go to tertiary level while those without OFI can go to secondary review. The categories include event/mortality with an OFI, event/mortality without an OFI, and undetermined OFI. A death should be designated as "mortality with OFI" if any of the following criteria are met: anatomic injury or combination of severe injuries but may have been survivable under optimal conditions; standard protocols were not followed, possibly resulting in unfavorable consequences; provider care was suboptimal. Includes the recommendation to review patients discharged to hospice to ensure there were no OFI in care that might have significantly changed the clinical course that ultimately led to the decision for hospice care. This is an addition to the Standards but a clarification from the Outcomes Manual • Effective immediately

Standards of Accreditation Revision Log

October 1, 2022		
Standard	**Levels**	**Edit**
10: Physicians	Adult Level I, II and III Pediatric Level I and II	Revised requirements for board certification/board eligibility. At Level I & II Trauma Centers, board certification/board eligibility in the appropriate specialty board is required for Anesthesiology, Emergency Medicine, General Surgery, Neurosurgery, Orthopedic Surgery and Radiology. Other surgical and non-surgical specialties must be a board certified or board eligible physician with credentialled expertise (privileges at the institution through the institution's credentialing process for the specialty) in the specific specialty. At Level III Trauma Centers, board certification/ board eligibility is required for Emergency Medicine, General Surgery and Orthopedic Surgery. • Effective immediately Revised the requirement from Microvascular Surgery to Soft Tissue Coverage Expertise at Level I and II Trauma Centers. At Level I Trauma Centers the provider with soft tissue coverage expertise must be capable to address comprehensive soft tissue coverage of wounds, including microvascular expertise for free flaps, all open fractures, soft tissue coverage of a mangled extremity, and soft tissue defects of the head and neck. At Level II Trauma Centers there must be soft tissue coverage expertise 24/7/365, however it is acceptable to transfer highly complex/low-volume patients. If a Level II Trauma Center will transfer highly complex/low-volume patients, then a transfer plan and PIPS review of all patients transferred must be in place. • Effective immediately
22: Laboratory & Blood Bank	Adult Level I, II and III Pediatric Level I and II	Clarified that the blood bank in-house supplies must be based on the needs of the trauma center. • Effective Immediately

Standards of Accreditation Revision Log

January 1, 2023		
Standard	**Levels**	**Edit**
1: Commitment	Adult Level I, II and III Pediatric Level I and II	Updated wording of the minimum criteria for the highest level trauma activation. Specifically simplified the criteria for GCS to only <9 without additional details, and simplified to transfer patient with ongoing blood transfusion. Added a recommended method for involvement in state and regional trauma system planning, development and operation: Participate in media and legislative education to promote and develop trauma systems. • Effective immediately
2: Capacity & Ability	Adult Level I, II and III Pediatric Level I and II	Revised the Diversion Standard. Revised the maximum amount of diversion hours per year, decreasing to 400 hours. Added that the hospital must have a trauma diversion protocol approved by the TPMD. Simplified the definition of diversion to the time during which the trauma center is not accepting trauma patients from the scene or via interfacility transfer. • Expected compliance by 1.1.24
6: PIPS	Adult Level I, II and III Pediatric Level I and II	Clarified the expectation for hospitals to provide feedback to EMS and referring providers. Review and feedback to EMS agencies must include transportation, transfer, accuracy of triage and clinical care. Review and feedback to referring providers must include care and outcomes of their patients and any potential opportunities for improvement in initial care. Clarified death event categorization. • Effective immediately
10: Physicians	Adult Level I, II and III Pediatric Level I and II	Clarified the Trauma Surgery/General Surgery Standard. Clarified that general surgeons who are involved in the care of trauma patients must have privileges in general surgery (Adult Level I-III) or general and/or pediatric surgery (Pediatric Level I-II). Clarified that residents' response to highest level trauma activations does not count toward the attending surgeon's response expectation. • Effective immediately

Standards of Accreditation Revision Log

January 1, 2023		
Standard	**Levels**	**Edit**
14: Emergency Medical Services	Adult Level I, II and III Pediatric Level I and II	Added that the trauma program must identify a physician from the emergency department or trauma program to participate in the pre-hospital PI process, assist in the development of local prehospital care protocols related to trauma care, and facilitate communication, education and outreach with EMS. • Expected compliance by 1.1.24

March 15, 2023		
Standard	**Levels**	**Edit**
1: Commitment 2: Capacity & Ability	Adult Level I, II and III Pediatric Level I and II	Clarified that the decision to transfer an injured patient must be based solely on the needs of the patient, without consideration of their health plan or payor status. Subsequent decisions regarding transfer should be made by the Trauma Surgeon only after stabilization of the patient's condition and appropriateness of the receiving facility's resources relative to the patient's needs. • Expected compliance by 1.1.24 Removed the requirement of transfer agreements. Added that written transfer plans must also include a list of predetermined referral centers, and the expected time frame for initiating and accepting a transfer. • Expected compliance by 1.1.24
2: Capacity & Ability	Adult Level I, II, III and IV Pediatric Level I and II	Updated the indications for transfer of burn patients based on the updated American Burn Associations Guideline for Burn Patient Referral to a Burn Center. • Expected compliance by 1.1.24 Level I, II and III: Clarified that the transfer consultation process may include communication through a transfer center. • Effective immediately

Standards of Accreditation Revision Log

March 15, 2023		
Standard	**Levels**	**Edit**
3: Trauma Program Medical Director	Pediatric Level I and II	Added additional requirements for pediatric TPMDs who are not board certified in pediatric surgery. The affiliate pediatric TPMD must be identified in the written affiliation agreement. The affiliate pediatric TPMD must attend 50 percent of the trauma multidisciplinary PIPS committee meetings, and must attend the accreditation site surveys. • Expected compliance by 1.1.24
5: Registry	Adult Level I, II and III Pediatric Level I and II	Revised the FTE requirements for registry staff to 0.5 Registrar FTE per every 200-300 trauma contacts. • Expected compliance by 1.1.25 Added that Registrars must complete an ICD course or refresher course every five years, as evidenced by a certificate. The course should correspond to the ICD version utilized within the PTOS submission software. • Expected compliance by 1.1.25 Clarified Registrar continuing education is eight hours annually or 24 hours over three years. At pursuing hospitals, for the initial accreditation survey each registrar must have at least eight hours during the reporting period. • Effective Immediately Added that the trauma program must have a written data quality plan that reflects compliance with the PTOS operations manual, includes a minimum of quarterly review of data quality, allows for a continuous process that ensures the fitness of data for use which may include an inter-rater reliability approach, internal or external data validation, or the use of reports. • Expected compliance by 1.1.24

Standards of Accreditation Revision Log

March 15, 2023		
Standard	**Levels**	**Edit**
9: Research	Adult Level I Pediatric Level I	Added that the hospital administration must demonstrate support for the research program and included suggested methods of support. Added that at least once per survey cycle a trauma program faculty member will speak at a regional, national, or international trauma conference. Revised the requirements for publications. Removed the option for two different methods. All Level I trauma centers must publish a minimum total of 10 trauma related publications within a three year period. • Three publications must be from members of the general surgery trauma team (adult program), or general/pediatric surgery trauma team (pediatric program). • One publication from three different specialties: Anesthesia, Basic Sciences, Cardiothoracic Surgery, Critical Care, Emergency Medicine, Neurosurgery, Nursing, Orthopedics, Plastics/ Maxillofacial Surgery, Radiology, Rehabilitation, and Vascular Surgery. • Added that a case series must have more than five patients to be counted among the 10 trauma related publications, and a maximum of one publication can be from acute care surgery. Added that publication authors from the trauma center must meet accepted authorship requirements of the International Committee of Medical Journal Editors. Added the trauma center must support residents or fellows in any of the following scholarly activities: laboratory experiences, clinical trials, resident trauma paper competitions, or resident trauma research presentations. • Expected compliance for all Research revisions by 1.1.24. Prior to 1.1.24, the trauma center may choose between meeting the previous standard requirement or the new standard requirement.

Standards of Accreditation Revision Log

March 15, 2023		
Standard	**Levels**	**Edit**
10: Physicians	Pediatric Level I and II	Added the requirement of a Child Abuse Physician who provides expertise in child abuse/ nonaccidental trauma. • Minimally the physician must have a special interest in child abuse/non-accidental trauma; preferably has board certification or board eligibility in child abuse pediatrics. • This role provides leadership in addressing the needs of children with nonaccidental trauma, is involved in the development of relevant policies and procedures, and where necessary, provides inpatient assessment and care. • Expected compliance by 1.1.24

Standards of Accreditation Revision Log

March 15, 2023		
Standard	**Levels**	**Edit**
17: Operating Room	Adult Level I, II and III Pediatric Level I and II	Clarified that the first OR team must include nursing and anesthesia personnel. • Effective Immediately Added the requirement of an OR booking policy/ guideline that specifies time expectation for timely access to the OR based on level of urgency/ acuity, includes access expectations for a range of clinical trauma priorities, and defines the parameters of immediate/emergent response based on level of urgency/acuity. At Level I & II trauma centers, it must outline the process and expectations related to preparing a second OR, both during regular working hours and after hours. • Expected compliance by 1.1.24 Added that at a minimum OR staffing must include nursing and anesthesia personnel to prepare the room and patient for an emergency surgical intervention. Added that the OR must track the on call personnel's response from initial notification to arrival. The expectation is that the OR team is notified when a trauma patient is going to be sent to the OR. • Expected compliance by 1.1.24 Revised the expectation for available ORs for musculoskeletal trauma care. • Level I & II trauma centers must have a dedicated OR prioritized for fracture care in nonemergent musculoskeletal trauma. Level III trauma centers must make ORs available for nonemergent musculoskeletal trauma. • The TPMD and the Orthopedic Liaison shall collaboratively determine and approve operational details related to staffing, frequency of availability, and use by other services. The frequency of availability should be sufficient to provide timely fracture care for patients.

Standards of Accreditation Revision Log

March 15, 2023		
Standard	**Levels**	**Edit**
		• Skeletal fixation is often secondary to immediate and lifesaving resuscitative intervention; might be staged, and often requires unique expertise. Predictable access to an OR assures that musculoskeletal trauma care can be planned and that the right expertise will be available to provide optimal care. • Expected compliance by 1.1.25
22: Laboratory & Blood Bank	Adult Level I, II and III Pediatric Level I and II	Added that the Massive Transfusion Protocol must include details on the process to trigger MTP activation, the process for cessation, and strategies for preservation of unused blood. • Expected compliance by 1.1.24 Clarified that the rapid reversal protocol for patients on anticoagulants should include therapeutic options and indications for the use of each reversal agent. • Effective Immediately

Standards of Accreditation Revision Log

March 15, 2023		
Standard	**Levels**	**Edit**
24: Collaborative Services	Adult Level I, II and III Pediatric Level I and II	Pediatric Trauma Centers Only: Added that the child protective service must be led by a physician who is board certified/board eligible in child abuse pediatrics or has a special interest in child abuse/nonaccidental trauma. • Expected compliance by 1.1.24 Added expectations for discharge planning. • The hospital must have a process to determine the level of care patients require after trauma center discharge, as well as the specific rehabilitation care services required at the next level of care. The medical record must show documentation of level of care and service requirements. • The discharge planning should ensure a patient-centered approach. The core of a patient-centered approach is the acknowledgment that patients' perspectives can be integrated into all aspects of the planning, delivery, and evaluation of trauma center care. • Added that if the trauma patient is transferred to another institution for rehabilitation, outcome and follow-up must be formally requested if not received. • Recommend Level I & II trauma centers adopt a means to facilitate the transition of patients into the community. This transition shall use patient-centered strategies such as peer-to-peer mentoring, a trauma survivors' program, or continuous case management. Transition management shall elicit and address patient concerns and link trauma center services with community care. • Expected compliance by 1.1.24 Clarified that the hospital must have nutritional support services. • Effective Immediately

Standards of Accreditation Revision Log

March 15, 2023		
Standard	**Levels**	**Edit**
		Added that the hospital must have a protocol that identifies which patients will require rehabilitation services during their acute inpatient stay. At adult trauma centers, the protocol must include screening of geriatric patients for mobility limitations and assurance of early, frequent, and safe mobility. At Level I & II trauma centers, Physical Therapy and Occupational Therapy must be available seven days a week. Availability can be in-house or on call with response expectations defined by the hospital. • Expected compliance by 1.1.24
25: Social Work	Adult Level I and II Pediatric Level I and II	Added that a social worker must be available for trauma patients seven days a week. Availability can be in-house or on call with response expectations defined by the hospital. • Expected compliance by 1.1.24
27: Geriatrics	Adult Level I, II and III	Added required content for geriatric trauma patient management guidelines (protocols): Identification of vulnerable geriatric patients Identification of patients who will benefit from the input of a health care provider with geriatric expertise Prevention, identification, and management of dementia, depression, and delirium 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 Medication reconciliation and avoidance of inappropriate medications Screening for mobility limitations and assurance of early, frequent, and safe mobility Implementation of safe transitions to home or other health care facility • Expected compliance by 1.1.24

Standards of Accreditation Revision Log

August 1, 2023		
Standard	**Levels**	**Edit**
10: Physicians	Adult Level I, II and III Pediatric Level I and II	Clarified the responsibilities for the surgical director/co-director also includes developing pathways and protocols for the care of the trauma patient, and participation in the care of the patients. Clarified that in Pediatric Trauma Centers, the two physicians in Level I centers and one physician in Level II centers with the required board certification must practice at least part of their time in the ICU where the majority of pediatric trauma patients are cared for. Clarified that in Adult Level III Trauma Centers, the ICU physicians providing 24-hour coverage of all trauma patients can be a surgeon, intensivist, hospitalist or advanced practitioner. Clarified that Ophthalmology may have sporadic gaps in call coverage due to vacation, conference attendance, etc., with a contingency plan to address the gaps. • Effective immediately

Standards of Accreditation Revision Log

August 1, 2023		
Standard	**Levels**	**Edit**
12: Residency Programs	Adult Level I Pediatric Level I	Clarified that the requirements of the Accreditation Council for Graduate Medical Education (ACGME) must be met. Updated that trauma centers must demonstrate commitment to postgraduate training and education with residency rotations in trauma by residents from an ACGME accredited programs. The rotations must be continuously available to assure ample exposure to trauma care, and available to general surgery residents, and if available, orthopedic, neurosurgery and emergency medicine residents. "Available" to residents implies the rotation is open to receive trainees at all times. Added that the residency program must have a defined documented trauma curriculum and trauma specific objectives for junior and senior residents specifically designed to prepare surgeons to be proficient in the delivery of high level of trauma care. Added that there must be sufficient volume and breadth of cases to provide general surgery senior residents the opportunity to meet the competency requirements for senior general surgery residents in trauma set forth by the ACGME. • Expected compliance by 1.1.25

Standards of Accreditation Revision Log

August 1, 2023		
Standard	**Levels**	**Edit**
13: Nursing	Adult Level I, II and III Pediatric Level I and II	Clarified that the PaTNCC trauma nurse course utilized by the hospital must be reviewed and continuing education credits granted by an organization accredited to provide continuing education by a professional nursing organization. Clarified that the annual continuing education must correspond to the nurses' scope of practice and patient population served. Added that the PCAR and TNACT advanced trauma courses may be credited to fulfill up to twelve hours of continuing education requirements over a three year timeframe from the class. Clarified that advanced certification requirements for an accredited trauma center that is opening a new unit is 25% of the nursing must have advanced certification within the first year of opening. • Effective immediately
17: Operating Room	Adult Level II and III Pediatric Level II	Clarified that Level II and III Trauma Centers that have cardiopulmonary bypass capability must have it immediately available when required or a contingency plan must exist. The contingency plan must address the need for immediate transfer of patients with time-sensitive cardiovascular injuries. • Effective immediately

Standards of Accreditation Revision Log

August 1, 2023		
Standard	**Levels**	**Edit**
19: Intensive Care Units	Adult Level I, II and III Pediatric Level I and II	Added that trauma patients requiring ICU admission must be admitted to, or evaluated by, a surgical service. The admitting trauma service must retain responsibility of the patient and maintain control over all aspects of care up to the point where the trauma surgeon documents transfer of primary responsibility to another service. While on the trauma service, the trauma surgeon must be kept informed of and concur with major therapeutic and management decisions when care is being provided by a dedicated ICU team. Added that there must be a policy that defines the hospital's expectation of the time frame within which the initial surgical evaluation is performed in the ICU. The policy must also include notification of changes in care to the trauma service. • Expected compliance by 1.1.25 Clarified that in Pediatric Trauma Centers, the two physicians in Level I centers and one physician in Level II centers with the required board certification must practice at least part of their time in the ICU where the majority of pediatric trauma patients are cared for. • Effective immediately

Standards of Accreditation Revision Log

August 1, 2023		
Standard	**Levels**	**Edit**
23: Radiology	Adult Level I, II and III Pediatric Level I and II	Added that conventional radiology must have the necessary human resources and equipment available for emergent/immediate tests within 15 minutes at Level I and II centers, and 30 minutes at Level III centers. The response time is tracked from initial request (order) to start of the test. The trauma program must define the parameters of emergent/immediate response based on level of acuity and patient needs. The PIPS program must monitor compliance with initiation of emergent tests and review delays for effects on patient care. Added that there must be documentation on the preliminary diagnostic imaging report that critical findings were communicated to the trauma team. Added that final interpretation of CT scans must be documented no later than 12 hours after completion of the scan. Added that at Level I and II centers CT Technicians must be available within 15 minutes for emergent/immediate tests from the time of request (order) to initiation of test. At Level III centers, CT Technicians must be available within 30 minutes for emergent/immediate tests from the time of request (order) to initiation of test. The trauma program must define the parameters of emergent/immediate response based on level of acuity and patient need. The PIPS program must monitor initiation of emergent tests and review delays for effects on patient care. Added that point-of-care ultrasound must be available 24 hours a day with a maximum response time of 15 minutes for emergent/immediate tests from the time of request (order) to initiation of test. This is a new imaging requirement at Level III Trauma Centers. The PIPS program must monitor compliance with initiation of emergent tests and review delays for effects on patient care. Added that Level I and II centers must have a mechanism in place to remotely view radiographic imaging from referring hospitals. • Expected compliance by 1.1.25

Standards of Accreditation Revision Log

August 1, 2023		
Standard	**Levels**	**Edit**
23: Radiology	Adult Level I, II, III & IV	Clarified that in the pediatric population, consider use of non-radiation imaging to limit exposure to radiation. • Effective Immediately

October 15, 2023		
Standard	**Levels**	**Edit**
2: Capacity & Ability	Adult Level I, II and III Pediatric Level I and II	Added that at Level III Trauma Centers the admission policy must include the types of neurotrauma injuries that may be treated at the center and be approved by the TPMD. Added that the trauma program must be integrated into the hospital's disaster plan to ensure a robust surgical response. The surgical response must include an outline of the critical personnel, means of contact, initial surgical triage (including subspecialty triage when appropriate), and coordination of secondary procedures. Added that the trauma surgeon who is a member of the hospital's disaster committee is responsible for the development of a surgical response to a mass casualty event. At Level I and II Trauma Centers, this individual must successfully complete the Disaster Management and Emergency Preparedness (DMEP™) or eDMEP at least once. Added that at Level I Trauma Centers an Orthopedic Surgeon who provides care to injured patients must be a member of the hospital's disaster committee. Added that the Trauma Center must participate in regional disaster/emergency management committees, health care coalitions, and regional mass casualty exercises. Added that the trauma program must participate in two hospital drills or disaster plan activations per year that include a trauma response with the goal of refining the hospital's response to mass casualty events. Actual plan activations and tabletop exercises are acceptable. • Expected compliance by 6.1.25

Standards of Accreditation Revision Log

October 15, 2023		
Standard	**Levels**	**Edit**
		Clarified that the Trauma Center must have a provider and equipment immediately available to establish an emergency airway. The emergency airway provider must be capable of advanced airway techniques, including surgical airway. • Effective immediately
3: Trauma Program Medical Director	Adult Level I, II, and III Pediatric Level I and II	Clarified that attendance at the Annual Trauma Quality Improvement Program is not equivalent to attending a trauma organization's member meeting and therefore does not satisfy the Standard for Trauma Program Medical Directors. • Effective with the associated Standard on 1.1.24
5: Registry	Adult Level I, II, III and IV Pediatric Level I and II	All Levels: • Added that Trauma Centers must create a facility-specific data hierarchy for all required elements in the PTOS Manual, to allow for consistent data abstraction. • Revised the definition of Trauma Contacts to all patients who meet PTOS inclusion criteria, NTDS inclusion criteria (not already counted in the PTOS inclusion), and those patients who meet inclusion criteria for hospital, local, and regional purposes. • Expected compliance by 6.1.25

Standards of Accreditation Revision Log

October 15, 2023		
Standard	**Levels**	**Edit**

		Levels I-III:
		• Added that the registry staffing plan must include at least one Registrar with a current certification as a Certified Abbreviated Injury Scale Specialist (CAISS) offered by AAAM. There is a recommended minimum of 1 year of experience with AIS prior to certification. A trauma program with Registrars with less than 1 year of registry experience must have a plan in place to achieve CAISS within 3 years of appointment. A CAISS certified Registrar with FTEs attributed to a combined adult/pediatric trauma program can meet the CAISS requirement for each of those programs. Additional trauma program personnel, including but not limited to Performance Improvement Coordinators and Injury Prevention Coordinators, with 0.5 FTE dedicated to the trauma registry, can meet this Standard.
		  • Expected compliance by 1.1.26
		• Added the recommendation that at Trauma Centers with multiple registrar FTEs, a registry structure should include an identified individual(s) with a portion (% of effort) of their FTE dedicated for administrative duties to oversee registry operations, quality (data validation), data analytics, and education.
		• Added the recommendation that additional registrars may be needed to support Trauma Center research through report generation and abstraction of additional customized elements. One consideration would be to determine a percentage of registry effort per faculty/fellow, especially if the faculty's academic appointment requires a certain volume of publications for advancement.
		• Added the recommendation that at minimum, registry staff should have a basic understanding of anatomy/physiology and medical terminology prior to attending an AIS class.
		  • Effective immediately

Standards of Accreditation Revision Log

October 15, 2023		
Standard	**Levels**	**Edit**
6: PIPS	Adult Level I, II and III Pediatric Level I and II	Added that the clinical practice/patient management guidelines, protocols, or algorithms must be reviewed and updated at least every three years and can be developed or revised in response to new evidence or opportunities for improvement. • Expected compliance by 6.1.25
8: Injury Prevention, Public Education & Outreach	Adult Level I, II, III and IV Pediatric Level I and II	All Levels: • Updated Tables 2 and 3 "Suggestions for planning optimal injury prevention and violence intervention strategies with the greatest impact" and "Suggested methods for tracking and reporting of injury prevention activities." • Effective immediately Levels I-III: • Clarified that injury prevention programs can also reflect local epidemiological data. • Effective immediately • Revised that two annual injury prevention activities must address separate major causes of injury. Each must have specific objectives, goals, and timeframe for completion which should be documented for each of the prevention initiatives in advance of implementation so that the trauma center can describe the success relative to the stated goals. • Expected compliance by 6.1.25 • Added that Injury Prevention Coordinator position must be someone other than the trauma Performance Improvement Coordinator, in addition to the current expectation that it cannot be the Trauma Program Manager. • Expected compliance by 6.1.25 • Added the reference "ACS COT Best Practice Guideline for recognition of abuse" https://www.facs.org/media/o0wdimys/abuse_guidelines.pdf

Standards of Accreditation Revision Log

October 15, 2023		
Standard	**Levels**	**Edit**
		• Revised the SBIRT Standard to require substance misuse screenings and brief interventions for all PTOS admissions over 12 years of age, removing a minimum length of admission. The screening methods are at the discretion of the individual trauma center but must include a validated tool or blood/urine laboratory testing. The brief intervention must be completed by appropriately trained staff as determined and credentialed by the institution (could include nurses, social workers, etc.) and must occur prior to patient discharge. Included the references "ACS COT Quick Guide Alcohol Screening and Brief Intervention for Trauma Patients" https://www.facs.org/media/wdanhnsc/alcohol-screening-and-brief-intervention-sbi-for-trauma-patients-cot-quick-guide.pdf and "Best Practice Guidelines Screening and Intervention for Mental Health Disorders and Substance Use and Misuse in the Acute Trauma Patient" https://www.facs.org/media/nrcj31ku/mental-health-guidelines.pdf • Expected compliance by 6.1.25 • Added that the Trauma Center must meet the mental health needs of the trauma patient and must have a protocol to screen patients at high risk for psychological sequelae with subsequent referral to a mental health provider. The protocol must include a structured approach to identify patients at high risk for mental health problems. Included the reference "ACS COT Best Practice Guidelines Screening and Intervention for Mental Health Disorders and Substance Use and Misuse in the Acute Trauma Patient" https://www.facs.org/media/nrcj31ku/mental-health-guidelines.pdf • Expected compliance by 6.1.25

Standards of Accreditation Revision Log

October 15, 2023		
Standard	**Levels**	**Edit**

10: Physicians	Adult Level I, II, III and IV
	Pediatric Level I and II
		All Levels:
		• Added that telemedicine is an acceptable form of consult for Pain Management, Physiatry, and Psychiatry subspecialists. Trauma Centers wishing to utilize telemedicine for other subspecialties should refer to Policy AC-105: Applying for a Variance from a Standard for additional details.
		  • Effective immediately
		
		Level I-III:
		• Clarified that at Pediatric Trauma Centers there must be Obstetric and Gynecologic surgical expertise, and if the obstetric and gynecologic surgical expertise is not immediately available for emergent surgical intervention, a contingency plan, including immediate transfer to an appropriate center and PIPS review of all patients transferred must be in place.
		  • Effective immediately
		• Revised that Level I & II Trauma Centers must have physicians in the Emergency Department who are board certified or board eligible in Emergency Medicine or Pediatric Emergency Medicine. Physicians who completed primary training in a specialty other than emergency medicine or pediatric emergency medicine prior to 2016 may participate in trauma care. At Level III Trauma Centers, physicians in the Emergency Department can be board certified or board eligible Emergency Medicine, Pediatric Emergency Medicine, or a specialty other than emergency medicine.
		• Added that the Emergency Department Physician Director at Level I and II Trauma Centers must be board certified or board eligible in Emergency Medicine or Pediatric Emergency Medicine.

Standards of Accreditation Revision Log

October 15, 2023		
Standard	**Levels**	**Edit**

		• Revised that at both Level I and II Trauma Centers a board certified or board eligible Emergency Medicine physician must be present in the emergency department 24/7/365 with no gaps in coverage.
		• Added that there must be a protocol/policy defining the shared roles and responsibilities of Trauma Surgeons and Emergency Medicine physicians for trauma resuscitation and clearly established responsibilities of the Emergency Medicine Physician on the trauma team. The protocol/policy must be approved by the TPMD.
		  • Expected compliance by 6.1.25
		• Clarified that at Pediatric Level I Trauma Centers there must be at least one board certified or board eligible neurosurgeon who has completed a pediatric neurosurgery fellowship and one additional board certified or board eligible neurosurgeon with demonstrated interest in trauma care.
		  • Effective immediately
		• Revised that the defined parameters of Neurosurgical emergent consults based on level of acuity must include, at a minimum, severe traumatic brain injury (GCS less than 9) with head CT evidence of intracranial trauma, moderate traumatic brain injury (GCS 9–12) with head CT evidence of potential intracranial mass lesion, neurologic deficit as a result of potential spinal cord injury (applicable to spine surgeon, whether a Neurosurgeon or Orthopedic surgeon), and Trauma Surgeon discretion/request for emergent consult. The emergent consult must be within 30 minutes and may occur remotely (viewing CT, MRI, etc.). Neurosurgical provider response times must be documented.
		  • Expected compliance by 6.1.25

Standards of Accreditation Revision Log

October 15, 2023		
Standard	**Levels**	**Edit**
		• Added required non-surgical specialties of Pain management (with expertise to perform regional nerve blocks), Physiatry and Psychiatry who must be available 7 days a week. Bedside response preferred and telemedicine response acceptable. • Expected compliance by 1.1.26
16: Emergency Department	Adult Level I, II and III Pediatric Level I and II	Added that a pediatric readiness assessment (https://www.pedsready.org/) and a documented plan to address identified gaps must be completed at a minimum every 3 years. "Pediatric readiness" refers to infrastructure, administration and coordination of care, personnel, pediatric-specific policies, equipment, and other resources that ensure the center is prepared to provide care to an injured child. Includes the reference "Pediatric Readiness Toolkit" https://emscimprovement.center/domains/pediatric-readiness-project/readiness-toolkit/ • Expected compliance by 6.1.25

Standards of Accreditation Revision Log

January 1, 2024		
Standard	**Levels**	**Edit**

2: Capacity & Ability	Adult Level I, II and III	Revised the requirements for adult trauma centers caring for pediatric patients. Adult trauma centers annually caring for 100 or more pediatric patients no longer need to comply with all PTSF Pediatric Standards; they must comply with the following:
		• Pediatric emergency department area which may include dedicated pediatric rooms or mobile pediatric carts with pediatric equipment that can turn a room into an appropriate pediatric room.
		• Pediatric intensive care area which may include a dedicated pediatric intensive care unit or mobile pediatric carts with pediatric equipment that can turn a room into an appropriate pediatric room. Required pediatric equipment includes:
		  • Tool or chart that relies on weight (kilograms) used to assist clinicians in determining equipment size and correct medication dosing by weight and total volume
		  • Pediatric doses of medication
		  • Pediatric-specific defibrillation pads
		  • Pediatric monitoring equipment
		  • Pediatric bag-mask device, endotracheal tubes, laryngoscope blades, tracheostomy tubes, difficult airway supplies and/or kit, suction catheters, nasopharyngeal airways, oropharyngeal airways, non-rebreather masks, and nasal cannula
		  • Pediatric chest tubes
		  • Pediatric central venous catheters, intravenous and intraosseous needles, infusion devices with the ability to regulate the rate and volume of infusate (including low volumes)
		• The count of 100 or more pediatric patients includes PTOS pediatric patients who were admitted, remained at the hospital in observation status and dead on arrival. Pediatric patients transferred to another trauma center or pediatric patients with isolated burns are excluded in the count.
		• Expected compliance by 6.1.25

Standards of Accreditation Revision Log

January 1, 2024		
Standard	**Levels**	**Edit**
4: Trauma Program Manager	Adult Level I, II and III Pediatric Level I and II	Clarified that the TPM has oversight of the trauma program, plays an essential role in the delivery of optimal and equitable trauma care to all patients, and an organizational chart depicting the relationship with the TPMD, hospital governance, and administration and other services. • Effective immediately Clarified that the TPM job description should also include development and implementation of clinical protocols and practice management guidelines, providing educational opportunities for staff development, oversight of trauma registry and performance improvement program, involvement in the budgetary process of the trauma program and serve as a liaison to administration and represent the trauma program on hospital and regional committees to enhance trauma care. • Effective immediately Added that the TPM must have a minimum of a Bachelor of Science in Nursing degree with a master's degree preferred. Clarified that measures of competency for TPMs can include attainment and maintenance of an advanced certification by an accredited organization such as TCRN, CEN, CPEN, CCRN, PCCN, CPN, CFRN and CNRN, maintenance or faculty of Advanced Trauma Care for Nurses, and three years as an RN at a trauma center in the care of the injured patient. Trauma Centers wishing to utilize a TPM that does not meet these qualifications should refer to Policy AC-105: Applying for a Variance from a Standard for additional details. • Expected compliance by 1.1.25 Revised the requirement for annual trauma-related continuing education to 36 hours over three years or 12 hours annually. Recommend participation in Advanced Trauma Care for Nurses and a trauma program management course by a national organization such as STN Optimal. • Expected compliance by 1.1.25

Standards of Accreditation Revision Log

January 1, 2024		
Standard	**Levels**	**Edit**
		Added that TPMs at Level I and II Trauma Centers must hold active membership in at least one national trauma organization and have attended at least one national conference during a three-year period • Expected compliance by 1.1.26
5: Registry	Adult Level I, II and III Pediatric Level I and I	Added that the written data quality plan must include a minimum accuracy expectation and plan for improvement if a Registrar is below the internal accuracy expectation. • Expected compliance by 1.1.25 Added the recommendation that the trauma program should utilize an electronic data transfer process to reduce keystroke entry and promote a focus on injury coding, event capture and data validation. • Effective immediately

Standards of Accreditation Revision Log

January 1, 2024		
Standard	**Levels**	**Edit**
6: PIPS	Adult Level I, II and III Pediatric Level I, II	Added the following to the PIPS Indicators: • Delayed recognition of or missed injuries • Compliance with prehospital triage criteria, as dictated by regional protocols • Delays or adverse events associated with prehospital trauma care • All Non-Surgical Trauma Admissions • Recommend utilizing the Nelson tool • Lack of availability of essential equipment for resuscitation or monitoring • MTP Activations and appropriateness of component ratios • Significant complications and adverse events • Transfers to hospice • Mental health screening compliance • Delays in providing rehab services • Neurotrauma care at Level III trauma centers • All traumatic injury related death Revised the following PIPS Indicators: • Removed annually from the Indicator - Compliance with Activation Criteria • Removed quarterly from the Indicator - Over/Under triage trended rate • Recommend utilizing Need for Trauma Intervention (NFTI) in review of over/under triage • Expected compliance by 1.1.25
10: Physicians	Adult Level I, II and III Pediatric Level I and II	Added that Level I and II Trauma Centers must have a Geriatric Provider Liaison to the trauma service who assists in the development and implementation of geriatric protocols and is available for patient consultation. The Geriatric Provider Liaison must be one of the following clinicians: a Geriatrician, a physician with expertise and focus in geriatrics, or an advanced practitioner with certification, expertise and a focus in geriatrics. This Liaison is not required to attend trauma PI meetings. • Expected compliance by 1.1.25

January 1, 2024		
Standard	**Levels**	**Edit**
		Added that Level I Trauma Centers must have an Orthopedic Surgeon Liaison who has completed an orthopedic traumatology fellowship approved by the Orthopaedic Trauma Association (OTA). Trauma centers with both adult and pediatric trauma programs may share the adult OTA fellowship trained Liaison. Trauma centers wishing to have an Orthopedic Surgeon liaison who has not completed an OTA-approved orthopedic traumatology fellowship must obtain a variance from this standard. Refer to Policy AC-105: Applying for a Variance from a Standard. The request for the variance must demonstrate the Liaison meets the following criteria: • At least 50 percent of the Orthopedic Surgeon's practice is dedicated to providing care to orthopedic trauma patients. • Active trauma committee membership in a regional, national, or international organization (outside of hospital or institution) and attendance at one member meeting during the reporting period. • Participation in peer-reviewed publications/research in orthopedic trauma over the past three years. • Participation in trauma-related educational activities as an instructor or educator (outside of hospital or institution) in the past three years. • Expected compliance by 1.1.25 Clarified that Orthopedic Surgery must have a published 24/7/365 on-call schedule without gaps in coverage. • Effective immediately

January 1, 2024		
Standard	**Levels**	**Edit**
		Added that the Trauma Center must provide a contingency plan in case the capability of the orthopedic surgeon, hospital or system is encumbered or overwhelmed and unable to meet standards of care for the orthopedic trauma patient with time-sensitive injuries. This plan must include EMS notification of advisory status/diversion, if applicable, evaluation of timely and appropriate care during event, and monitoring the efficacy of the process and each instance by the PIPS program. • Expected compliance by 1.1.25 Added that the orthopedic related practice management guidelines (PMG) must include specific information. The unstable pelvic and acetabular fracture PMG must include treatment guidelines for patients who are hemodynamically unstable attributed to pelvic ring injuries. The long bone fracture PMG must include treatment guidelines for patients with multiple injuries, for example, should include time to fixation and damage control versus definitive fixation strategies. The open fracture PMG must include treatment guidelines for open extremity fractures, for example, should include time to antibiotics, time to OR for operative debridement, and time to wound coverage. Added the requirement of a geriatric patient hip fracture management PMG that should include expected time to OR. • Expected compliance by 1.1.25

Standards of Accreditation Revision Log

January 1, 2024		
Standard	**Levels**	**Edit**
		Added minimum parameters that must be included in the criteria for orthopedic surgery emergent consults that require a 30-minute bedside response expectation. Clarified that the time is measured from time of request until orthopedic surgery arrival at bedside. The minimum parameters must include: • Hemodynamically unstable, secondary to pelvic fracture • Suspected extremity compartment syndrome • Fractures/dislocations with risk of avascular necrosis (e.g., femoral head or talus) • Vascular compromise related to a fracture or dislocation • Trauma Surgeon discretion Clarified that although an Orthopedic resident in at least the second year of clinical orthopedic experience and an Orthopedic advanced practitioner can fulfill the response requirement, an Attending Orthopedic Surgeon must be involved in clinical decision-making for care of the orthopedic trauma patients. The communication with the Attending Orthopedic Surgeon must be documented in the medical record. • Expected compliance by 1.1.25
23: Radiology	Adult Level I, II and III Pediatric Level I, II	Added that a radiologist must have access to patient images and be available for imaging interpretation within 30 minutes from time of images' availability to time of interpretation when an expedited read is requested. • Expected compliance by 1.1.25
27: Geriatrics	Adult Level I, II and III	Added Hip Fractures to the required geriatric PMGs. • Expected compliance by 1.1.25

Standards of Accreditation Revision Log

June 15, 2024		
Standard	**Levels**	**Edit**
1. Commitment	Adult Level I, II, III & IV	Added to the list of considerations for inclusion in trauma activation criteria at some level Geriatric specific criteria: • Ground level fall patients on antithrombotic agents • Systolic blood pressure < 110 • Heart rate > 90 • Shock index > 1 • Ground level fall patients not on anticoagulants with GCS < 14 and signs of head trauma • Effective immediately
6. PIPS	Adult Level I, II, III & IV Pediatric Level I & II	Clarified the non-surgical trauma admissions (NSA) expectations at Level I-III trauma centers. NSA must be reviewed by the TPMD in secondary review at a minimum if one of the following is met: • NSA without trauma or other surgical consultation • NSA with ISS > 9 • NSA with identified opportunities for improvement NSA may be closed in primary review if none of the above items are met, there are trauma or other surgical consultations, ISS ≤ 9, and without identified opportunities for improvement. Clarified that the Nelson tool for evaluating NSA has been validated at adult trauma centers. Added to the Standards existing educational requirements for Trauma PI Coordinators as per PTSF Educational Offerings that participation in the PTSF PI Part 1: Theory & Overview is required within one year of appointment. Clarified the educational requirements for additional PI personnel above the required 1.0 FTE: • Participation in the STN-TOPIC Course (incl. Rural for Level IV) within one year of appointment. • Participation in the PTSF PI Part 1: Theory & Overview within one year of appointment.

Standards of Accreditation Revision Log

June 15, 2024		
Standard	**Levels**	**Edit**

		• Maintain 75 percent attendance at the Trauma PIPS:
		  • Multidisciplinary Peer Review PI Meeting
		  • Multidisciplinary Trauma Program Operational Meeting
		• Eight hours of trauma-related continuing education per year.
		• Effective immediately

10. Physicians	Adult Level I, II, III, & IV
	Pediatric Level I & II
		Revised the requirements for Level I-III physicians on an alternate pathway. Physicians on an alternate pathway prior to January 1, 2026 must complete 36 hours in three years or 12 hours annually of trauma-related CME. For pediatric trauma care, nine of 36 hours must be pediatric-specific CME. Physicians approved for an alternate pathway after January 1, 2026 must:
		• Complete 36 hours in three years or 12 hours annually of trauma-related CME. For pediatric trauma care, nine of 36 hours must be pediatric-specific CME.
		• All general surgeons, all neurosurgeons, all orthopedic surgeons, all emergency department physicians, and the anesthesiology liaison:
		  • Current ATLS certification.
		  • Active membership in at least one national or regional trauma organization and must have attended at least one meeting during the reporting period.
		  • Attendance of 50 percent or more at the trauma multidisciplinary PIPS committee meeting during the reporting period.
		• Processes and outcomes of care comparable to that of other physicians.
		Additionally, physicians who are no longer board eligible are unacceptable for inclusion on the trauma team. The ICU surgical director or co-director is not eligible for an alternate pathway.
		• Expected compliance by 1.1.26
		
		Added that the Level III anesthesiology liaison must be board certified or board eligible.
		• Expected compliance by 1.1.26

Standards of Accreditation Revision Log

June 15, 2024		
Standard	**Levels**	**Edit**
		Added that Level I-III emergency department directors who completed primary training prior to 2016 and are board certified in a specialty other than emergency medicine or pediatric emergency medicine may serve as the emergency department director. • Expected compliance by 1.1.25 Revised that Level I-II surgical director or co-director is not eligible for an alternate pathway. • Expected compliance by 1.1.26 Revised that at Level I-III centers the radiology board certification/eligibility requirement is limited to only the radiology liaison. • Effective immediately Added that Level I-III physicians on the ophthalmology service cannot be a surgeon with ophthalmology expertise. • Expected compliance by 1.1.26 Revised that at Level III-IV trauma centers telemedicine is an acceptable method of consult for non-surgical subspecialties, for non-trauma indications, in admitted patients. Telemedicine, by itself, is not an acceptable method of consult for surgical specialties or for trauma indications. Injured patients must be admitted to an onsite service and not a telemedicine service. • Effective immediately

Standards of Accreditation Revision Log

June 15, 2024		
Standard	**Levels**	**Edit**
16. Emergency Department	Adult Level I, II, III & IV Pediatric Level I & II	Clarified that there must be a policy defining the frequency of vital signs. Trauma alert patients must have hourly vital sign documentation beginning with ED arrival through post-ED transport time or at the time a physician/provider order extends vital signs to an adjusted, longer frequency. Non-trauma alert patients must have expected vital sign frequency defined by the trauma center which may be a tiered expectation based on triage level, such as emergency severity index levels. Vital signs include respirations, blood pressure, and pulse at a minimum. • Effective immediately
27. Geriatrics	Adult Level I, II, III & IV	Added that a frailty screening tool should be used in the evaluation of the geriatric trauma patient. The Trauma-Specific Frailty Index is a validated screening tool. Included the reference "ACS COT Best Practices Guidelines Geriatric Trauma Management" https://www.facs.org/media/ubyj2ubl/best-practices-guidelines-geriatric-trauma.pdf • Effective immediately

Standards of Accreditation Revision Log

August 15, 2024		
Standard	**Levels**	**Edit**
10. Physicians	Adult Level IV Pediatric Level I & II	Clarified the requirements for a Level I-II Pediatric Trauma Center's emergency department (ED) physicians. Physicians must be board certified or board eligible in emergency medicine or pediatric emergency medicine. Physicians who completed primary training prior to 2016 and are board certified in a specialty other than emergency medicine or pediatric emergency medicine may participate in trauma care. • Expected compliance remains by 6.1.25 Clarified the requirements for Level IV Trauma Center's general surgery if utilized as a trauma service. • General surgeons must be present in the ED for major resuscitations and at the bedside of the patients with highest-level trauma activations within 30 minutes from patient arrival if the hospital has defined general surgery participation as being involved in trauma activations. This provision must be included in an institutional policy. • General surgeons must be present in the operating room for surgical procedures related to their specialty if the hospital has defined general surgery participation as being involved in operative interventions beyond wound management. This provision must be included in an institutional policy. • This is a clarification, therefore effective immediately.
19. Intensive Care Unit	Adult Level I, II & III Pediatric Level I & II	Clarified that trauma patients must be admitted to, or evaluated by, a surgical service. Non-surgical specialists should be consulted as necessary; however, it is recommended the trauma service retain care of the critically ill trauma patient until all acute traumatic issues are resolved. Decisions to admit a trauma patient to a non-surgical specialist should involve collaboration with the trauma surgeon, and the trauma service should remain involved in the care of the critically ill trauma patient until all acute traumatic issues have been resolved. Additionally, the word primary is removed when referring to the admitting trauma surgeon/ service. • This is a clarification, therefore effective immediately.

Standards of Accreditation Revision Log

January 1, 2025		
Standard	**Levels**	**Edit**
3. Trauma Program Medical Director	Adult Level I, II, III & IV Pediatric Level I & II	Added the existing requirements from PTSF policies that new Trauma Program Medical Directors must participate in the PTSF Site Survey / Accreditation Education within the year prior to their first survey (All Levels) and panel review (Level IV only). • Effective immediately
4. Trauma Program Manager	Adult Level I, II, III & IV Pediatric Level I & II	Added the existing requirements from PTSF policies that new Trauma Program Managers must participate in the PTSF Site Survey / Accreditation Education within the year prior to their first survey (All Levels) and panel review (Level IV only). • Effective immediately
6. PIPS	Adult Level I, II, III & IV Pediatric Level I & II	Added the recommendation for new trauma Performance Improvement Coordinators to participate in the PTSF Site Survey / Accreditation Education within the year prior to their first survey (All Levels) and panel review (Level IV only). • Effective immediately Clarified the language related to timeliness of response in the ICU to track: timeliness of response to emergency/unplanned situations in the ICU. • Effective immediately
8. Injury Prevention, Public Education & Outreach	Adult Level I, II & III Pediatric Level I & II	Clarified that the acceptable mental health screenings focus on identifying patients at high risk of post-traumatic stress disorder and/or depression. • Changed expected compliance date to 1.1.26 Changed the expected compliance date for the new substance abuse screening, brief intervention and referral to treatment standard to 1.1.26.

January 1, 2025		
Standard	**Levels**	**Edit**

10. Physicians	Adult Level IV	Revised the Orthopedic Surgery Standards. The hospital must choose one of the following three options:
		• Orthopedic surgery will not participate in the care of the injured patient.
		• Orthopedic surgery as an operative service. Must meet all the following requirements
		  ○ Published on-call schedules must be maintained with 24/7/365 coverage with physicians.
		  ○ Orthopedic surgeons must maintain applicable specialty board certification/ eligibility OR maintain 8 hours of trauma-related CME annually (completion of an internal educational program is acceptable).
		  ○ An identified orthopedic surgeon Liaison must be identified and attend a minimum of 50% of the multidisciplinary rauma peer review meetings. The attendance benchmark may be shared with a second identified orthopedic surgeon.
		  ○ Must have a minimum of one intra-compartmental pressure monitoring device within the hospital.
		• Orthopedic surgery as a non-operative service. Must meet all the following requirements:
		  ○ Orthopedic surgeons must maintain applicable specialty board certification/ eligibility OR maintain 8 hours of trauma-related CMR annually (completion of an internal educational program is acceptable).
		  ○ Recommend identifying an orthopedic surgeon Liaison who can attend the multidisciplinary trauma peer review meetings on an as needed bases when orthopedic cases are discussed.
		  ○ Must have a minimum of one intra-compartmental pressure monitoring device within the hospital.
		• Effective immediately.

Standards of Accreditation Revision Log

January 1, 2025		
Standard	**Levels**	**Edit**
11. Advanced Practitioners	Adult Level I, II & III Pediatric Level I & II	Clarified that APs functioning as a member of the trauma service caring for trauma patients in the ICU must maintain ATLS. • Effective immediately
19. Intensive Care Unit	Adult Level I, II & III Pediatric Level I & II	Level I-II: Revised the ICU coverage for emergency/unplanned situations must be a physician. • A physician must be available within 15 minutes of request for emergency/planned situations. This coverage for emergencies is not intended to replace the primary admitting trauma surgeon in caring for the patient in the ICU. It is to ensure that the patient's immediate needs will be met while the primary surgeon is being contacted. • If the trauma attending is providing ICU coverage, a back-up ICU attending must be identified and available. • A resident can be used to meeting this standard. o If a PGY-1, they must be in the second half of the first year within the institution. o Must maintain ATLS o If a PGY-1-3, they must be supervised by a general trauma surgeon or a senior resident in general surgery (PGY-4 or above). The PGY 4 or above cannot be considered a replacement for the attending surgeon. Level III: Included the ICU coverage that is currently expected in the Physician Standard. • 24-hour coverage of all trauma patients and available within 15 minutes of request for emergency/unplanned situations. • Coverage may include a surgeon, intensivist, hospitalist, or advanced practitioner. • Expected immediately

Standards of Accreditation Revision Log

January 1, 2025		
Standard	**Levels**	**Edit**
23. Radiology	Adult Level I & II Pediatric Level I & II	Clarified the expectation for Interventional Radiology (IR). • IR must be available 24-hours a day. • IR procedure for hemorrhage control that requires rapid intervention must begin within 60 minutes. • The trauma program must define hemorrhage control in addition to the parameters of an emergent IR procedure. • This is a clarification, effective immediately
Appendix D. Guideline and Policy Reference Tool	Adult Level I, II, III & IV Pediatric Level I & II	Removed the Policy for first responders. Revised the policy expectation for timeliness of response to emergent consults or emergency/unplanned situations, and patient criteria for: Physicians to the ICU, anesthesia (outside of the trauma resuscitation area), radiology (interventional), orthopedics and neurosurgery as applicable.