

Annotated Level III and IV Trauma Hospital Criteria

Institutional Organization

Program Component	Level III	Level IV	Criteria Description
Hospital Commitment	E	E	The board of directors, administration, and medical, nursing and ancillary staff shall make a commitment to providing trauma care commensurate to the level at which the facility is applying for categorization and or is verified.
Trauma Program	E	E	The trauma program shall be established by the facility with approval from the medical staff, board of trustees, and administration, and represented on an organizational chart. This may be in conjunction with an existing department; for example, emergency or surgery appropriate.
Trauma Team Activation	E	E	Trauma hospitals shall have a trauma team activation protocol/policy to include: <ul style="list-style-type: none"> • Lists of all team members • Response requirements for all team members when a trauma patient is en route or has arrived • The criteria, based on patient severity of injury, for activation of the trauma team and the person(s) authorized to activate the trauma team
	E	NA	The trauma team activation policy shall include both physiological and anatomical clinical indicators for when the ED physician is expected to be present in the ED within 15 minutes of EMS notification.
	NA	E	The trauma team activation policy shall include both physiological and anatomical clinical indicators for when the on-call medical provider covering the ED is expected to be present in the ED within 30 minutes of EMS notification.

Program Component	Level III	Level IV	Criteria Description										
Trauma Team Activation (cont'd)	E	NA	<p>The minimum criteria for surgeon response to the resuscitation are (1) respiratory compromise/obstruction and/or intubation (2) penetrating trauma to the abdomen, neck or chest (3) Glasgow coma scale (GCS) < 8 with a primary etiology attributed to trauma (unless transfer out is expected to occur within 30 minutes) or (4) two consecutive, pre-hospital systolic blood pressures less than 90 mmHg in an adult or age-specific hypotension in children as follows:</p> <table border="1" data-bbox="829 443 1167 618"> <thead> <tr> <th>Age</th> <th>mmHg</th> </tr> </thead> <tbody> <tr> <td>6 years +</td> <td>90</td> </tr> <tr> <td>2-5 years</td> <td>80</td> </tr> <tr> <td>12-24 months</td> <td>75</td> </tr> <tr> <td>0-12 months</td> <td>70</td> </tr> </tbody> </table> <p><i>Exemption Clause</i> <i>Surgeon response to the resuscitation is not required if:</i></p> <ul style="list-style-type: none"> • <i>The emergency department is staffed 24 hours/day, 7 days/week by an in-house physician and</i> • <i>The emergency department physician determines that the facility resources cannot provide definitive care and, subsequently, the patient will be emergently transferred and</i> • <i>The patient's length of stay in the emergency department does not exceed 30 minutes.</i> <p><i>A hospital utilizing this exemption clause must monitor the practice by use of a PI audit filter.^{1, 2}</i></p>	Age	mmHg	6 years +	90	2-5 years	80	12-24 months	75	0-12 months	70
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¹ Under the exemption clause, the surgeon must respond if:

- The emergency department physician determines that the patient will be admitted or
- The emergency department physician is uncertain as to whether or not the patient will be admitted or
- The emergency department physician requests the surgeon to respond or
- The emergency department physician knows or suspects that the patient's length of stay in the emergency department will exceed 30 minutes, regardless of whether or not a transfer has been initiated (e.g. waiting for a helicopter).

² A hospital utilizing the Exemption Clause must possess all of the capabilities and resources of a level III trauma hospital. The Exemption Clause only provides for an exemption to the deployment of the surgeon on a case-by-case basis.

E = Essential Criteria

D = Desired Criteria (not required)

NA = not applicable

Program Component	Level III	Level IV	Criteria Description
Trauma Program Medical Director	E	D	Trauma program medical director shall be a board-certified or boards-in-progress physician with special interest in trauma care. Trauma hospitals shall have a physician on staff 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 trauma hospitals. The trauma hospital medical director shall have successfully completed ATLS [®] and/or CALS (including the Benchmark Lab or Trauma Module Course) within the last four years. ³
Trauma Program Medical Advisor	NA	E	Trauma program medical advisor shall be a physician on staff 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 trauma hospitals. The trauma hospital medical advisor shall have successfully completed ATLS [®] and/or CALS (including the Benchmark Lab or Trauma Module Course) within the last four years. ²
Trauma Program Coordinator/Manager	E	D	This person shall be a RN with clinical experience in trauma care. Alternatively, other qualified allied health personnel with clinical experience in trauma care may be appropriate. It is expected that the Coordinator/Manager has allocated time for the trauma program.
	NA	E	This individual shall work in conjunction with the medical director/advisor, helping to organize and coordinate the facilities' trauma care response. Ideally this individual should be a RN with emergency/trauma care experience. Alternatively, other allied health personnel with clinical experience in emergency/trauma care may fulfill this role.

³ For the initial designation only, hospitals may become designated after the medical providers successfully complete the CALS Provider Course only. They must then complete the Benchmark Lab or Trauma Module Course within one year of the Provider Course.

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Clinical Capabilities

Program Component	Level III	Level IV	Criteria Description
General Surgery	E	D	The operating room must be readily available for trauma care 24 hours/day.
			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 available to the ED physician for consultation to assist in the decision for need of surgical interventions or transfer 24 hours/day. General surgeon response to the resuscitation is required if the patient meets the minimum criteria for surgeon response or is otherwise required by hospital policy. Eighty (80) percent of the time the general surgeon response to the resuscitation should be within 30 minutes of the patient's arrival in the emergency department.
			The surgeon must also be available to care for trauma patients in the ICU. Compliance with this requirement and applicable criteria must be monitored by the trauma PI program.
			A formal plan must be in place indicating: <ul style="list-style-type: none"> ▪ How the trauma patient will be managed should the usual surgical coverage be temporarily unavailable for any reason (e.g., the surgeon is already in surgery) ▪ How surgeon call will be covered when scheduled gaps in the usual coverage occur (e.g., vacations)
			Surgeon must be present at all operative procedures.
Emergency Medicine	E	E	Published and posted call schedules must specifically identify the physician/provider on call for the emergency department.
	E	D	24-hour coverage by a physician who is present at all emergency resuscitations. If the physician is off-site, his/her response to the hospital should be within 15 minutes of EMS notification. (See "Clinical Qualifications for further emergency physician details.")
	NA	E	Physician assistants (PA) and/or nurse practitioners (NP) may provide lead coverage in the emergency department. They must be present at the resuscitation. 24-hour coverage must be provided. If the ED provider is off-site, his/her response to the hospital should be within 30 minutes of EMS notification. (See <i>Clinical Qualifications for further Other Medical Staff Covering Emergencies.</i>)
			When the lead emergency department provider is a mid-level practitioner (NP or PA), a physician who meets the training standards of the System must be on call and available to the mid-level practitioner to consult by telephone (or similar means) within 30 minutes.
Anesthesia	E	NA	May be covered by certified registered nurse anesthetist (CRNA).

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Program Component	Level III	Level IV	Criteria Description
Orthopedic Surgery	E	NA	The ED physician, in consultation with the general surgeon, makes critical trauma care decisions in the emergency department. There is no expectation that an orthopedic surgeon be onsite or immediately available.
			While orthopedic surgical capabilities will vary among Level IIIs, it is an expectation that all Level IIIs be able to handle basic orthopedic surgical cases. It is the responsibility of the Level IIIs to have protocols that clearly define which cases they can handle and which cases require transfer to an appropriate facility.
			If necessary, the same individual may cover both general surgery and orthopedic surgery if he/she meets the clinical qualifications for each discipline.
Post Anesthesia Recovery	E	NA	RN available 24 hours/day
Radiology	E	D	24-hour radiologist coverage required (may utilize in-house, on-call or teleradiology resources).
	E	NA	Radiology technician available or on-call 24 hours/day 24-hour availability of computed tomography
Respiratory Therapy	E	NA	In-house or on-call 24-hour coverage. A nurse with specific in-house ventilator training may provide this coverage. Records of in-house CEUs must be maintained.
Clinical Laboratory	E	E	Must have a comprehensive blood bank or access to community blood bank. 24-hour availability of a laboratory capable of standard analysis of blood, urine and other body fluids, including micro sampling
	E	NA	24-hour availability of a laboratory capable of: <ul style="list-style-type: none"> • Blood typing and cross matching • Coagulation studies • Blood gas and ph determination • Microbiology

Program Component	Level III	Level IV	Criteria Description
Trauma Transfer	E		An age-specific, pre-determined, pre-written plan/protocol/flow chart that directs the internal process for rapidly and efficiently transferring a trauma patient to definitive care. The plan should address such things as: appropriate ground and air transport services, along with contact numbers and backup providers; and what supplies, records, personnel and/or other necessary resources will accompany the patient. Must also clearly identify the anatomical and physiological criteria that, if met, will immediately initiate transfer to definitive care.
			Designated trauma hospitals may not transfer adult or pediatric patients to undesignated hospitals. <i>Exception: Patients may be transferred to a Veterans Administration Medical Center.</i>
		E	When a trauma patient is transferred to designated trauma hospital in another state, the sending hospital must attempt to obtain information related to the final disposition of the patient, particularly whether or not the patient required another transfer from the receiving hospital for definitive care.
			The hospital must have the following transfer agreements with facilities capable of caring for major trauma patients: <ul style="list-style-type: none"> ▪ Hemodialysis ▪ Burn care ▪ Acute spinal cord injury In the case of burn care, a second agreement is necessary in the event the primary burn facility lacks the capacity to receive the patient. A comprehensive transfer agreement with a level I or II trauma hospital may suffice if that trauma hospital has the required capabilities.

Clinical Qualifications

Program Component	Level III	Level IV	Criteria Description
General Surgeon	E	D	<p>If currently board certified in general surgery, then required to only have successfully completed an Advanced Trauma Life Support (ATLS®) or Comprehensive Advanced Life Support (CALs) course (including Benchmark Lab or Trauma Module Course) once. If not board certified in general surgery, then must have successfully completed ATLS® and/or CALs (including the Benchmark Lab or Trauma Module Course) within the last four years.³</p> <p>Physicians who are board-certified in pediatric surgery and practicing in a pediatric hospital are required only to have successfully completed an ATLS® or CALs course (including Benchmark Lab or Trauma Module Course) once.</p>
Emergency Physician	E	E	<p>If currently board certified with an American Board of Emergency Medicine (ABEM)-approved or American Osteopathic Board of Emergency Medicine (AOBEM) certification, then required to only have successfully completed an ATLS® or CALs course (including Benchmark Lab or Trauma Module Course) once. If not board certified with an ABEM-approved or AOBEM certification, then must have successfully completed ATLS® and/or CALs (including the Benchmark Lab or Trauma Module Course) within the last four years.⁴</p>
Other Medical Staff Covering Emergencies (e.g., NPs, PAs, Locum Tenens)	E	E	<p>Must have successfully completed ATLS® and/or CALs (including the Benchmark Lab or Trauma Module Course) within the last four years.³ This requirement is for those who are regularly scheduled in the emergency department. It does not apply to those who are called in to back-up the attending physician during an unusual and rare event. (See <i>Performance Improvement</i> section.)</p>
Orthopedic Surgeon	E	E	<p>May be a surgeon with the ability to do orthopedic surgery and who is credentialed by the hospital to do so. (Note: This is “Essential” for Level IV facilities ONLY if orthopedic surgical services are provided).</p>
	D	D	<p>Successfully complete an ATLS® or CALs course.</p>

⁴ For the initial designation only, hospitals may become designated after the medical providers successfully complete the CALs Provider Course only. They must then complete the Benchmark Lab or Trauma Module Course within one year of the Provider Course.

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Program Component	Level III	Level IV	Criteria Description
Registered Nurse Trauma Education	E	E	<p>Registered nurses responsible for emergency and/or critical care setting (i.e., ICU) must have successfully completed appropriate professional trauma education. (Example: Trauma Nursing Core Course (TNCC), Comprehensive Advanced Life Support (CALs) Provider Course, Advanced Trauma Care for Nurses (ATCN), Course in Advanced Trauma Nursing (CATN), or in-house training⁵ that meets the following objectives:</p> <ul style="list-style-type: none"> • Identify the common mechanisms of injury associated with blunt and penetrating trauma. • Describe and demonstrate the components of the primary and secondary nursing assessment of the trauma patient. • List appropriate interventions, based on the assessment findings, for recognized and suspected life-threatening and non-life-threatening injuries. • Correlate signs and symptoms to specific pathophysiological changes as they relate to potential injuries. • Describe the ongoing assessment and methods used to evaluate the effectiveness of the interventions. • Examine the facility's specific criteria and protocols for admission or transfer of the trauma patient.
Licensed Practical Nurse Trauma Education	E	E	<p>Effective July 1, 2012, licensed practical nurses that care for patients in the emergency and/or critical care setting (i.e., ICU) must have successfully completed appropriate trauma education. (Example: Comprehensive Advanced Life Support (CALs) Provider Course, Rural Trauma Team Development Course (RTTDC), audit of a Trauma Nursing Core Course (TNCC), audit of a Course in Advanced Trauma Nursing (CATN), or in-house training⁵ that meets the following objectives:</p> <ul style="list-style-type: none"> • Identify the common mechanisms of injury associated with blunt and penetrating trauma. • Recognize common signs and symptoms of potentially life-threatening and non-life-threatening injuries. • Identify data needed for the ongoing monitoring of a trauma patient. • Demonstrate role-specific trauma care competencies. • Examine the role-specific practice parameters for trauma care as defined by the hospital. • Examine the facility's specific criteria and protocols for admission or transfer of the trauma patient.

⁵ Contact the designation coordinator to have in-house curriculum approved before beginning any training. In-house training may be attended concurrently by both RNs and LPNs.

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Performance improvement

Program Component	Level III	Level IV	Criteria Description
Performance Improvement Program	E	NA	General surgeon representation and participation at the trauma performance improvement (PI), peer review, and multidisciplinary committees.
	E	E	The PI process should review all cases when medical providers who do not normally provide emergency department coverage are called in to back-up the attending physician during a rare and unusual event.
			The trauma PI program shall be consistent with medical staff and facility policies. All trauma hospitals shall work with the MDH in statewide PI activities
			The PI process may be performed by the trauma hospital's trauma committee or by an appropriate PI standing committee.
			If teleradiology is utilized, this process shall be monitored and evaluated by the trauma PI program.
			Trauma hospitals shall have a formal, trauma-related diversion policy and a mechanism established to review times and reasons for trauma-related diversion.
			The trauma PI program shall consist of a formal policy that includes a minimum of the following: 1. Defined population of trauma patients to be monitored 2. Set of indicators/audit filters to include: a. General surgeon non-compliance to on-call response times b. Emergency department provider non-compliance to on-call response times c. Trauma care provided by physicians who do not meet minimal educational requirements, i.e., ATLS® or CALS d. All trauma deaths e. Trauma patients admitted by a non-surgeon f. Trauma patients transferred out g. Trauma patients received via transfer 3. Frequency of review 4. Multidisciplinary physician involvement 5. Standard of care 6. Demonstration of loop closure and resolution
			The overall responsibility of concurrent and retrospective review of the care of trauma patients lies with the trauma program medical director/advisor and the trauma program coordinator/manager in conjunction with the trauma PI committee and the physician multidisciplinary peer review committee.

Program Component	Level III	Level IV	Criteria Description
Performance Improvement Program	NA	E	The trauma program medical advisor or designee (who must meet the training standards of the System) must review trauma cases attended by an NP or PA within the 72 hours following the resuscitation.
Morbidity And Mortality Review	E	E	<p>A mechanism shall be established by which all physicians caring for trauma patients are involved in confidential peer review of the care in accordance with facility and medical staff policy. These physicians will regularly review and discuss:</p> <ul style="list-style-type: none"> ▪ Results of trauma peer review activities. ▪ Problematic cases including complications. ▪ All trauma deaths, identifying each death as non-preventable, possibly preventable, or preventable.* <p>The peer review process and minutes of this committee should be confidential and in accordance with facility and medical staff policy. Utilization of trauma registry data will facilitate the entire PI and peer review process.</p> <p><i>*The STAC has adopted standardized definitions based on industry standards. See the Trauma Hospital Resource Manual.</i></p>
Multidisciplinary Trauma Review	E	D	Must have an established mechanism by which all those involved in caring for trauma patients are involved in a review of the care. In addition to attendance by emergency, surgery, anesthesia, radiology and ICU staff; administration, nursing, radiology, lab, anesthesia and other ancillary personnel might attend.
Trauma Registry	E	E	Collect trauma data using either the state Web-based system or an in-house program and submit the required data to the statewide trauma system within 60 days of the patients' discharge or transfer.
Regional Trauma Advisory Committee	D	D	<p>The trauma hospital should actively participate in at least one Minnesota Regional Trauma Advisory Committee (RTAC) or subcommittee of a Minnesota RTAC.</p> <p>Active participation is defined as attending at least 50% of the scheduled meetings.</p>

Prevention

Injury Prevention Activities	E	D	Coordination and/or participation in community prevention activities
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Equipment Capabilities

Equipment must be available in sizes to care for **all ages** of trauma patients.

Emergency Department

Airway control and ventilation equipment	E	E	
Pulse oximetry	E	E	
Suction devices	E	E	
Electrocardiograph/oscilloscope/defibrillator	E	E	
Standard IV fluids and administration sets	E	E	
Large bore IV catheters	E	E	
Drugs necessary for emergency care	E	E	
Nasal gastric & oral gastric tubes	E	E	
Spine immobilization boards and C-collars	E	E	
Pediatric length-based resuscitation tape	E	E	
Thermal control for patient and fluids/blood	E	E	
Rapid infuser system	E	E	May use pressure bag
End-tidal CO ₂ detector	E	E	May be disposable
Communications with EMS	E	E	
Mechanism for IV flow-rate control	E	E	
Intraosseous administration sets	E	E	
Supplies for surgical airway & thoracostomy	E	E	
Central lines	D	NA	

Operating Room

Thermal control for patient and fluids/blood	E	E	Essential for Level IV only if operating room is available
X-ray capabilities including C-arm intensifier	E	D	
Rapid infuser system	E	NA	May use pressure bag

Post Anesthesia Recovery

Equipment for monitoring and resuscitation	E	D	
Pulse oximetry	E	D	
Thermal control for patients and fluids/blood	E	D	

Intensive Care Unit

Equipment for monitoring and resuscitation	E	D	
Ventilator	E	NA	Transport ventilator is not sufficient

Many valuable resources and templates are available in the *Trauma Hospital Resource Manual*, accessible from our Web site.

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