## Level 4 Work Group Recommendations

### Side-by-Side

<table>
<thead>
<tr>
<th>Category</th>
<th>Existing Criteria</th>
<th>Recommended Criteria</th>
<th>Explanation of Change</th>
</tr>
</thead>
</table>
| Institution | 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. | The board of directors, administration and medical staff shall demonstrate a commitment to provide the resources and support necessary to sustain the trauma designation. This commitment shall be renewed with each application for designation. | - Plain language  
- Exclude nursing and ancillary staff from commitment  
- Add expectation that commitment is renewed with each application |
| 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. | The trauma program shall be established by the facility and shall be represented on the organizational chart, which may be within an existing department (e.g., emergency or surgery). | - Plain language  
- Remove redundancy captured above |
<table>
<thead>
<tr>
<th><strong>Medical Director</strong></th>
<th><strong>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.</strong></th>
<th><strong>Trauma program medical director or medical advisor shall be a physician whose job description defines his or her authority, roles and responsibilities for the leadership of the trauma program, the trauma performance improvement process and the provider case review meetings.</strong></th>
<th><strong>Simplified and clarified expectation that TMD primary role is to lead program and lead medical staff in trauma PI</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>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. The medical advisor must re-take his/her ATLS or CALS before or during the month in which it expires.</strong></td>
<td><strong>The trauma program medical director or medical advisor must meet the same trauma training requirements as the Emergency Physician. (See Clinical Qualifications.)</strong></td>
<td><strong>TMD no longer required to maintain current ATLS/CALS if board-certified by ABEM or ABOEM</strong></td>
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</tr>
<tr>
<td><strong>N/A</strong></td>
<td><strong>The trauma program medical director or medical advisor may appoint an advance practice provider to serve as a co-medical advisor. The co-medical advisor must meet the same trauma training requirement as the Emergency Advance Practice Provider. (See Clinical Qualifications.)</strong></td>
<td><strong>Permits TMD to appoint an advance practice provider as a co-medical advisor</strong></td>
<td>---</td>
</tr>
</tbody>
</table>
**Program Manager**

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.

Ideally, the trauma program manager/coordinator should be a registered nurse with emergency and trauma care experience whose job description defines his or her roles and responsibilities for the management and leadership of the trauma program and the trauma performance improvement process. Alternatively, other allied health personnel with clinical experience in emergency/trauma care may fulfill this role as long as a registered nurse assists with the review of trauma care and functions as a liaison to the nursing staff.

- Plain language
- Clarified expectation that TPM’s primary roles are management of the program and performance improvement
- If TPM is not an RN, requires an RN to assist w/ case review and act as liaison w/ nursing staff

**TTA**

Trauma hospitals shall have a trauma team activation protocol/policy to include:

- 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

The hospital must have a trauma team activation policy, protocol or guideline that includes:

- A list of all team members expected to respond, which may include telemedicine providers.
- The response time expectation for the team members;
- The physiological and clinical indicators that, when met, require the activation of the trauma team; and
- The person(s) authorized to activate the trauma team.

- Simplified language
- Explicitly includes telemedicine providers as potential members of the trauma team

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.

N/A

Incorporated into above criterion
<table>
<thead>
<tr>
<th>TTA</th>
<th>N/A</th>
<th>The trauma team activation indicators must be visible in locations where a trauma patient is likely to be initially encountered.</th>
<th>New requirement to post TTA indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Department</td>
<td>Published and posted call schedules must specifically identify the physician/provider on call for the emergency department.</td>
<td>The emergency department must be continuously covered by a physician or advance practice provider. If the emergency department provider is off-site, an on-call schedule must identify the provider(s) covering the emergency department.¹</td>
<td>Clarified language; no change of intent</td>
</tr>
</tbody>
</table>
| | 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 Clinical Qualifications for further Other Medical Staff Covering Emergencies.) | When called, the provider must arrive in the emergency department within 30 minutes of the patient’s arrival. | - Plain language  
- Part of existing criteria incorporated above  
- If ED covered by APP, schedule must include physician back-up provider |

¹ If an advance practice provider is the primary emergency department provider, the on-call schedule must also include the physician provider providing back-up coverage.
<table>
<thead>
<tr>
<th>Emergency Department</th>
<th>General Surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td>N/A</td>
</tr>
<tr>
<td>When the primary emergency department provider is an advance practice provider, a physician must be on-call and available for consultation by telephone (or similar means) within 30 minutes. The physician on-call for consultation must either meet the same trauma training requirements as the Emergency Physician (see Clinical Qualifications), or must practice emergency medicine or trauma surgery at a Level 1 or Level 2 trauma hospital.</td>
<td>If the hospital admits patients from trauma care, a general surgeon must be on-call and available to respond to the hospital within two hours, unless the hospital admits only patients with isolated orthopaedic injuries.</td>
</tr>
</tbody>
</table>
| When hospital uses telemedicine provider as the back-up physician, assumes the telemedicine physician is adequately trained if working at a Level 1 or 2 trauma hospital. | • First appearance of criteria for Level 4s that admit patients for trauma care  
• “Admitted for trauma care (AFTC)” defined  
• If AFTC, then new general surgeon requirement  
• Excludes general surgeon requirement if AFTC, but only ortho injuries |

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2 Such as telemedicine.

3 “Admitted for trauma care” includes patients in observation status and excludes patients who refuse to be transferred, or are admitted only for the care of a medical condition, for palliative care, for pain control, for in-patient physical or occupational therapy, while awaiting evaluation and placement for a living situation, or to monitor or treat one of the following conditions:
- Head injury with a negative CT scan
- Diminished mentation due to dementia, or alcohol or drug intoxication
- Superficial injuries (i.e., contusions, abrasions).
<table>
<thead>
<tr>
<th>General Surgery</th>
<th>If the hospital admits patients from trauma care,³ the operating room and an operating room team must be continuously available, unless the hospital admits only patients with isolated orthopaedic injuries.</th>
<th>If AFTC, requires OR and team availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ortho Surgery</td>
<td>If the hospital provides emergent orthopaedic surgery or admits patients for the care of surgical orthopaedic injuries, an accurate on-call schedule must be maintained and accessible by emergency department staff.</td>
<td>If hospital provides emergent ortho surgery, then must have on-call schedule in ED</td>
</tr>
</tbody>
</table>
| Lab             | 24-hour availability of a laboratory capable of standard analysis of blood, urine and other body fluids, including micro sampling | • Lab services no longer required if not admitting  
• Blood and lab services required if AFTC |
|                 | Must have a comprehensive blood bank or access to community blood bank. | • Blood bank staffing expectation  
• Policy for release of uncross-matched blood required |
<table>
<thead>
<tr>
<th>Radiology</th>
<th>N/A</th>
<th>• New requirement for imaging capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• Capability to take plain films</td>
</tr>
<tr>
<td></td>
<td>A radiology technician must be continuously available, either in-house or on-call.</td>
<td>Capability to read plain films</td>
</tr>
<tr>
<td></td>
<td>A radiologist must be continuously available, either in-house or off-site.</td>
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</tr>
<tr>
<td></td>
<td>If the hospital admits patients for trauma care, computed tomography must be onsite and continuously available, and a computed tomography technician must be continuously available, either in-house or on-call.</td>
<td>If AFTC, then CT required</td>
</tr>
<tr>
<td>Admission</td>
<td>N/A</td>
<td>New admission standards for hospitals that AFTC</td>
</tr>
<tr>
<td></td>
<td>Patients admitted for trauma care must be admitted by or receive a consultation from a surgeon.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For patients with conditions listed in Table 1, consultations/evaluations must be performed within two hours of the patient’s arrival.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>For patients with conditions listed in Table 2, consultations/evaluations must be performed within 18 hours of the patient’s arrival.</td>
<td></td>
</tr>
</tbody>
</table>
### Table 1 (table formatting removed)
Mandatory Surgeon Admit or Consult w/in two hours

- Solid organ injury<sup>A</sup>
- Initial or persistent shock<sup>A</sup>
- Cardiac or large vessel injury<sup>A</sup>
- Penetrating wound to neck or torso<sup>A</sup>
- Hemothorax or pneumothorax: untreated >10%<sup>A</sup>
- >1 proximal long bone fractures<sup>A</sup>
- Paralysis or focal neurological sign/symptoms<sup>B</sup>
- Subdural, epidural, subarachnoid or intraparenchymal bleeding<sup>B</sup>
- Fracture/dislocation w/ tenting of skin<sup>B</sup>
- Femoral shaft fracture<sup>B</sup>
- Open fracture<sup>B</sup>
- Ilium or ischium fracture displaced >1cm<sup>B</sup>
- Inferior ramus, sacrum, tibia or femoral neck fracture displaced >100%<sup>B</sup>
- Femoral neck fracture <50 y.o.<sup>B</sup>
- Unreduced joint dislocation<sup>B</sup>
- Threatened limb<sup>B</sup>

### Table 2
Mandatory Surgeon Admit or Consult w/in 18 hours

- Hemothorax or pneumothorax: treated or <10%<sup>A</sup>
- Pulmonary contusion<sup>A</sup>
- Ilium or ischium fracture displaced <1cm<sup>B</sup>

**Tables:**
- Establish timelines in which to obtain surgeon consults for specific conditions (within either two or 18 hours)
- Distinguish general surgeon vs. surgical subspecialist consults
- Subspecialists may provide consults remotely; general surgeon must provide at bedside

**Footnotes:**

A High-energy and multi-system injury trauma cases should be admitted to a general surgeon. The general surgeon must provide the consult/evaluation at the bedside.

B High-energy and multi-system injury trauma cases should be admitted to a general surgeon. Single-system injury trauma cases may be admitted to a primary care physician if consultations are obtained from the appropriate surgical sub-specialist (i.e., orthopaedic surgeon for isolated orthopaedic injuries, neurosurgeon for isolated neurological injuries). Surgical sub-specialists may provide the consultation remotely. The consultation may be accomplished by the surgeon’s appointed advanced practice provider on behalf of the surgeon.
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.

The hospital must have a policy directing the internal processes to emergently transfer a trauma patient to definitive care that lists:
- The anatomical and physiological criteria that, when present, result in immediate transfer.
- The criteria must include orthopaedic surgical conditions and must specifically address how time-sensitive orthopaedic conditions such as a threatened limb and compartment syndrome will be managed within one hour.
- The primary and alternate ground and aeromedical transfer services along with contact information.
- The supplies, records and personnel that will accompany the patient.

Designated trauma hospitals may not transfer adult or pediatric patients to undesignated hospitals.

Exception: Patients may be transferred to a Veterans Administration Medical Center.

Designated trauma hospitals may not transfer adult or pediatric patients to undesignated hospitals.

Exception: Patients may be transferred to a Veterans Administration Medical Center.

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.

No change

N/A

Eliminate requirement for sending hospital to attempt to obtain feedback from out-of-state receiving hospitals
The hospital must have the following transfer agreements with facilities capable of caring for major trauma patients:

- 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.

The hospital must have transfer agreements with trauma hospitals capable of caring for major trauma patients definitively, including agreements with at least two hospitals capable of caring for burn patients, and at least one agreement with a designated Level 1 or Level 2 Pediatric Trauma Hospital.

- Simplified language
- New requirement to have transfer agreement with a Level 1 or 2 pediatric center
<table>
<thead>
<tr>
<th>ED Physician</th>
<th>ED APP</th>
</tr>
</thead>
<tbody>
<tr>
<td>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. Emergency physicians must re-take their ATLS or CALS before or during the month in which it expires.</td>
<td>Advance practice providers must have successfully completed ATLS and/or CALS (including the Benchmark Lab or Trauma Module Course) within the last four years. Providers must re-take their ATLS or CALS before or during the month in which it expires.</td>
</tr>
</tbody>
</table>

No substantive change

4 This requirement does not apply to those who are called in to assist the attending provider during an unusual and rare event, such as an MCI.

5 There is no grace period for either ATLS or CALS training. The CALS lab component must, too, be re-taken before or during the month in which it expires.
<table>
<thead>
<tr>
<th>General Surgeon</th>
<th>N/A</th>
<th>If the hospital admits patients for trauma care, the general surgeon must successfully complete ATLS® and/or CALS (including the Benchmark Lab or Trauma Module) every four years, unless the hospital admits only patients with isolated orthopaedic injuries. Surgeons must re-take their ATLS or CALS before or during the month in which it expires.</th>
<th>New general surgeon training requirement if AFTC, unless only admits ortho injuries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ortho Surgeon</td>
<td>May be a surgeon with the ability to do orthopedic surgery and who is credentialed by the hospital to do so. (Note: This is required for level 4 facilities only if orthopedic surgical services are provided).</td>
<td>N/A</td>
<td>Repealed</td>
</tr>
<tr>
<td>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 training that meets the following objectives:</td>
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<tr>
<td>Identify the common mechanisms of injury associated with blunt and penetrating trauma.</td>
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<tr>
<td>Describe and demonstrate the components of the primary and secondary nursing assessment of the trauma patient.</td>
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<tr>
<td>List appropriate interventions, based on the assessment findings, for recognized and suspected life-threatening and non-life-threatening injuries.</td>
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<tr>
<td>Correlate signs and symptoms to specific pathophysiological changes as they relate to potential injuries.</td>
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<tr>
<td>Describe the ongoing assessment and methods used to evaluate the effectiveness of the interventions.</td>
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<tr>
<td>Examine the facility’s specific criteria and protocols for admission or transfer of the trauma patient.</td>
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<tr>
<td>Registered nurses scheduled or expected to cover the emergency department must have successfully completed acceptable trauma education.</td>
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<tr>
<td>If the hospital admits patients for trauma care, registered nurses scheduled or expected to cover in-patient departments where trauma patients are admitted must have successfully completed acceptable trauma education.</td>
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<tr>
<td>Acceptable trauma education is Trauma Nursing Core Course (TNCC), Comprehensive Advanced Life Support (CALS) Provider Course, Advanced Trauma Care for Nurses (ATCN), Trauma Care After Resuscitation (TCAR), or in-house training that meets the following objectives:</td>
<td></td>
<td></td>
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<tr>
<td>Identify the common mechanisms of injury associated with blunt and penetrating injuries.</td>
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<tr>
<td>List appropriate interventions for injuries identified in the nursing assessment.</td>
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<tr>
<td>Associate signs and symptoms with physiological changes in the patient.</td>
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<tr>
<td>Describe the ongoing assessment to evaluate the effectiveness of interventions.</td>
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<tr>
<td>Describe and demonstrate the primary and secondary nursing trauma assessment.</td>
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<tr>
<td>Review the hospital’s trauma admission and transfer policies.</td>
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</tbody>
</table>

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*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.*
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 training. that meets the following objectives:

- 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.

Licensed practical nurses scheduled or expected to cover the emergency department must have successfully completed trauma education.

If the hospital admits patients for trauma care, licensed practical nurses scheduled or expected to cover in-patient departments where trauma patients are admitted must have successfully completed acceptable trauma education.

- Simplified language
- RN training specific to ED nurses

If AFTC, then floor nurses must also be trained

Acceptable trauma education is Comprehensive Advanced Life Support (CALS) Provider Course, Rural Trauma Team Development Course (RTTDC), audit of a Trauma Nursing Core Course (TNCC), Trauma Care After Resuscitation (TCAR), or in-house training that meets the following objectives:

- Identify the common mechanisms of injury associated with blunt and penetrating injuries
- Recognize common signs and symptoms of 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.
- Review the hospital’s trauma admission and transfer policies.

CATN removed from list; TCAR added
<table>
<thead>
<tr>
<th>PI Process</th>
<th>The trauma PI program shall consist of a formal policy that includes a minimum of the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Defined population of trauma patients to be monitored</td>
<td>▪ Defined population of trauma patients to be reviewed</td>
</tr>
<tr>
<td>▪ Set of indicators/audit filters to include:</td>
<td>▪ Define the filters to be monitored</td>
</tr>
<tr>
<td>▪ Emergency department provider non-compliance to on-call response times</td>
<td>▪ Establish the frequency of case finding, case review and committee meetings</td>
</tr>
<tr>
<td>▪ Trauma care provided by providers who do not meet minimal educational</td>
<td>▪ Include documentation of issue identification, action planning, progress monitoring and issue resolution</td>
</tr>
<tr>
<td>requirements, i.e., ATLS® or CALS</td>
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<tr>
<td>▪ All trauma deaths</td>
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<tr>
<td>▪ Trauma patients admitted by a non-surgeon</td>
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<tr>
<td>▪ Trauma patients transferred out</td>
<td></td>
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<tr>
<td>▪ Trauma patients received via transfer</td>
<td></td>
</tr>
<tr>
<td>▪ Frequency of review</td>
<td></td>
</tr>
<tr>
<td>▪ Multidisciplinary physician involvement</td>
<td></td>
</tr>
<tr>
<td>▪ Standard of care</td>
<td></td>
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<tr>
<td>▪ Demonstration of loop closure and resolution</td>
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</tr>
</tbody>
</table>

| The performance improvement process must, at a minimum:                    |                                                                                                 |
| ▪ Define the population of trauma cases to be reviewed                     |                                                                                                 |
| ▪ Define the filters to be monitored                                      |                                                                                                 |
| ▪ Establish the frequency of case finding, case review and committee       |                                                                                                 |
|   meetings                                                                |                                                                                                 |
| ▪ Include documentation of issue identification, action planning, progress |                                                                                                 |
|   monitoring and issue resolution                                          |                                                                                                 |

| ▪ PI section reworked                                                      |                                                                                                 |
| ▪ First four bullets define the process; the following criteria set the   |                                                                                                 |
|   requirements for each bullet                                             |                                                                                                 |

The population of cases reviewed through the trauma performance improvement process must include, at a minimum, all patients that meet the trauma registry inclusion criteria.

Population to be monitored is defined
<table>
<thead>
<tr>
<th>PI Process</th>
<th>The performance improvement filters must, at a minimum, include:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>▪ Emergency department provider non-compliance to on-call response times</td>
</tr>
<tr>
<td></td>
<td>▪ Trauma care provided in the emergency department by providers who do not meet educational requirements listed under <em>Clinical Qualifications</em></td>
</tr>
<tr>
<td></td>
<td>▪ Under-triaged: Trauma team activation criteria met but trauma team not activated</td>
</tr>
<tr>
<td></td>
<td>▪ Trauma patient admitted to a non-surgeon and no surgeon consult</td>
</tr>
<tr>
<td></td>
<td>▪ Trauma activation and length of stay before transfer &gt;60 minutes</td>
</tr>
<tr>
<td></td>
<td>▪ Patient met trauma transfer criteria and admitted locally</td>
</tr>
</tbody>
</table>

Last four filters are new requirements

<table>
<thead>
<tr>
<th>N/A</th>
<th>Case finding and primary case review must occur, at a minimum, bi-weekly.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medical director review of trauma cases must occur, at a minimum, monthly.</td>
</tr>
</tbody>
</table>

Frequency of case finding defined, primary and secondary review defined

| 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. | N/A | Repealed |

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5/25/2017

*MN STATEWIDE TRAUMA SYSTEM*
<table>
<thead>
<tr>
<th>PI Process</th>
<th>N/A</th>
<th>Repealed</th>
</tr>
</thead>
<tbody>
<tr>
<td>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</td>
<td>N/A</td>
<td>Repealed</td>
</tr>
<tr>
<td>The PI process may be performed by the trauma hospital’s trauma committee or by an appropriate PI standing committee.</td>
<td>The trauma performance improvement process may be integrated with the hospital’s quality improvement processes; but the trauma program leaders must retain oversight over the trauma program’s performance improvement initiatives. Action plans and resolution of issues referred to other bodies within the hospital, such as peer review, must be made available to the trauma program leadership.</td>
<td>If trauma PI integrated w/ hospital quality or issues referred to other bodies, trauma program must retain oversight of trauma PI issues</td>
</tr>
<tr>
<td>If tele-radiology is utilized, this process shall be monitored and evaluated by the trauma PI program.</td>
<td>If tele-radiology is utilized, the trauma program must monitor the tele-radiology provider’s missed diagnosis rate and interpretation turnaround times.</td>
<td>Monitoring expectations made explicit</td>
</tr>
<tr>
<td>Trauma hospitals shall have a formal, trauma-related diversion policy and a mechanism established to review times and reasons for trauma-related diversion.</td>
<td>N/A</td>
<td>Repealed</td>
</tr>
<tr>
<td>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.</td>
<td>N/A</td>
<td>Repealed; addressed in other areas of the criteria</td>
</tr>
<tr>
<td>PI Process</td>
<td>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.</td>
<td>N/A</td>
</tr>
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</table>
| Provider Case Review | 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:  
- Results of trauma peer review activities.  
- Problematic cases including complications.  
- All trauma deaths, identifying each death as non-preventable, possibly preventable, or preventable.*  
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.  
*The STAC has adopted standardized definitions based on industry standards. See the Trauma Hospital Resource Manual. | Providers involved in trauma care must meet to review trauma cases selected by the trauma program leaders at least three times each year to identify and discuss opportunities for improvement. | Minimum number of meetings annually established |
| | | Staff emergency department providers must attend a minimum of two of the scheduled meetings.  
7 Minimum attendance requirements established. | | |

7 If liaisons attend as a representative of their disciplines, other members of the discipline must attend a minimum of two of their disciplines' case review meetings.
<table>
<thead>
<tr>
<th><strong>Provider Case Review</strong></th>
<th><strong>Contract providers addressed</strong></th>
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</thead>
<tbody>
<tr>
<td>If the hospital employs contract emergency department providers, the hospital must identify the frequently-scheduled providers that must attend a minimum of two of the scheduled meetings. There must be a mechanism to convey information from the provider case review meeting to the contract providers that do not attend the case review meetings.</td>
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<tr>
<td>If the hospital admits patient for trauma care, general surgeons and general surgical advance practice providers involved in trauma care must attend a minimum of 50% of the scheduled meetings, unless the hospital admits only patients with isolated orthopaedic injuries.</td>
<td>General surgeons must attend if hospital AFTC, unless only admits ortho injuries</td>
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<tr>
<td>The provider case review committee must review all trauma deaths.</td>
<td>Removed requirement to classify deaths as preventable, possibly preventable, not preventable</td>
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<thead>
<tr>
<th><strong>Trauma Registry</strong></th>
<th><strong>Hospitals that import data must submit in an acceptable format</strong></th>
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<tbody>
<tr>
<td>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.</td>
<td>The hospital must submit data as defined by the State Trauma Advisory Council within 60 days of the patients’ discharge or transfer. Data imported from other sources must be submitted in a format acceptable to MDH.</td>
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<tr>
<td>ED Equipment</td>
<td>Imaging Dept.</td>
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</tbody>
</table>
| Airway control and ventilation equipment  
Arterial tourniquet  
Pulse oximetry  
Suction devices  
Electrocardiograph/oscilloscope/defibrillator  
Standard IV fluids and administration sets  
Large bore IV catheters  
Drugs necessary for emergency care  
Nasal gastric & oral gastric tubes  
Spine immobilization boards and C-collars  
Pediatric length-based resuscitation tape  
Thermal control for patient and fluids/blood  
Rapid infuser system (may use pressure bag)  
End-tidal CO₂ detector (may be disposable)  
Communications with EMS  
Mechanism for IV flow-rate control  
Intraosseous administration sets  
Supplies for surgical airway & thoracostomy | N/A |
| Airway control and ventilation equipment  
Arterial tourniquet  
Pulse oximetry  
Suction device and supplies  
EKG monitor and defibrillator  
Crystalloid IV fluids and administration sets  
IV catheters from 14 – 22 Ga  
Drugs necessary for emergency trauma care  
Nasal gastric & oral gastric tubes  
Spine boards and cervical collars  
Pediatric length-based resuscitation tape or reference manual  
Blanket warmer and/or overhead radiant heater  
Warming cabinet for IV fluids and/or inline IV fluid warmer  
Rapid IV fluid infuser system (may use pressure bag)  
End-tidal CO₂ detector (may be disposable)  
Method to communicate with EMS  
Mechanism for IV flow-rate control  
Intraosseous needles and administration sets  
Supplies for surgical airway & thoracostomy | Equipment requirement added for imaging dept. |

8 For pediatric sizes, ensure that there is one size for each section of the length-based resuscitation tape or reference manual.

- No new equipment requirements
- Language updated
- IV catheter sizes specified
- Footnote re: pediatric sizes provides guidance (applies to all equipment requirements)
| OR Equip. | In-Patient | Blanket warmer and/or overhead radiant heater  
Warming cabinet for IV fluids and/or inline IV fluid warmer | Language modified to be consistent with ED Equipment section

|          | N/A       | Airway control and ventilation equipment  
Pulse oximetry  
Suction device and supplies  
EKG monitor and defibrillator  
Crystalloid IV fluids and administration sets  
IV catheters from 14 – 22 Ga.  
Drugs necessary for emergency and trauma care  
Nasal gastric & oral gastric tubes  
Pediatric length-based resuscitation tape or reference manual  
Rapid IV fluid infuser system (may use pressure bag)  
End-tidal CO₂ detector (may be disposable)  
Mechanism for IV flow-rate control  
Intraosseous needles and administration sets  
Supplies for surgical airway & thoracostomy | New requirements for in-patient areas to where trauma patients might be admitted; only if hospital AFTC |