The American College of Surgeons

Clarification Document

Resources for Optimal Care of the Injured Patient
2014 Standards

By the Verification Review Committee

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www.facs.org/quality-programs/trauma/tqp/center-programs/vrc/resources

Chapter 23
Only criteria that have a clarification will be noted in this document. New updates will be highlighted in yellow.
Disclaimer: • **The term Midlevel Providers throughout the Resources manual is the same as Advanced Practice Providers, Nurse Practitioners, Physician Assistants, and Physician Extenders.** • **P/k/a – Previously known as** • **PTC – Pediatric Trauma Center** • **ATCTIC – Adult Trauma Center Treating Injured Children**

Chapter	Level	Criterion by Chapter and Level	Type	Clarification on the Criteria
Chapter 1: Trauma Systems				
Chapter 2: Description of Trauma Centers and Their Roles in a Trauma System				
2	I, II	Qualified attending surgeons must participate in major therapeutic decisions, be present in the emergency department (ED) for major resuscitations, be present at operative procedures, and be actively involved in the critical care of all seriously injured patients (CD 2-6).	TYPE I	An ED physician can start the resuscitation if the trauma team is not present. It does **NOT** negate the presence of the surgeon or any other in-house requirements.
2	I, II	A resident in postgraduate year 4 or 5 or an attending emergency physician who is part of the trauma team may be approved to begin resuscitation while awaiting the arrival of the attending surgeon but cannot independently fulfill the responsibilities of, or substitute for, the attending surgeon (CD 2-6).	TYPE I	An ED physician can start the resuscitation if the trauma team is not present. It does **NOT** negate the presence of the surgeon or any other in-house requirements.
2	I, II, III	The attending surgeon's (immediate within 15 minutes for Level I and II trauma centers; promptly within 30 minutes for Level III trauma centers) arrival for patients with appropriate activation criteria must be monitored by the hospital's trauma PIPS program (CD 2–9). Compliance with this requirement and applicable criteria must be monitored by the hospital's PIPS program (CD 2–9).	TYPE I	For Level I, II, and III trauma centers, the attending surgeon's response for the highest level of activation must be monitored by the PIPS process.
2	I, II, III, IV	For Level I, II, III, and IV trauma centers a Trauma Medical Director (TMD) and Trauma Program Manager (TPM) knowledgeable and involved in trauma care must work together with guidance from the trauma peer review committee to identify events, develop corrective action plans, and ensure methods of monitoring, reevaluation, and benchmarking (CD 2-17).	TYPE II	In Level IV facilities, the role of the TMD may be an ED physician. (rv 10/6/15)
Chapter 3: Prehospital Trauma Care				
Chapter 4: Interhospital Transfer				
4	I, II, III, IV	A very important aspect of interhospital transfer is an effective Performance Improvement and Patient Safety (PIPS) program that includes evaluating transport activities (CD 4-3).	TYPE II	Perform a PIPS review of all transfers in and out during the acute phase of hospitalization for appropriateness of care by the TMD and TPM. The receiving facility should provide feedback to the transferring facility regarding the patient's condition, plan of care, and any PIPS issues identified. If there is no feedback, ensure that it is documented in the medical record.

Chapter 5: Hospital Organization and the Trauma Program				
5	I, II, III	During the resuscitation phase, the general surgeon, emergency physician, and anesthesiologist may work simultaneously.	Not a Standard	During the resuscitation phase, the general surgeon, emergency physician, and anesthesia clinician may work simultaneously.
5	I, II, III	The TMD must be a current board-certified general surgeon (or a general surgeon eligible for certification by the American Board of Surgery (ABS) according to current requirements) or a general surgeon who is an American College of Surgeons (ACS) Fellow with a special interest in trauma care and must participate in trauma call (CD 5-5).		The TMD must be full-time, permanent, dedicated to one trauma center, and cannot administer two facilities. (rv 9/4/2015)
5	I, II	The TMD must maintain an appropriate level of trauma-related extramural continuing medical education (16 hours annually, or 48 hours in 3 years) (CD 5-7).	TYPE II	The continuing medical education (CME) requirement has changed to the following: In Level I and II trauma centers, the TMD must fulfill this requirement by obtaining and demonstrating a minimum of 36 hours (12 hours annually) external trauma-related CME over a 3-year period. In Level I and II pediatric trauma centers, the pediatric TMD must fulfill the same requirement, of which 9 hours must be pediatric trauma specific (CD 5-7/CD 10-39). Type II (rv 4/13/18) The Verification Review Committee (VRC) will accept a total of 33 hours from the board certification or recertification process to count toward the trauma CME requirement for all specialties. (rv 11/9/16)

				For new centers seeking consultation or verification, the TMD must have 1 year (12 hours) minimum of CME. (rv 11/9/16, 4/13/18)
5	I, II	Membership and active participation in regional or national trauma organizations are essential for the trauma director in Level I and II trauma centers and are desirable for TMDs in Level III and IV facilities (CD 5-8).	TYPE II	The Pediatric Trauma Society is an acceptable national organization. In Level II trauma centers, the TMD membership in the state Committee on Trauma (COT) is acceptable as a regional trauma organization.
5	I, II, III	In addition, the TMD must perform an annual assessment of the trauma panel providers in the form of Ongoing Professional Practice Evaluation (OPPE) and Focused Professional Practice Evaluation (FPPE) when indicated by findings of the PIPS process (CD 5-11).	TYPE II	The TMD is expected to assess the individual surgeon's adequacy of trauma care knowledge in the OPPE process that stems from the trauma center's PIPS process. For the specialty panel members (emergency medicine, neurosurgery, orthopaedic surgery, and intensive care units [icus]), the OPPE may be done by the specialty liaisons with approval of the TMD. This will also include the advanced practice providers (APPs) for those services. (rv 2/14/19)
5	I, II, III	Programs that admit more than 10% of injured patients to non-surgical services must review all non-surgical admissions (NSA) through the trauma PIPS process (CD 5-18).	TYPE II	For best practices, all non-surgical patients should be evaluated through the PIPS process. Centers admitting <10% NSA should review patients with an Injury Severity Score (ISS) >15 admitted to a non-surgical service.

Chapter 6: Clinical Functions: General Surgery				
6	I, II, III	Trauma/general surgeons who have trained outside the United States or Canada may be eligible to participate in the trauma program through an alternate pathway procedure (CD 6-3). If a physician has not been certified within the time frame by the certifying board after successful completion of an ACGME or Canadian residency, the surgeon is not eligible for inclusion on the trauma team. Such as surgeon may be included when given recognition by a major professional organization (for example, the American College of Surgeons (CD 6-3).	TYPE II	The Alternate Pathway Criteria (APC) is only applicable for surgeons who did **NOT** train in the U.S. or Canada. Surgeons/physicians trained outside of the U.S. may participate if approved by the APC, https://www.facs.org/quality-programs/trauma/tqp/center-programs/vrc/resources. All non-US or Canadian-trained surgeons who were inducted as a Fellow of the American College of Surgeons (FACS) prior to January 1, 2017 are **NOT** required to go through the APC process. However, all non-US or Canadian trained surgeons inducted as a FACS after January 1, 2017, are required to follow the APC process and have an onsite review. (rv 1/22/16) **Effective April 15, 2018** For surgeons who have been approved by the APC at the current institution, an onsite visit will **NOT** be required; however, the following criteria will be required at the time of the subsequent visit: 3. A list 36 hours of verifiable external trauma-related CME over a 3-year period or by participating in an equivalent number of hours in the trauma center's internal education process (IEP) or a combination of CME and IEP. 7. Performance improvement assessment

				by the TMD to ensure that patient outcomes compare favorably to other members of the trauma call panel.
6	I, II, III	In Level I, II, and III trauma centers, there must be a multidisciplinary trauma peer review committee chaired by the TMD (CD 5-25) and representatives from general surgery (CD 6-8), and liaisons from orthopedic surgery (cd 9-16), emergency medicine (cd 7-11), ICU (CD 11-62), and anesthesia (CD 11-13) – and for Level I and II trauma centers, neurosurgery (CD 8-13) and radiology (CD 11-39). Level III trauma centers that have neurosurgery capabilities and retain those patients are required to comply with CD 8-13.	TYPE II	The liaison or a representative (one predetermined alternate) will be acceptable to attend the peer review in place of the liaison. (rv 3/9/16) The total of the liaison and alternate's combined attendance must add up to 50 percent or greater.
6	I, II, III	Each member of the group of general surgeons must attend at least 50 percent of the multidisciplinary trauma peer review committee meetings (CD 6-8).	TYPE II	Any surgeon previously designated as non-core must attend at least 50 percent of multidisciplinary trauma peer review. (rv 9/4/15) Attendance may be met through teleconferencing or videoconferencing participation. Audio conferencing should be limited. Peer review meeting attendance may be waived for deployment, medical leave, and missionary work. The center must provide documentation to support the absence. (rv 11/9/16)
6	I, II	In Level I and II adult and pediatric trauma centers, trauma surgeons, pediatric surgeons, and the specialty panel members (emergency medicine, orthopaedic surgery, neurosurgery, and ICUs) participating on the trauma call panel must demonstrate evidence of ongoing trauma-related education (CD 6-10).	TYPE II	For the trauma surgeons, pediatric surgeons, liaisons, and specialty panel members (emergency medicine, neurosurgery, orthopaedic surgery, and ICUs) participating on the trauma call panel, staying current with their board certification satisfy the CME requirement (CDs 5-24, 7-12, 7-13, 8-14, 8-15, 9-18, 9-19, 10-39, 10-40, 11-63, and 11-

				64) (rv 4/26/18). Physicians/surgeons who are currently board-eligible (recent graduates) and those who have life-time (grandfathered) board certification, meet the CME requirement. (rv 4/18/18) **Effective April 15, 2018** For surgeons who have been approved by the APC at the current institution, an onsite visit will **NOT** be required; however, the following criteria will be required at the time of the subsequent visit: 3. A list 36 hours of verifiable external trauma-related CME over a 3-year period or by participating in an equivalent number of hours in the trauma center's internal education process (IEP) or a combination of CME and IEP. 4. Performance improvement assessment by the TMD to ensure that patient outcomes compare favorably to other members of the trauma call panel.(rv 4/18/18)
Chapter 7: Clinical Functions: Emergency Medicine				
7	I, II, III	Basic to qualifications for trauma care for any physician is current board certification by the American Board of Medical Specialties (ABMS), the American Osteopathic Association (AOA), or the Royal College of Physicians and Surgeons of Canada. Board certification or eligibility for certification by the appropriate emergency medicine board according to current requirements or the Alternate Pathway is essential for physicians staffing the ED and caring for trauma patients in Level I, II, and III trauma centers (CD 7-6).	TYPE II	If the board is **NOT** recognized under the authority of the ABMS, the AOA, or the Canadian Royal College of Physicians and Surgeons, it is **NOT** acceptable by the ACS. The American Board of Physician Specialists (ABPS) is **NOT** recognized by the ACS.

				Physicians boarded in other specialties such as internal medicine, family practice, etc., through an approved accredited program may be included on the trauma team in the ED; however, they must be current in Advanced Trauma Life Support (ATLS) (refer to CD 7-15). For Level I and II trauma centers, physicians who completed primary training in 2016 and beyond must be board certified or board eligible by the appropriate emergency medicine or pediatric emergency medicine board according to the current requirements. Physicians who completed primary training in 2016 and beyond who are **NOT** board certified or board eligible by the appropriate emergency medicine or pediatric emergency medicine board may provide care in the emergency room but **CANNOT** participate in trauma care. For example, if a physician who completed Family Medicine primary training in 2017, they would **NOT** be eligible to participate on the trauma call panel.
7	I, II, III	Emergency medicine physicians who have trained outside the United States or Canada may be eligible to participate in the trauma program through an alternate pathway procedure (CD 6-3). If a physician has not been certified within the time frame by the certifying board after successful completion of an Accreditation Council for Graduate Medical Education (ACGME) or Canadian residency, the physician is not eligible for inclusion in the trauma team. Such as physician may be included	TYPE II	The APC is only applicable for physicians who did **NOT** train in the U.S. or Canada. The only acceptable alternative is a *Fellow* of the American College of Emergency Physicians (FACEP). Refer to APC, https://www.facs.org/quality-

		when given recognition as a fellow by a major professional organization (for example, the American College of Emergency Physicians) (CD 6-3).		programs/trauma/tqp/center-programs/vrc/resources
7	I, II, III	The emergency medicine liaison on the multidisciplinary trauma peer review committee must attend a minimum of 50 percent of the committee meetings (CD 7-11).	TYPE II	Liaison or representative (one predetermined alternate) will be acceptable to attend the peer review in place of the liaison. (rv 3/9/16) The total of the liaison and alternate's combined attendance must add up to 50 percent or greater. Attendance may be met through teleconferencing or videoconferencing participation. Audio conferencing should be limited. Peer review meeting attendance may be waived for deployment, medical leave, and missionary work. The center must provide documentation to support the absence. (rv 11/9/16)
7	I, II	In Level I and II trauma centers, the liaison from emergency medicine must accrue an average of 16 hours annually or 48 hours in 3 years of verifiable external trauma-related CME (CD 7-12).	TYPE II	Refer to Clarification Document, Chapter 6, CD 6-10
7	I, II	Other emergency medicine physicians who participate on the trauma team also must be knowledgeable and current in the care of injured patients. This requirement may be met by documenting the acquisition of 16 hours of trauma-related CME per year on average **or** by demonstrating participation in an IEP conducted by the trauma program based on the principles of practice-based learning and the PIPS program (CD 7-13).	TYPE II	Refer to Clarification Document, Chapter 6, CD 6-10
7	I, II, III	Physicians who are certified by boards other than emergency medicine who treat trauma patients in the ED are required to have current ATLS status (CD 7-15).	TYPE II	Physicians boarded in other specialties such as internal medicine, family practice, etc., through an approved accredited program may be included on the trauma team in the ED; however, they must be current in ATLS (refer

				to CD 7-6).
Chapter 8: Clinical Functions:				
8	I, II	Neurotrauma care must be continuously available for all traumatic brain injury (TBI) and spinal cord injury patients and must be present and respond within 30 minutes based on institution-specific criteria (CD 8-2).	TYPE I	The intent is that consultants for neurosurgical care are available for the acute care of the brain and spinal cord injured patients and must respond with an in-person evaluation within 30 minutes based on institution specific criteria when requested (via page/text notification) on notification of need by the attending surgeon (rv 8/11/20). Neurosurgical evaluation may be done by a neurosurgery resident at any level or neurosurgery APP as long as the patient was initially evaluated by an EM physician or trauma surgeon. There must be documented communication with the attending neurosurgeon. The specific types of patients or clinical scenarios should be developed by each institution and agreed upon and documented by the PIPS process.
8	I, II	The trauma center must provide a reliable, published neurotrauma call schedule with formally arranged contingency plans in case the capability of the neurosurgeon, hospital, or system to care for neurotrauma patients is overwhelmed (CD 8-3).	TYPE I	A published back up call schedule is the best method to meet this requirement. Clarification to Table 1 noted on page 55: Neurosurgical evaluation may be done by a neurosurgery resident at any level or neurosurgery APP as long as the patient was initially evaluated by an EM physician or trauma surgeon. There must be documented communication with the attending neurosurgeon. Refer to the table at the end of this document for ICU coverage of Neuro patients.

8	I, II, III	A formal, published contingency plan must be in place for times in which a neurosurgeon is encumbered upon the arrival of a neurotrauma case (CD 8-5). The contingency plan must include the following: • A credentialing process to allow the trauma surgeon to provide initial evaluation and stabilization of the neurotrauma patient. • Transfer agreements with a similar or higher-level verified trauma center. • Direct contact with the accepting facility to arrange for expeditious transfer or ongoing monitoring support. • Monitoring of the efficacy of the process by the PIPS program.	TYPE II	If there is **NOT** dedicated neurosurgery coverage at the institution, there must be a backup call schedule in place. If dedicated neurosurgery coverage is present, there must be either a backup call scheduled or a contingency plan. The published backup call schedule must list a specific individual and their contact information.
8	I, II, III	If one neurosurgeon covers two centers within the same limited geographic area, there must be a published backup schedule (CD 8-6).	TYPE II	The published backup call schedule must list a specific individual and their contact information.
8	III	Transfer agreements must exist with appropriate Level I and Level II trauma centers (CD 8-8).	TYPE II	Patients requiring intracranial pressure monitoring and patients with more significant traumatic brain injuries should be transferred to a higher-level trauma center.
8	III	In all cases, whether patients are admitted or transferred, the care must be timely, appropriate, and monitored by the PIPS program (CD 8-9).	TYPE I	Refer to Clarification Document, Chapter 4, CD 4-3
8	I, II, III	Neurosurgeons who have trained outside the United States or Canada may be eligible to participate in the trauma program through an alternate pathway procedure (CD 6-3).	TYPE II	Refer to Clarification Document, Chapter 6, CD 6-3
8	I, II (III*)	The neurosurgery liaison on the multidisciplinary trauma peer review committee must attend a minimum of 50 percent of the committee's meetings (CD 8-13).	TYPE II	Refer to Clarification Document, Chapter 7, CD 7-11 *Level III trauma centers with a neurosurgeon who participates in the care of injured patients must participate in the multidisciplinary trauma peer review meeting a minimum of 50 percent. (rv 7/1/2016)
8	I, II	The liaison representative from neurosurgery must accrue an average of 16 hours annually or 48 hours in 3 years of verifiable external trauma-related CME (CD 8-14).	TYPE II	Refer to Clarification Document, Chapter 6, CD 6-10
8	I, II	This requirement may be documented by the acquisition of 16 hours of	TYPE II	Refer to Clarification Document, Chapter 6,

		trauma CME per year on average **or** through an IEP conducted by the trauma program and the neurosurgical liaison based on the principles of practice-based learning and the PIPS program (CD 8-15).		CD 6-10
Chapter 9: Clinical Functions: Orthopaedic Surgery				
9	I, II	Because of their skills and training in the management of the acute and rehabilitation phases of musculoskeletal trauma, physical and occupational therapists, and rehabilitation specialists are essential at Level I and II trauma centers (CD 9-1).	TYPE II	This requirement is best met by having physical therapists and occupational therapists available to the trauma patient 7 days per week.
9	I, II	In Level I and II trauma centers, a system must be organized so that musculoskeletal trauma cases can be scheduled without undue delay and not at inappropriate hours that might conflict with more urgent surgery or other elective procedures (CD 9-3).	TYPE II	This requirement is best met by maintaining a dedicated trauma orthopaedic room.
9	I, PTC	In a Level I trauma center, orthopaedic care must be overseen by an individual who has completed a fellowship in orthopaedic traumatology approved by the Orthopaedic Trauma Association (OTA) (CD 9-5).	TYPE I	The form must be completed and submitted (anita.johnson@facs.org) at the time of the site visit application. For those OTLs who were previously approved, must submit the form (anita.johnson@facs.org) and only complete questions 1 through 3 (trauma center name, OTL name and current center status). https://www.facs.org/quality-programs/trauma/tqp/center-programs/vrc/site-packet. (rv 1/21/16, 7/1/16, 4/15/19) In Level I pediatric trauma centers, this requirement may be met by having a formal transfer agreements that specify which cases will be transferred for high-level orthopaedic oversight and ensuring that all such transfers (or potential transfers) are reviewed as part of the PI process (CD 9-5, Type I). For combined centers, the adult OTA surgeon

				may be used to meet this requirement. (rv 1/21/16)
9	I, II	Orthopaedic team members must have dedicated call at their institution **or** have an effective backup call system (CD 9-6).	TYPE II	If there is dedicated orthopaedic surgery coverage, a backup schedule is not required; however, if the orthopaedic surgeon on call is encumbered, there must be an effective backup call system in place (rv 4/15/19).
9	I, II	They must be available in the trauma resuscitation area within 30 minutes after consultation has been requested by the surgical trauma team leader for multiply injured patients (CD 9-7) based on institution-specific criteria.	TYPE II	The intent is that consultants for orthopaedic care are available for the acute care of the injured patients and must respond with an in-person evaluation within 30 minutes based on institution specific criteria when requested (via page/text notification) on notification of need by the attending surgeon (rv 8/11/20). Orthopaedic evaluation may be done by an orthopaedic resident at any level or orthopaedic APP as long as the patient was initially evaluated by an EM physician or trauma surgeon. There must be documented communication with the attending orthopaedic surgeon. The specific types of patients or clinical scenarios should be developed by each institution and agreed upon and documented by the PIPS process. (rv 6/8/15)
9	I, II	If the on-call orthopaedic surgeon is unable to respond promptly, a backup consultant on-call surgeon must be available (CD 9-9).	TYPE II	If utilizing a published backup call schedule, the specific individual(s) and their contact information must be listed. Clarification to page 61 first paragraph, "An orthopaedic resident at PGY 4 or 5 or an orthopaedic trauma fellow may act as a temporary consultant, as long as this participation is acceptable to the trauma team leader." An orthopaedic resident of <u>any level</u>

				may act as a temporary consultant as long as there documented communication with the orthopaedic surgeon.
9	I, II, III	The orthopaedic liaison to the trauma PIPS program must attend a minimum of 50 percent of the multidisciplinary trauma peer review committee meetings (CD 9-16).	TYPE II	Refer to Clarification Document, Chapter 7, CD 7-11
9	I, II, III	Orthopaedic surgeons who have trained outside the United States or Canada may be eligible to participate in a trauma program through an alternate pathway procedure (CD 6-3).	TYPE II	Refer to Clarification Document, Chapter 6, CD 6-3
9	I, II	The orthopaedic surgical liaison to the trauma program at Level I and II centers must accrue an average of 16 hours annually or 48 hours in 3 years of verifiable external trauma-related CME (CD 9-18).	TYPE II	Refer to Clarification Document, Chapter 6, CD 6-10
9	I, II	This requirement may be documented by the acquisition of 16 hours of trauma CME per year on average **or** through an IEP conducted by the trauma program and the orthopaedic liaison based on the principles of practice-based learning and the PIPS program (CD 9-19).	TYPE II	Refer to Clarification Document, Chapter 6, CD 6-10
				Clarification to page 61 first paragraph, "An orthopaedic resident at PGY 4 or 5 or an orthopaedic trauma fellow may act as a temporary consultant, as long as this participation is acceptable to the trauma team leader." An orthopaedic resident of <u>any level</u> may act as a temporary consultant as long as there is documented communication with the orthopaedic surgeon.
Chapter 10: Pediatric Trauma Care				
10	PTC I, II	Hospitals that pursue verification as a pediatric trauma center must meet the same resource requirements as an adult trauma center, in addition to pediatric resource requirements (CD 2-3). (Table 1)	TYPE II	For adult trauma centers that have a separate pediatric hospital: • These hospitals are considered on a separate campus and therefore separate facilities, and/or, • If the transfer of a child from the adult ED for admission to the institution's children's hospital requires transfer by

				ambulance.
10	PTC I	A Level I pediatric trauma center must have at least two surgeons who are board certified or eligible for certification by the ABS according to current requirements in pediatric surgery (CD 10-12).	TYPE I	Combined/Concurrent Adult – Pediatric Centers with physically separate EDs: The adult trauma surgeon can respond to the highest level of activation for a child if the adult ED and pediatric EDs are physically connected (via walkway, tunnel, etc., and a reasonable distance) and there is a provision in place for backup in the event multiple activations (adult and pediatrics) are called at the same time.
10	PTC I	There must be two physicians who are board certified or eligible for certification in pediatric critical care medicine, according to current requirements in pediatric critical care medicine; or in pediatric surgery and surgical critical care (SCC) by the ABS (CD 10-17).	TYPE I	There must be two physicians who are board certified or eligible for certification in critical care by the ABS according to current requirements, or one surgeon who is board eligible/certified in critical care by the ABS and one physician who is board eligible or certified by the American Board of Pediatrics in pediatric critical care according to current requirements.
10	PTC I	There must be two physicians who are board certified or eligible for certification by an appropriate emergency medicine board according to current requirements in pediatric emergency medicine (CD 10-18).	TYPE II	There must be two physicians who are board certified or eligible for certification by an appropriate emergency medicine board according to current requirements in pediatric emergency medicine or board certified or eligible for certification by the appropriate pediatrics board according to current requirements in pediatric emergency medicine.
10	PTC I, II	The pediatric section of the ED must be staffed by individuals credentialed by the hospital to provide pediatric trauma care in their respective areas (CD 10-20).	TYPE II	Refer to Clarification Document, Chapter 7, CD 7-6.
10	PTC II	In a Level II pediatric trauma center, there must be at least one pediatric	TYPE I	This physician must actively participate in the

		surgeon who is board certified or eligible for certification by the ABS according to current requirements in Pediatric surgeon (CD 10-21).		PIPS process, protocol development, and care of the injured child.
10	PTC I, II	In Level I and II pediatric trauma centers, the pediatric TMD must be board certified or eligible for certification by the ABS according to current requirements for pediatric surgery or alternatively, a pediatric surgeon who is a Fellow of the ACS with a special interest in pediatric trauma care, and must participate in trauma call (CD 10-24).	TYPE I	When the pediatric TMD is not a board certified/eligible pediatric surgeon, then this individual must be a general surgeon board certified or eligible for certification by the ABS according to current requirements, and must: 1. Be privileged by the hospital to provide pediatric trauma care 2. Be a member of the adult trauma panel 3. Participate in trauma call 4. Accrue an average of 12 hours annually or 36 hours in 3 years of verifiable external CME, of which at least 9 hours must be related to clinical pediatric trauma care (rv 4/13/18) 5. Be current in Pediatric Advanced Life Support (PALS) or have taken the Society of Critical Care Medicine Fundamentals of Pediatric Critical Care course. 6. Maintain a formal relationship with a pediatric TMD at another verified Level I pediatric trauma center.
10	PTC I, II	There must be a trauma peer review committee chaired by the pediatric TMD with participation by the pediatric/general surgeons and liaisons from pediatric/general surgery, orthopaedic surgery, neurosurgery, emergency medicine, pediatric critical care medicine, anesthesia, and radiology to improve trauma care by reviewing selected deaths, complications, and sentinel events with the objectives of identification of issues and appropriate responses (CDs 10-36, 10-37).	TYPE I	Refer to Clarification Document, Chapter 7, CD 7-11 For combined adult and pediatric trauma centers, the peer review meetings may be held on the same day; However, there must be clear start and end times for each meeting and have separate minutes. For combined adult and pediatric trauma

				centers, there must be a representative (TMD or designee) from the adult program or from the pediatric program, who will attend the other program's meeting and ensure dissemination of communication is sent to the other panel members. (rv 11/9/16)
10	PTC I, II	In Level I and II pediatric trauma centers, the pediatric TMD and the liaisons from neurosurgery, orthopaedic surgery, emergency medicine, and critical care medicine must each accrue an average of 16 hours annually or 48 hours in 3 years of verifiable external CME, of which at least 12 hours (in 3 years) must be related to clinical pediatric trauma care (CD 10-39).	TYPE II	Refer to Clarification Document: Chapter 5, CD 5-7 and Chapter 6, CD 6-10
10	PTC I, II	The other general surgeons, orthopaedic surgeons, neurosurgeons, emergency medicine physicians, and critical medicine care physicians who take trauma call in Level I and II pediatric trauma centers also must be knowledgeable and current in the care of injured patients. This requirement may be met by documenting the acquisition of 16 hours of CME per year on average **or** by demonstrating participation in an IEP conducted by the trauma program based on the principles of practice-based learning and the PIPS program (CD 10-40).	TYPE II	Refer to Clarification Document, Chapter 6, CD 6-10
Chapter 11 Collaborative Clinical Services				
11	III	In Level III facilities, operative anesthesia may also be provided by a CRNA under on-site physician supervision.	Not a Standard	In Level III facilities, operative anesthesia may also be provided by a CRNA.
11	I, II	When anesthesiology senior residents or certified registered nurse anesthetists (CRNAs) are used to fulfill availability requirements, the attending anesthesiologist on call must be advised, available within 30 minutes at all times, and present for all operations (CD 11-5).	TYPE I	Anesthesia requirements may be fulfilled by anesthesiology senior residents or CRNAs or certified anesthesiologist's assistants (C-AAs). Utilizing in-house CRNAs for obstetrics is acceptable.
11	III	In Level III hospitals, in-house anesthesia services are not required, but anesthesiologists or CRNAs must be available within 30 minutes (CD 11-7).	TYPE I	Anesthesia requirements may be fulfilled by CRNAs or C-AAs.

11	III	In Level III trauma centers without in-house anesthesia services, protocols must be in place to ensure the timely arrival at the bedside by the anesthesia provider within 30 minutes of notification and request (CD 11-8).	TYPE I	In Level III facilities, operative anesthesia may be provided by a CRNA under onsite physician supervision. The specialty of the supervising physician should follow state and local/institutional practices. In states where CRNAs are licensed to practice independently, CRNAs should follow local or institutional practices and may not require physician supervision.
11	III	Under these circumstances, the presence of a physician skilled in emergency airway management must be documented (CD 11-9).	TYPE I	Under these circumstances [Level III facilities], the presence of a physician or CRNA skilled in emergency airway management must be documented .
11	I, II	In Level I and II trauma centers, anesthesiologists taking call must be currently board certified or eligible for certification by an appropriate anesthesia board according to current requirements in anesthesiology (CD 11-11).	TYPE II	Only the anesthesiologist liaison must be currently board certified. In Level I and IIs, at least one anesthesiologist must put forth effort and commitment to education in trauma-related anesthesia and educate other anesthesiologists and the entire trauma team.
11	I, II, III	Anesthesiologists who have trained outside the United States or Canada may be eligible to participate in the trauma program through an alternate pathway procedure (CD 6-3).	TYPE II	Refer to Clarification Document, Chapter 6, CD 6-3
11	I, II, III	The anesthesiology liaison to the trauma program must attend at least 50 percent of the multidisciplinary peer review meetings, with documentation by the trauma PIPS program (see Chapter 16, Performance Improvement and Patient Safety) (CD 11-13).	TYPE II	Refer to Clarification Document, Chapter 7, CD 7-11 In Level IIIs, where CRNAs are licensed to practice independently may function as the anesthesia liaison. A designated physician anesthesiologist liaison is an expectation in Level I and II trauma centers. However, in Level III trauma centers we recognize there may be no

				anesthesiologist on staff. In Level III trauma centers, a dedicated physician anesthesiologist or anesthesia clinician must be designated as the liaison to the trauma program and the anesthesia representative must attend at least 50 percent of the multidisciplinary peer review meetings.
11	I, II	In Level I and II trauma centers qualified radiologists must be available within 30 minutes to perform complex imaging studies, or interventional procedures (CD 11-33).	TYPE II	Qualified radiologists are defined as interventional radiologist for interventional procedures. In addition, vascular surgeons are also acceptable. (rv 10/26/16) The time should start when the request is made to the service (time of page or call).
11	I, II, III	Changes in interpretation between preliminary and final reports, as well as missed injuries, must be monitored through the PIPS program (CD 11-37).	TYPE II	The changes categorized by RADPEER, Peer Learning orsimilar programs.
11	I, II	The radiologist liaison must attend at least 50 percent of peer review meetings and should educate and guide the entire trauma team in the appropriate use of radiologic services (CD 11-39).	TYPE II	Refer to Clarification Document, Chapter 7, CD 7-11
11	I, II	At a minimum, radiologists must be involved in protocol development and trend analysis that relate to diagnostic imaging (CD 11-41).	TYPE II	The expectation is that solid organ injuries (spleen, liver, and kidney) grading should be provided by the radiologist (if CT scans are obtained). (rv 9/4/15)
11	I, II	Level I and II facilities must have a mechanism in place to view radiographic imaging from referring hospitals within their catchment area (CD 11-42).	TYPE II	Ideally, this would be Gateway or similar software, but at a minimum there must be the ability to view and store images from CDs.
11	I, II	Board certification or eligibility for certification by an appropriate radiology board according to current requirements is essential for radiologists who take trauma call in Level I and II trauma centers (CD 11-43).	TYPE II	Only the radiologist liaison must be currently board certified.
11	I	A surgeon with current board certification in SCC must be designated as the ICU director (CD 11-49).	TYPE II	If the TMD is currently board certified in SCC, then they may fulfill both roles. (rv 12/7/16) If the TMD also serves as the ICU director,

				the attendance will be counted simultaneously.
11	I, II, III	This ICU liaison must attend at least 50 percent of the multidisciplinary peer review meetings, with documentation by the trauma PIPS program (CD 11-62).	TYPE II	Refer to Clarification Document, Chapter 7, CD 7-11
11	I, II	The ICU liaison to the trauma program at Level I and II centers must accrue an average of 16 hours annually or 48 hours in 3 years of verifiable external trauma-related CME (CD 11-63).	TYPE II	Refer to Clarification Document, Chapter 6, CD 6-10
11	I, II	This requirement must be documented by the acquisition of 16 hours of trauma CME per year, on average, **or** through an internal educational process conducted by the trauma program and the ICU liaison based on the principles of practice-based learning and the PIPS program (CD 11-64).	TYPE II	Refer to Clarification Document, Chapter 6, CD 6-10 If the **intensivists** are the primary physician responsible for the care of the patients while in the ICU (patients care is transferred to them), they are required to maintain current board certification to satisfy the CME requirement. (rv 4/26/18)
11	I, II	Level I and II facilities are prepared to manage the most complex trauma patients and must have available a full spectrum of surgical specialists (CD 11-70, 11-71) that includes the following specialists: • Orthopaedic surgery • Neurosurgery • Cardiac surgery (only required at Level I facilities) • Thoracic surgery • Vascular surgery • Hand surgery • Microvascular surgery • Plastic surgery • Obstetric and gynecologic surgery • Ophthalmology • Otolaryngology • Urology	TYPE I	In regard to the microvascular requirement, the intent is for the center to have microvascular capability. The requirement is satisfied if there is a surgeon who can use an operating microscope for nerve repair, for free tissue transfer, etc. The capability for reimplantation is not expected. Furthermore, the microvascular capability is not required 24/7, just that it is available when a consult is requested. Reviewers will want to see a name on the call schedule for these services. (rv 4/15/19)

11	I, II, III, IV	APPs who participate in the initial evaluation of trauma patients must demonstrate current verification as an ATLS provider (CD 11-86).	TYPE II	APPs who are clinically involved in the initial evaluation and the resuscitation of trauma patients during the activation phase, are required to have current ATLS certification. This would therefore include ED and trauma APPs. It does not include orthopaedic and neurosurgery practitioners who are consulting. If the trauma and/or ED APPs only role is as a scribe or entering orders, they would not need to meet the ATLS requirement. This does not include the consult tier or Fast-Track. ATCN cannot be used to meet the requirement. (rv 6/8/15, 4/14/16)
Chapter 12: Rehabilitation				
Chapter 13: Rural Trauma Care				
Chapter 14: Guidelines for the Operation of Burn Centers				
Chapter 15: Trauma Registry				
15	I, II, III	All trauma centers must use a risk-adjusted benchmarking system to measure performance and outcomes (CD 15-5).	TYPE II	The National Trauma Data Bank (NTDB) is **NOT** a risk-adjusted benchmarking program. Equivalent programs would be based upon the ATS objectives, the administration or learning sequence and format. (rv 6/8/15) The objectives for the ATS Trauma Registrar Course may be found at: https://www.amtrauma.org/page/TRC Registrars new to the facility must have attended two courses within 1 year of being hired.
15	I, II, III	The registrars must attend or have previously attended two courses within 12 months of being hired: (1) the American Trauma Society's (ATS) Trauma Registrar Course or equivalent provided by a state trauma program; and (2) the Association of the Advancement of Automotive Medicine's Injury Scaling Course (CD 15-7).	TYPE II	

Chapter 16: Performance Improvement and Patient Safety				
16	I, II, III	Mortality Review (CD 16-6). All trauma-related mortalities must be systematically reviewed and those mortalities with opportunities for improvement identified for peer review. 1. Total trauma-related mortality rates. Outcome measures for total, pediatric (younger than 15 years), and geriatric (older than 64 years) trauma encounters should be categorized as follows: a. DOA (pronounced dead on arrival with no additional resuscitation efforts initiated in the ED). b. DIED (died in the emergency department despite resuscitation efforts) c. In-hospital (including operating room).	TYPE II	Deaths are classified as follows: – Mortality with opportunity for improvement – Mortality without opportunity for improvement – Unanticipated Mortality with opportunity for improvement (rv 10/6/15, 7/1/16, 9/2/16)
16	I, II, III	Rates of undertriage and overtriage must be monitored and reviewed quarterly (CD 16-7).	TYPE II	To determine undertriage, include patients with ISS > 15 for which the highest level of trauma team activation (TTA) was not activated.
Chapter 17: Outreach and Education				
17	I, PTC	At a minimum, a Level I trauma center must have continuous rotations in trauma surgery for senior residents (Clinical PGY 4-5) that are part of an ACGME-accredited program (CD 17-3). For pediatric Level I centers, the continuous rotation for surgical residents is extended to include clinical PGY 3 (CD 10-27).	TYPE I	A resident who has completed their PGY-3 year and is in their 4th year of surgical training is acceptable. Lab residents who are clinically active during the lab year (take call regularly and participate in the round, didactic and peer review) are acceptable.
Chapter 18: Prevention				
18	I, II, III	Screening for Acute Stress Disorder may be counted as Post Traumatic Stress Disorder.		Not a requirement.
18	I, II, III, IV I	Each trauma center must have someone in a leadership position that has injury prevention as part of his or her job description (CD 18-2) In Level I centers, this individual must be a prevention coordinator (separate	TYPE II	One person may serve as the injury prevention coordinator for a combined adult Level I and a pediatric Level I trauma center. This person needs to have sufficient dedicated time to

		from the trauma program manager) with a job description and salary support (CD 18–2).		ensure effective injury prevention in the community based on the registry data.
18	I, II, III, IV	Universal screening for alcohol use must be performed for all injured patients and must be documented (CD 18-3).	TYPE II	Changed from "All = 100%" to at least 80% of trauma patients who are admitted with a stay > 24 hours must receive an alcohol screening. The requirement is applicable to eligible patients (alive and participatory), regardless of activated or non-activated, who have been admitted and meet inclusion criteria with a hospital stay of >24 hours. Eighty percent of these patients must be screened. This includes patients admitted to the orthopaedic and neurosurgery services. (rv 11/30/17, 4/18/18) Any patient with an altered mental status (and deaths) should be excluded from the denominator as these cannot be considered "participatory." (rv 4/18/18)
18	I, II	At Level I and II trauma centers, all patients who have screened positive must receive an intervention by appropriately trained staff, and this intervention must be documented (CD 18-4).	TYPE II	A minimum threshold of 80% has been applied to this standard, reduced from the initial 100% requirement. This revision will be effective immediately. (rv 11/1/21) "Appropriately trained staff" will be determined and credentialed by the institution. This may be an RN, Social Worker, etc.
18	I, II	Level I and II trauma centers must implement at least two programs that address one of the major causes of injury in the community (CD 18-5).	TYPE II	This may include two projects related to local issues, e.g. two projects on one issue or two projects on two issues. (rv 9/1/2016) Stop the Bleed may be used as an outreach activity. (rv 11/9/16)

Chapter 19: Trauma Research and Scholarship (Refer to the VRC research statement at the end of the document)				
19	I, PTC	For a Level I [adult or pediatric] trauma center, at a minimum, a program must have 20 peer-reviewed articles published in journals included in Index Medicus or PubMed in a 3-year period (CD 19-1, 19-2, 19-3, 19-4, 19-7, 10-9, 10-10, 10-11).	TYPE II	These numbers may include one article from Acute Care Surgery (rv 1/22/16) Refer to the VRC research statement at the end of the document for further clarification.
Chapter 20: Disaster Planning and Management				
20	I, II, III, IV	Trauma centers must meet the disaster-related requirements of the Joint Commission (CD 20-1).	TYPE II	Equivalent program may be acceptable as long as it follows the Joint Commission structure.
Chapter 21: Solid Organ Procurement Activities				
Chapter 22: Verification, Review, & Consultation Program				
Chapter 23: Criteria Quick Reference Guide				
All reference documents will be available at: *https://www.facs.org/quality-programs/trauma/vrc/resources*				

Chapter 8 Neurosurgery: Table 1Expected Neurosurgical Coverage

Trauma Center	NSG Liaison	NS	Emergency Coverage	Initial Eval	Backup
Level I Level II	Board–Certified NSG	BC NSG or alt pathway	Immediately available 24/7	NSG Sr NSG resident Trauma surg EM phys APP	NSG Sr NSG resident Transfer agreement

Initial Evaluation means who initially saw the patient in the ED. If the patient was first seen by the ED physician or trauma surgeon and NSG was consulted, then acceptable for junior neurosurgery resident to perform consult. There must be documentation though of discussion with attending.

VRC Statement on requirements for research in a Level I Trauma Center (November, 2017)

The following is the language from the **Resources for Optimal Care of the Injured Patient** Guidelines.

> *Research and scholarly activity are some of the capabilities that distinguish a Level I trauma center from other trauma centers. Research, the process to advance knowledge, is essential to optimize the care of injured patients. The unique combination of a large volume of severely injured patients, a core of experienced trauma surgeons, and an academic infrastructure enables Level I trauma centers to be effective and productive in research and scholarly activity.*
>
> *The fact that most Level I trauma centers are housed in academic medical centers is not a coincidence. With the unique coexistence of expert trauma surgeons and committed basic and translational scientists, a structured research program can be accomplished.*
>
> *Perhaps the most important resource is a core of trauma surgeons with interest and dedicated training in research methodology. Specifically, the Level I trauma director should have established research productivity, with regular participation in academic trauma forums such as the American Association for the Surgery of Trauma (AAST) and the ACS Committee on Trauma (ACS-COT). One of the trauma surgeons who remains clinically active in trauma care should direct formal, regularly scheduled trauma research meetings, with documentation of the ongoing activities. Trauma program managers, residents, and trauma registrars are an integral part of the research team to ensure the collection of complete and accurate data and regularly provide clinical outcome reports. Basic or translational scientists should participate in the regularly scheduled trauma research meetings, but the majority of the attendees should be trauma surgeons, surgical residents, and research fellows.*

The surgical intensive care unit is an ideal environment to bridge the basic laboratory to injured patients, which underscores the imperative for a trauma surgeon to be director of the surgical intensive care unit. It is the ideal location in which to conduct comparative effectiveness research—designed to inform health care decisions by providing evidence on the effectiveness, benefits, and harms of different treatment options. The evidence is generated from research studies that compare drugs, medical devices, tests, surgeries, or ways to deliver health care.

Finally, the administration of a Level I trauma center must demonstrate support for the research program by, for example, providing basic laboratory space, sophisticated research equipment, advanced information systems, biostatiscal support, salary support for basic and translational scientists, or seed grants for less experienced faculty (CD 19–8).

The statement in the **Resources for Optimal Care of the Injured Patient** implies that the trauma surgeons are actively involved in the creation of new knowledge and the research process. It is also implied that the research is done on-site and not all sent out for performance by an outside group. It is also implied that the facility has provided support and resources other than simply paying for research output form an outside source.

Therefore, it does not meet the intent of these requirements to simply pay to outsource research to an independent third party not routinely, clinically, associated with facility. (rv 11/6/17)