

**Iowa Department of Public Health
Bureau of Emergency Medical Services**

**Iowa Trauma System Community (Level IV)
Hospital and Emergency Care Facility Categorization Criteria (2013)**

Criteria	Requirements	Interpretive Guidelines
GENERAL STANDARDS		
1. Trauma care facility commitment	E	1a, b. There must be a current (reaffirmed every three years) written documentation of dedicated financial, physical, human resources, community outreach activities, and educational activities
a. Current written resolution supporting the Trauma Care Facility (TCF) from the hospital board and administration.	E	(not limited to Trauma Nurse Core Course (TNCC), Advanced Trauma Life Support (ATLS), and/or Rural Trauma Team Development Course (RTTDC)).
b. Current written resolution supporting the TCF from the medical and nursing staff.	E	The preferred commitment documentation should be in letterform, dated, and signed by, at a minimum, a. CEO and Board president b. Medical Staff President, Chief Nursing Officer, Trauma Nurse Coordinator (TNC), Trauma Program Manager (TPM), Trauma Medical Director (TSMD), ED Medical Director (EDMD).
c. Commitment to State trauma committees.	E	c. Commitment to State trauma and EMS activities; for example, Iowa Trauma Coordinators, Iowa Chapter American College of Surgeons (ACS) Committee on Trauma Committee on Trauma (ACS), Iowa Chapter of American College Emergency Physicians (ACEP), Iowa Emergency Medical Service Association (IEMSA), Trauma System Advisory Council (TSAC), System Evaluation Quality Improvement Committee (SEQIC), Emergency Medical Service Advisory Council (EMSAC).

E-Essential

D-Desirable

*-If routinely available

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		<p>activation of the trauma team, and 4) identifies the person(s) authorized to activate the trauma team. Time critical injuries have been identified in the Out of Hospital Trauma Triage Destination Decision Protocol (OOHTTDDP) (Step #1 and Step #2) and the Inter-Trauma Care Facility Triage and Transfer Protocol. The types of conditions and injuries listed in the physiologic and anatomic sections of this protocol require a trauma alert/activation. Changes in these criteria must be supported by documentation from the trauma PIPS program.</p>
	E	<p>The trauma team activation policy shall include both physiologic and anatomic clinical indicators for when the physician covering the ED is expected to meet the patient upon arrival at the ED when given timely notice by EMS.</p> <p>When the Emergency Department is staffed by non-physician medical provider, the supervising physician must be notified and respond within 30 minutes for the highest level (Level I) trauma team activation.</p>
	E	<p>The size of the trauma team may vary from facility to facility depending upon physician specialty resources, hospital resources, severity of the patient's injuries, and methods of patient transportation to the trauma care facility. A high level trauma team response to a severely injured patient typically includes: 1) general surgeon, if available 2) emergency physician, 3) ED nurses, 4) scribe nurse, 5) OR nurse, 6) lab technician, 7) radiology technologist, 8) ICU nurse, 9) anesthesiologist or CRNA, 10) security officer, and 11) chaplain and or social worker. Facilities may use more than one level of trauma team response based on the variables listed above.</p> <p>The minimum criteria for a (major resuscitation) high level trauma team response shall include any of the following: 1) Confirmed blood pressure < 90 at any time in adults and age specific for pediatrics; 2) Respiratory compromise/obstruction and/or intubation;</p>

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		<p>3) Penetrating wounds to the head, neck, chest, or abdomen;</p> <p>4) GCS ≤8 with mechanism attributed to trauma.</p> <p>5) Emergency physicians discretion</p>
<p>4. Trauma service medical director (TSMD)</p> <p>a. Board certification in their specialty</p>	E	<p>TCFs shall have a physician on staff who functions as the trauma service medical director and whose job description defines his/her role and responsibilities for trauma patient care, trauma team formation, supervision/leadership, and trauma training/continuing education and acts as the medical staff liaison for trauma care with out-of-hospital medical directors, nursing staff, administration, and higher level TCFs.</p> <p>The TSMD shall be currently verified in ATLS® and obtain 24 hours of continuing trauma education every 4 years. 8 hours shall be formal and 16 hours may be informal. The TSMD or designee shall also participate in trauma continuing education activities.</p> <p>Through the quality improvement process, the TSMD shall have the overall responsibility for all trauma patients and the administrative authority for the hospital's trauma program. These roles and responsibilities shall be outlined in a formal job description.</p>
<p>5. Trauma Nurse Coordinator/Trauma Coordinator</p>	E	<p>TCF's shall have an individual acting as the trauma coordinator who works in conjunction with the TSMD helping to organize and coordinate the TCF's trauma care response. Ideally this individual should be a RN with emergency/trauma care experience.</p> <p>As an alternative other allied health personnel with clinical experience in emergency/trauma care may fulfill this role. In addition, this position may be shared by individuals with different qualifications in clinical care, quality improvement, and data collection. They shall hold the responsibility for the education of the trauma team in the varied aspects of trauma care within the facility.</p>
	E	<p>The TSMD roles and responsibilities of the TPM/TNC/TC shall be outlined in a formal job description.</p>
<p>a. 16 hours of continuing</p>	E	<p>The TPM/TNC/TC may be a part-time or full-time position depending on the</p>

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<p>trauma education: 4 hours formal, 12 hours informal.</p> <p>b. Trauma Program Support Personnel (Trauma registrar, clinical support nurse, secretary, etc.)</p>	E	<p>volume of trauma patients cared for at the TCF.</p> <p>a. Successful completion of trauma nursing course objectives recommended by TSAC and Trauma System Overview.</p> <p>b. The need for trauma program support personnel in a community TCF should be determined by the administration, medical staff and nursing staff. Individuals functioning as the trauma registrar, clinical support nurse, or secretary may be the most helpful individuals. The TPM/TNC/TC may function as the trauma registrar and clinical support nurse if the volume of trauma patients does not require additional personnel. Additional individuals are to be supervised by the TPM/TNC/TC and have a formal job description. Administrative and budgetary support needed for the TPM/TNC/TC depends on the size of the program.</p>
<p>6. Trauma Committees</p> <p>a. Trauma program (system) performance committee</p>	E E	<p>Trauma Care Facilities usually have two committees, the Trauma Multidisciplinary Peer Review Committee and the Multidisciplinary Trauma Program Operational Process Performance (System) Committee. <u>In a community TCF these committee functions may be included in other hospital committees as long as there are separate times delineated for their activities and they are documented separately in the minutes.</u></p> <p>a. Community TCFs shall have a multidisciplinary trauma performance (system) committee (See trauma committees paragraph above), chaired by the TSMD or his/her designee that assesses (identifies) and corrects trauma program system and service provider issues unrelated to peer review. The committee should work to correct overall program deficiencies and continue to optimize patient care. Committee membership shall include all program-related services. It should meet regularly (usually quarterly or bi-yearly) and take attendance. Minutes that document the issues and any corrections should be developed and provided to the appropriate individuals.</p>

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<p>b. Trauma Multidisciplinary Peer Review (PIPS) Committee</p>	<p>E</p>	<p>b. The Trauma Multidisciplinary Peer Review Committee (See trauma committees paragraph above) is a physician committee whose responsibility it is to review trauma morbidity, mortality (selective deaths), and complications including review of the TSMD's cases, discuss sentinel events, and review organizational issues. It is the responsibility of this committee to identify and resolve problems or specific issues regarding trauma care, trigger new policies/protocols and have the representatives from the various departments act as a conduit for information back to their respective departments. All of the committee's functions are considered confidential and should be so labeled. Those individuals that should be involved in this committee's activities are the TSMD, emergency medicine, anesthesia (CRNA), and the TNC/TC or his/her alternate. <u>If a general surgeon is routinely involved in the care of trauma patients then he/she should attend the meetings.</u></p> <p>All physicians involved in the care of trauma patients should be invited to attend the meetings. There shall be an attendance requirement of $\geq 50\%$ of the total meetings per year for this committee. The committee should meet regularly (minimum quarterly), take attendance, take minutes, and be able to demonstrate how loop closure is accomplished to avoid patient care problems in the future. Loop closure may be demonstrated by the attending physician presence at the peer review session, or through memo, letter or documentation of verbal consultation with the physician. Return communication in by the physician is usually part of the loop closure process. This committee should function under the aegis of the facility's performance improvement program and may meet at the same time as the hospital peer review committee.</p>
HOSPITAL DEPARTMENTS/DIVISIONS		
<p>1. Surgery</p>	<p>*</p>	

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2. Neurological surgery a. Neurosurgical trauma liaison	--	
3. Orthopedic surgery a. Orthopedic trauma liaison	--	
4. Emergency medicine	E	Usually one ED physician is the TSMD and he/she needs to follow the interpretive guidelines under the TSMD section above. It is this individual's responsibility to keep all members of the ED medical staff informed about trauma program activities by E-mail, department meeting or other personal communication.
5. Anesthesia	*	*If there is anesthesia services routinely available at a level IV trauma care facility there should be a published anesthesia call schedule. This is important in the management of the difficult airway in the trauma patient.
CLINICAL CAPABILITIES (Immediately available 24 hours/day in-house)		
1. General surgery a. Dedicated to a single hospital when on-call	E* D	<p><u>*If a general surgeon is routinely involved in the care of a trauma patient, the following shall apply.</u></p> <p>*The active involvement of the trauma/general surgeon is crucial to optimal care of the injured patient in all phases of management. The presence of the trauma/general surgeon in the emergency department at the time of arrival of the patient is expected for all high level trauma alert activations when the hospital was given timely notice by out-of-hospital providers as to the expected arrival of the patient. If the hospital is not given timely notice by out-of-hospital providers as to the expected arrival of the patient it is expected that the trauma team respond immediately upon notification of a high level trauma alert.</p> <p>*For all other trauma patients requiring surgical care/consultation the general surgeon shall respond promptly.</p>

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		<p>*Local criteria may be established to allow the general surgeon to take call from outside the facility, but with clear commitment on the part of the facility and the surgical staff that the general surgeon will be present in the emergency department at the time of arrival of the trauma patient (high level trauma alert). Compliance with this requirement and applicable criteria must be monitored by the trauma PIPS program.</p> <p>*Qualifications for the trauma/general surgeons caring for trauma patients include; board certification, clinical involvement, education, and state/regional/national commitment. Compliance with these requirements is the responsibility of the trauma service medical director.</p> <p>*Credentialing is required for participation in the trauma program by the trauma/general surgeons</p>
2. Anesthesia	*	<p>If an anesthesiologist or certified nurse anesthetist is on staff then it is appropriate that they have a liaison to the trauma program and attend the trauma committee meetings.</p> <p>They should participate in the peer review process.</p>
3. Emergency medicine a. Physician capable of initial resuscitation who is on-call & immediately available to the ED upon arrival of the trauma patient.	E	<p>Optimally the physician providing initial ED care for trauma patients should be in-house twenty-four hours per day. As an alternative the physician may be on-call and notified to meet the patient upon arrival at the TCF to assume immediate care responsibilities. The presence of the ED physician in the emergency department at the time of arrival of the patient is expected for all high level trauma alert activations when the hospital was given timely notice by out-of-hospital providers as to the expected arrival of the patient.</p> <p>The appropriateness and timeliness of the physician's response to the ED shall be monitored by the TCF's trauma PIPS program.</p>

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4. Orthopedic surgery	*	Any specialist involved in the care of trauma patients will need to be involved with all aspects of the trauma program.
On-call and promptly available 24 hours/day		
1. Radiology	E	If teleradiology is utilized, this process shall be monitored and evaluated by the trauma PI program.
2. Laboratory	E	If laboratory is utilized, this process shall be monitored and evaluated by the trauma PIPS program
CLINICAL QUALIFICATIONS		
1. Formal credentialing policy for the trauma program	D	<p>Each trauma care facility should have a formal credentialing policy for general/trauma surgeons (if routinely available), and emergency department physicians participating on the trauma service that establishes trauma-specific credentials that exceed those required for general hospital privileges.</p> <p>The formal credentialing shall policy shall include at a minimum, but not be limited to:</p> <ol style="list-style-type: none"> 1. Board certification, 2. Physician peer review committee attendance, 3. Trauma program performance committee attendance, 4. ATLS[®], 5. Continuing trauma education
1. General/trauma surgeon <ol style="list-style-type: none"> a. Current board certification (see interpretive guidelines) b. Physician peer review committee attendance > 50% c. Trauma program (system) performance committee attendance d. ATLS[®] (see interpretive guidelines) e. 24 hours continuing trauma education every 4 years 	* E* E* D* E* E*	<p>*If a general surgeon participates routinely in the trauma care of a patient, all criteria in this section shall apply.</p> <p>Qualification for trauma care for any general surgeon is board certification, regular participation as trauma team leader in the care of injured patients and attendance at > 50% of the physician peer review committee meetings. The general/trauma surgeon should also attend trauma program (system) performance committee meetings. Trauma/general surgeons shall be currently verified in ATLS[®] or successfully complete the course within one</p>

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<p>1) 8 hours formal 2) 16 hours informal</p> <p>If a physician is providing temporary (locum tenens) coverage, this physician is required to be current in ATLS®.</p>	E	<p>year of joining the trauma service.</p> <p>Board certification in a surgical specialty recognized by the American Board of Medical Specialties, the American Board for Osteopathic Specialties, the Royal College of Physicians and Surgeons of Canada, or other appropriate foreign board is acceptable. Alternate criteria to board certification may be considered.</p> <p>Alternate Criteria: the non-board-certified surgeon must have completed an approved surgical residency program, be licensed to practice medicine and approved for surgical privileges by the trauma care facility’s credentialing committee. The surgeon must also meet all criteria established by the trauma director to serve on the trauma team and the trauma director must attest to this surgeon’s experience and quality of patient care as part of the recurring granting of trauma team privileges consistent with the trauma care facility’s policy. This individual is expected to meet all other qualifications for members of the trauma team.</p> <p>d. All general surgeons on the trauma team must have successfully completed the ACS ATLS® course at least once. Surgeons who are not boarded in general surgery must be current in ATLS. Refer to 641—137(147A) Trauma Education and Training</p>
<p>2. Emergency medicine</p> <p>a. Current board certification</p> <p>b. Physician (representative) peer review committee attendance > 50%</p> <p>c. Trauma program (system) performance committee attendance</p> <p>d. ATLS® (see interpretive guidelines)</p> <p>e. 24 hours continuing trauma education every 4 years 1) 8 hours formal 2) 16 hours informal</p> <p>If a physician is providing temporary (locum tenens) coverage, this physician is required to be current in</p>	E E E E E	<p>Qualification for trauma care for any emergency physician is board certification, regular participation in the care of injured patients and attendance at > 50% of the physician (representative) peer review committee meetings. The emergency physician should also attend trauma program (system) performance committee meetings.</p> <p>Current ATLS® verification is required for all physicians (as defined by the facilities trauma alert policy) who work in the ED and are boarded in a specialty other than emergency medicine.</p> <p>Board certification in a specialty recognized by the American Board of Medical Specialties, the American Board for Osteopathic Specialties, the Royal College of Physicians and Surgeons of Canada, or other appropriate foreign board is acceptable. Alternate criteria to board certification may be</p>

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ATLS®.		<p>considered.</p> <p>Alternate Criteria: the non-board-certified emergency physician must have completed an approved residency program, be licensed to practice medicine and approved for emergency medicine privileges by the trauma care facility's credentialing committee. The emergency physician must also meet all criteria established by the trauma director and emergency medicine director to serve on the trauma team. The trauma director and emergency medicine director must attest to this physician's experience and quality of patient care as part of the recurring granting of trauma team privileges consistent with the trauma care facility's policy. This individual is expected to meet all other qualifications for members of the trauma team.</p> <p>d. Successful completion and current ATLS® status is an optimal standard for emergency physicians who participate in the initial assessment and resuscitation of injured patients. All emergency medicine physicians must have successfully completed the ATLS® course at least once. Physicians who are certified by boards other than emergency medicine who treat trauma patients in the emergency department are required to have current ATLS® status. Refer to 641—137(147A) Trauma Education and Training</p>
3. Non physician medical provider (ARNP or PA) Licensed or boarded in specialty ATLS® (current certification) 24 hours continuing trauma education every 4 years 1) 8 hours formal 2) 16 hours informal	E E E	(PA- NCCPA certification) Licensed for ARNP
4. Neurosurgery a. Current board certification b. Physician (representative) peer review committee attendance ≥ 50% c. Trauma program performance committee attendance	-	
5.. Orthopedic Surgery a. Current board certification	*	*If an orthopedic surgeon participates routinely in the trauma care of a patient, all criteria in this section shall apply.

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b. Physician (representative) peer review committee attendance \geq 50% c. Trauma program performance committee attendance		<p>Qualification for trauma care for any orthopedic surgeon on staff is board certification, regular participation in the care of musculoskeletal injured patients and attendance at \geq 50% of the physician (representative) peer review committee meetings. The orthopedic surgeon should also attend trauma program (system) performance committee meetings.</p> <p>Board certification in a surgical specialty recognized by the American Board of Medical Specialties, a Canadian Board, or other appropriate foreign board is acceptable. Alternate criteria to board certification may be considered. Alternate Criteria: the non-board-certified surgeon must have completed an approved surgical residency program, be licensed to practice medicine and approved for surgical privileges by the trauma care facility's credentialing committee. The surgeon must also meet all criteria established by the trauma director to serve on the trauma team. The trauma director and orthopedic surgeon liaison/director must attest to this surgeon's experience and quality of patient care as part of the recurring granting of trauma team privileges consistent with the trauma care facility's policy. This individual is expected to meet all other qualifications for members of the trauma team.</p>
FACILITY RESOURCE CAPABILITIES		
1. Volume Performance a. Presence of surgeon at resuscitation b. Presence of surgeon at operative procedures	* E	*If a general/trauma surgeon participates routinely in the trauma care of a patient, then he/she will be expected to be present at all high level trauma alert activations.
2. Emergency Department a. Designated physician director	E	One of the physicians taking ED call, perhaps the chairperson of the ED committee (or similar standing committee responsible for the ED), or ED medical director shall be responsible for 1) physician staffing of the ED, 2) out-of-hospital medical direction, 3) acting as liaison for the ED with nursing staff, and TCF administration, and 4) ensuring that ED physician PI activities are in place and performed. These responsibilities shall be formalized in an ED medical director job description and or in the medical staff bylaws. The ED medical director is usually the TSMD.

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b. Registered nurses available 24 hours per day	E	<p>Nursing personnel staffing the ED should be physically present in the ED prior to the arrival of the trauma patient to ensure that the room and equipment are available and ready for use. These activities shall be assessed by the trauma PIPS program. Nurses acting in this capacity, as defined by the TCF's trauma alert policy, shall have current trauma training equivalent to the trauma course objectives approved by the department and they shall maintain appropriate CEUs in trauma care.</p> <p>Nurses have one year from the date of the nurse joining the TCF's trauma team to successfully complete the required trauma training. Continuing trauma education (CEUs) are required every four years, to include but not be limited to, 4 hours formal and 12 hours informal. Refer to 641-137(147A)</p>

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C. Equipment for patients of all ages:		
1. Airway control & ventilation	E	
2. Pulse oximetry	E	
3. Suction devices	E	
4. Electrocardigraph/oscilloscope-defibrillator	E	
5. Internal paddles	--	
6. CVP monitoring equipment	--	
7. Standard IV fluids & administration sets	E	
8. Large-bore intravenous catheters	E	
9. Sterile surgical sets for:		
a) Cricothyrotomy	E	
b) Thoracostomy (chest tube insertion)	E	
c) Central line insertion	D	
d) Thoracotomy	D	
e) Venous cutdown	D	
f) Intraosseous (IO)	E	
g) Thoracotomy	D	
10. Arterial catheters	D	
11. Drugs for emergency care	E	
12. X-ray tech. availability 24 hours per day	E	
13. Spinal immobilization devices	E	
14. Pelvic immobilizer	E	
15. Pediatric resuscitation tape	E	
16. Thermal control equipment		
a) for patient	E	
b) for blood and fluids	E	
17. Rapid infuser system	E	
18. Qualitative end-tidal CO2 determination	E	
19. Communication with EMS	E	
20. Ultrasound	D	
21. Heliport or Landing Zone	E	
		<p>17. This means any device that can allow for fluid to be given rapidly such as rapid infuser device, blood pressure bag or similar bag, etc.</p> <p>19. On-line medical control (two-way communication) shall be available to all out-of-hospital service programs in the TCF area, with physician and/or physician designees trained in receiving patient reports and giving orders for patient treatment interventions and/or TCF destination decisions. Physician designee means any registered nurse licensed under Iowa Code chapter 152, or any physician assistant licensed under Iowa Code chapter 148C and approved by the board of physician assistant examiners. The physician designee acts as an intermediary for a supervising physician in accordance with written policies and protocols in directing the actions of emergency medical care personnel providing emergency medical services.</p> <p>21. Have a helipad or a written, organized plan for getting the trauma patient to a safe landing zone with alternative sites should something occur with the first choice.</p>

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<p>3. Operating Room</p> <p style="margin-left: 20px;">a. Personnel available 24 hours per day</p> <p style="margin-left: 20px;">b. Age-specific equipment</p> <p style="margin-left: 40px;">1. Cardiopulmonary bypass</p> <p style="margin-left: 40px;">2. Thermal control equipment</p> <p style="margin-left: 60px;">a). For patient</p> <p style="margin-left: 60px;">b). For fluids and blood</p> <p style="margin-left: 40px;">3. X-ray capability including c-arm image intensifier</p> <p style="margin-left: 40px;">4. Endoscopes, bronchoscope</p> <p style="margin-left: 40px;">5. Equipment for long bone and pelvic fixation</p> <p style="margin-left: 40px;">6. Rapid infuser system</p>	<p style="text-align: center;">*</p> <p style="text-align: center;">E*</p> <p style="text-align: center;">*</p> <p style="text-align: center;">--</p> <p style="text-align: center;">E*</p> <p style="text-align: center;">E*</p> <p style="text-align: center;">D*</p> <p style="text-align: center;">E*</p> <p style="text-align: center;">E*</p> <p style="text-align: center;">E*</p>	<p>*If a general/trauma surgeon is routinely available and operates on trauma patients at your hospital then the following criteria apply.</p> <p>*The operating room staff shall be on-call and promptly available when notified to respond. The OR staff is part of the trauma team and shall be notified as part of the trauma alert activation protocol. A call schedule shall be posted. The OR staff's availability and response times shall be part of the trauma PI program.</p> <p>When a general surgeon is available and responds as part of the TCF's trauma alert protocol, operating room staff shall be on-call and promptly available when notified to respond. The OR staff is then part of the trauma team and shall be notified as part of the trauma alert protocol. The OR staff's availability and response times shall be part of the trauma PIPS.</p> <p>5.* If an orthopedic or surgeon capable of managing orthopedic trauma is routinely available then this equipment is essential</p> <p>6.* This means any device that can allow for fluid to be given rapidly such as rapid infuser device, blood pressure bag or similar bag, etc.</p>
<p>4. Postanesthetic Recovery Room (ICU OK)</p> <p style="margin-left: 20px;">a. Registered nurses available 24 hours per day (in-house or on-call)</p> <p style="margin-left: 20px;">b. Equipment for monitoring and resuscitation</p> <p style="margin-left: 20px;">c. Intracranial monitoring equipment</p> <p style="margin-left: 20px;">d. Pulse oximetry</p> <p style="margin-left: 20px;">e. Thermal control</p> <p style="margin-left: 20px;">f. CO₂ monitoring</p>	<p style="text-align: center;">E*</p> <p style="text-align: center;">E*</p> <p style="text-align: center;">E*</p> <p style="text-align: center;">--</p> <p style="text-align: center;">E*</p> <p style="text-align: center;">E*</p> <p style="text-align: center;">E*</p>	<p>*If a general/trauma surgeon is available all of these apply.</p>
<p>5. Intensive or Critical Care Unit</p> <p style="margin-left: 20px;">a. Registered nurses with trauma education available 24 hours per day</p> <p style="margin-left: 20px;">b. Designated surgical director or surgical co-director</p> <p style="margin-left: 20px;">c. General/trauma surgeon with privileges in critical care and approved by the TSMD, on-call and promptly available to the ICU</p>	<p style="text-align: center;">D</p> <p style="text-align: center;">--</p> <p style="text-align: center;">D</p> <p style="text-align: center;">--</p>	<p>This function may be performed by a general surgeon/TSMD on the TCF's ICU committee or by the ICU medical director participating on the multidisciplinary physician peer review committee.</p>

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d. Equipment for monitoring and resuscitation (in ICU/CCU) 1). Cardiopulmonary resuscitation cart with defibrillator 2). Electrocardiograph machine 3). Instrument sets for tracheal intubation, tracheostomy, thoracostomy, and central venous puncture e. Pulmonary artery monitoring equipment	-- -- -- --	d. This equipment is necessary if there are trauma patients in the ICU.
6. Respiratory Therapy Services a. On-call 24 hours per day	D D	A call schedule shall be posted and availability and response of the therapist shall be part of the trauma PIPS program.
7. Radiological Services a. Radiology technologist on-call and available 24 hours per day b. In-house radiology technologist c. Angiography d. Sonography e. Computed tomography f. In-house CT technician g. Magnetic resonance imaging	E E D -- D D -- --	Radiology technologists shall be on call & promptly available to the ED. The technologist is part of the trauma team and shall be notified as part of the trauma alert activation protocol. A call schedule shall be posted in all areas of the TCF caring for trauma patients. The technician's availability and response shall be monitored as part of the trauma PIPS program.
8. Clinical Laboratory Services (available 24 hours per day) a. Standard analysis of blood, urine and other body fluids, including microsampling when appropriate b. Blood typing and cross-matching c. Coagulation studies d. Blood bank capability or access to a community central blood bank and adequate storage facilities e. Blood gases and pH determinations f. Microbiology	E E E E E E E	Laboratory personnel shall be on-call and promptly available to the emergency department/ICU. They are part of the trauma team & shall be notified as part of the trauma alert activation protocol. A call schedule shall be posted in all areas of the TCF caring for trauma patients. Laboratory personnel availability and response times shall be part of the trauma PIPS program. There shall be a policy delineating the priority of a trauma patient in the collection and processing of blood and urine for evaluation. TCF's shall be capable of storing blood received from blood banks and providing non-cross matched blood to the ED on patient arrival. TCFs shall have a formal emergency release of blood policy.

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9. Acute Hemodialysis a. In-house or transfer plan/agreement	E	One plan/guideline/agreement to cover all transfer trauma patients.
10. Organized Burn Care a. In-house or transfer plan/agreement b. Stabilization/treatment guidelines	E E	One plan/guideline/agreement to cover all transfer trauma patients. As part of the transfer plan for burn care, the TCF should have a formal agreement with a burn center.
11. Acute Spinal Cord Management a. In-house management or transfer plan/agreement b. Stabilization/treatment guidelines	E E	One plan/guideline/agreement to cover all transfer trauma patients.
12. Rehabilitation Services 1. In-house or transfer plan/agreement to an approved rehabilitation facility 2. Physical therapy 3. Occupational Therapy 4. Speech therapy 5. Social services 6. Formal policy integrating the trauma and rehabilitation service.	D D D -- D D	
PERFORMANCE IMPROVEMENT		
Trauma performance improvement and patient safety (PIPS) program	E	Community TCFs shall perform all PIPS activities as required for Resource, Regional and Area TCFs. The overall responsibility of concurrent and retrospective review of the care of trauma patients (PIPS) lies with the TSMD and TPM/TNC in conjunction with the trauma performance improvement (system) committee and the physician multidisciplinary peer review committee and is consistent with medical staff and facility PIPS policies. Some of the activities of the two committees may coincide with each other and require both committees involvement, e.g. trauma related transfers, trauma related bypass/diversions, pre-hospital trauma care, etc. Standard of care and evidenced based data should be utilized. Summaries of the TCF's PIPS activities should be reported regularly to the administration and physician committees as required by the hospital bylaws. The Community (Level IV) PIPS process review may be performed by the two separate committees or higher level TCFs or by an appropriate hospital (system) and

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Criteria	Requirements	Interpretive Guidelines
<p>1. Multidisciplinary physician peer review committee</p> <p style="margin-left: 20px;">a. Multidisciplinary physician peer review and documentation of all trauma care including morbidity and mortality at the TCF with documented loop closure</p> <p style="margin-left: 20px;">b. Review of times and reasons for trauma related transfers</p> <p style="margin-left: 20px;">c. Review of times and reasons for trauma related bypass/diversion based on TCF policy</p> <p style="margin-left: 20px;">d. Medical nursing audit</p> <p style="margin-left: 20px;">e. Review of pre-hospital trauma care</p>	<p>E</p> <p>E</p> <p>E</p> <p>E</p> <p>E</p>	<p>medical staff peer review committees. This process may also be performed in conjunction with PIPS committee in higher level TCFs.</p> <p>The frequency of committee meetings in community is usually decided by the TMD and TPM/TNC/TC. Due to the fact there are less patients to be reviewed in community TCF, this is usually quarterly or twice a year. It certainly may be more frequent if required.</p> <p>Consideration should be given to offering continuing education credits to all in attendance at the meetings.</p> <p>1. The peer review committee should be chaired by the TSMD or his/her designee and have representatives from all physicians involved in the care of trauma patients. Attendance requirements should be established for all physicians on the committee at least 50% of the meetings.</p> <p>The peer review process and minutes of this committee should be confidential in accordance with facility and medical staff policy and protected from discovery by state law. A statement indicating this should be placed on all PIPS forms to ensure this.</p> <p>A mechanism shall be established by which all physicians caring for trauma patients in the TCF are involved in peer review of the care. Physicians should regularly review and discuss: 1) the results of trauma peer review activities, 2) problematic cases including complications, and 3) all trauma deaths identifying each death as mortality without opportunity for improvement, anticipated mortality with opportunity for improvement, unanticipated mortality with opportunity for improvement.</p> <p>The findings of the peer review process should be communicated by the TSMD to the physician(s) involved in the care of the trauma patient that was reviewed by memo, letter, chart review form, personal contact or by meeting attendance. Communication from the physician in return is expected. Obtaining communication in return is part of the loop closure/resolution process in the trauma PIPS program. Included in this</p>

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b. Work with the Trauma System Advisory Council (TSAC)	D	Providing input to the trauma systems advisory committee (TSAC) would be advisable should the community TCF have any concerns, questions, or issues.
CONTINUING EDUCATION (for staff)/OUTREACH		
1. ATLS instructor participation in state programs.	D	Continuing trauma education programs in TCFs must be provided by, but not limited to, the facility in-house or via the ICN, closed circuit TV, computer networks etc. 2a Continuing education for trauma team members: Physicians and non-physician medical providers (ARNP, PA): Eight hours of the required continuing trauma education are to be formal, i.e., standardized educational settings (conferences) with a curriculum. These formal hours may be developed by the host TCF, collaboration with other State TCFs, or a program developed and offered by an out-of-state provider of education. The provider and/or credentialing agency must document attendance in educational trauma topics in order to maintain and enhance knowledge and skills that are centered around the assessment and management of the trauma patient in all age groups. *Highly Recommended Objectives To Meet in Continuing Education Programs: 1) Communication and/or demonstration of the systematic initial assessment and treatment. 2) Within the primary survey, determine and demonstrate airway patency and cervical spine control, breathing and ventilation, circulatory status with hemorrhage control, neurologic status, exposure and environmental control. 3) Discussion and/or demonstration of the management techniques in the resuscitation phase, based on findings from the primary survey. Major skills to maintain include airway and ventilation management, needle and tube
2. Trauma continuing education programs provided for:	E	
a. Staff/community physicians	E	
b. Nurses	E	
c. Allied health	E	
d. Out-of-hospital personnel	E	
3. Yearly Multidisciplinary Trauma Conference	D	

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		<p>thoracostomy, shock resuscitation, neurologic assessment and scoring.</p> <p>4) Integration of the history of the trauma event, patient’s past medical history, and current findings with anticipated injuries.</p> <p>5) Discussion/outline of the definitive care necessary to stabilize each patient in preparation for possible transport to a trauma center or to the closest appropriate facility.</p> <p>6) Establishment and discussion of transport plans with other members of the trauma team, based on patient status and resources in that region, including EMS modes of transport and scope of practice.</p> <p>7) Within the secondary assessment findings, given a radiographic image, identify fractures and associated injuries. Discussion and demonstration of immobilization techniques with subsequent referral if necessary.</p> <p>*these objectives may easily be met within the Advanced Trauma Life Support (ATLS)® program.</p> <p>Sixteen hours of the required continuing trauma education may be informal, determined and approved by the trauma care facility from any of the following:</p> <ol style="list-style-type: none"> 1. Multidisciplinary trauma case reviews; 2. Multidisciplinary trauma conferences; 3. Multidisciplinary trauma mortality and morbidity reviews; 4. Multidisciplinary trauma committee meetings; 5. Trauma peer review meetings; 6. Any trauma care facility committee meeting with a focus on trauma care evaluation; and 7. Critical care education such as ACLS, PALS, NRP, APLS (1) or equipment inservices. <p>TCF’s at a minimum shall provide for CEU and CEH offerings (internally or</p>

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		externally) for nursing, allied health personnel, and EMS providers. Community TCFs are not required to hold trauma conferences. However, attendance at higher level TCF conferences to obtain continuing medical education or nursing credits would be recommended.
PREVENTION		
1. Injury control studies	-	
2. Collaboration with other institutions	D	
3. Monitor progress/effect of prevention programs -	D	
4. Designated prevention coordinator-spokesperson for injury control -	-	
5. Outreach activities	D	
6. Information resources for public	D	
7. Collaboration with existing national, regional, state prevention programs	D	
8. Community prevention activities	D	8. Coordination and/or participation in community prevention activities.
ORGAN PROCUREMENT		
1. Organ procurement policy	E	
TRANSFER AGREEMENTS/PLAN/PROTOCOL		
As a transferring facility	E	Generic agreements, plans or guidelines.
PEDIATRICS		
1. Trauma surgeons credentialed for pediatric trauma care	--	
2. Pediatric emergency department area	--	
3. Pediatric resuscitation equipment immediately available in designated patient care areas	E	
4. Microsampling	--	

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5. Pediatric-specific PIPS program	E	5. The pediatric PIPS activity shall include specific indicators/audit filters in the trauma PIPS program.
		<p>Criteria adopted from the American College of Surgeons Committee on Trauma (2006) <i>Resources for Optimal Care of The Injured Patient</i>. Chicago, IL: American College of Surgeons.</p> <p>Revised by the Trauma System Advisory Council, Categorization and Verification Subcommittee (Chair-Thomas Foley, M.D., FACS)</p> <p>Reviewed and approved by the Trauma System Advisory Council</p>