



## **Pre-Review Questionnaire (PRQ) for Michigan Level IV Trauma Facility**

**This pre-review questionnaire allows site reviewers to have a preliminary understanding of the trauma care capabilities and performance of the hospital and medical staff before beginning the review. Please use this document to gather the hospital data. Please note, the site review team MAY ask for further documentation to substantiate information on any question that is answered with a “yes.”**

**Complete each section of the PRQ, please write legibly and attach additional pages if necessary. Ensure all attachments are included and labeled appropriately. See, “General Information and Instructions” at the back of the PRQ for details and definitions. A checklist has been provided at the end of the document to assist in compiling the PRQ and supporting documents. The PRQ must be submitted no later than 45 days prior to the scheduled site visit. Keep a copy of the PRQ for reference during the site visit.**

**The information used to complete the site review report will be considered in both the verification and designation determinations. The data submitted may be used for analysis by MDHHS EMS AND TRAUMA SERVICES DIVISION and may not be used for any purpose other than the intended. The reporting period is defined as 12 months and cannot be earlier than 15 months prior to the date of application. There must be 12 months of data in the State Trauma Registry, Image Trend, to schedule a site review. Ongoing data submission (quarterly) is a requirement for designation.**

**The PRQ can be submitted via mail at the address below:**

**Michigan Department of Health and Human Services  
EMS and Trauma Division  
Attn: Trauma Verification/Designation Coordinator  
PO Box 30207  
Lansing, MI 48909**

**Once the PRQ is received by the State Trauma Verification/Designation Coordinator, the contact person that was listed on the “Request for Verification” will receive electronic confirmation of receipt.**

**Please answer ALL questions completely. Do not use abbreviations.**

Type of Review:

- Verification
- Re-Verification

Level of Review:

- Level IV Trauma Facility

Reporting time frame for this document:

*(Twelve months of data must be submitted into the State Trauma Registry prior to applying for designation as a Michigan trauma facility for the first time. The twelve month time frame must start no earlier than fifteen months from the date of application) (MI-CD 1-2)*

Date Range: From month/year \_\_\_\_\_ to: \_\_\_\_\_ month/year

**I. HOSPITAL INFORMATION**

**A. Demographics**

1. Name of Hospital \_\_\_\_\_
2. Hospital Address \_\_\_\_\_
3. City, State, ZIP \_\_\_\_\_
4. Trauma Region: \_\_\_\_\_

**B. General Information**

Trauma Care Provider	Total Number of Providers
General Surgeons	
Emergency Physicians	
Anesthesiologists	
Mid-Level Practitioners (Nurse Practitioners, Advanced Practice Nurses, Physician Assistants)	
Other Physician Specialty (Family Practice, Internal Medicine, Hospitalists, Pediatricians, Orthopedic Surgeons)	
Certified Registered Nurse Anesthetists	

**C. Hospital Commitment**

1. Trauma facilities must provide the necessary human and physical resources (plant and physical) to properly administer acute care consistent with the level of verification. Documentation of this is demonstrated by providing a commitment to Level IV trauma care. A sample of this commitment is provided in **Appendix #1**. Please obtain a signature from the Chairperson of the hospital board (CD 5-1 & CD 2-3). **(Label as Attachment #1)**

2. The individual trauma facility and their health care providers are essential system resources. They must be active and engaged participants. Documentation of this commitment is demonstrated by providing a medical staff resolution. A sample of this resolution is provided in **Appendix #2** (CD 5-1). (**Label as Attachment #2**)

#### **D. Michigan Criteria**

1. Michigan’s Trauma System Administrative Rules outline trauma facility responsibilities to ensure a regionalized, accountable and coordinated trauma system. This work further is supported by the following statement from the American College of Surgeons Committee on Trauma, “Meaningful involvement in state and regional trauma system planning, development, and operation is essential for all designated trauma facilities and participating acute care facilities within a region” (CD 1-3).

Failure to meet the Michigan Criteria outlined in the Administrative Rules will result in a Type I critical deficiency.

Please respond to the following questions regarding participation in the regional trauma system:

- A. Does the facility’s trauma program staff participate in the state and/or regional trauma system planning, development, or operation? (CD 1-3) (Yes) (No)
- B. Is the facility submitting data to the state trauma registry? (MI-CD 1-1) (Yes) (No)
- C. Is the facility participating in regional injury prevention planning and initiatives? (MI-CD 3-1) (Yes) (No)
- D. Is the facility participating in regional performance improvement as described in the Regional Trauma Network work plan\*? (MI-CD 2-1) (Yes) (No)

*\*The Regional Trauma Network work plan for your region can be found at [www.michigan.gov/traumasystem](http://www.michigan.gov/traumasystem) under the individual region heading.*

## **II. PRE-HOSPITAL SYSTEM**

### **A. EMS**

1. The protocols that guide pre-hospital trauma care must be established by emergency physicians and medical directors for EMS agencies, with advice from the trauma health care team, including surgeons, and basic and advanced pre-hospital personnel. (CD 3-2)

Does the trauma program participate in the following Medical Control Authority activities?

- A. Pre-hospital protocol development (Yes) (No)

- B. EMS Training which could consist of case reviews/patient follow-up, facility sponsored classes and continuing education (Yes) (No)

2. If 'Yes', briefly describe and provide one example.

### III. TRAUMA PROGRAM\*

#### A. Trauma Staff

Complete the section below. Note if not applicable.

Trauma Manager Name: \_\_\_\_\_

Trauma Medical Director Name: \_\_\_\_\_

Injury Prevention Staff Name: \_\_\_\_\_

Trauma Data Entry Staff Name: \_\_\_\_\_

Other: \_\_\_\_\_

Attach position descriptions for the Trauma Manager and Trauma Medical Director (**Label as Attachment #3**)

***\*Be prepared to discuss at the site review the Trauma Program: how roles interact on a daily basis, and how issues and problems are handled.***

#### B. Trauma Medical Director (TMD) (may also be the Emergency Department Director)

1. Please complete the credentials section for the Trauma Medical Director (TMD) on **Appendix #3**.
2. Is there an annual review by the Trauma Medical Director of all trauma advanced practitioners addressing appropriate orientation, credentialing processes and skill maintenance?\* (CD 11-87)  
(Yes) (No)

***\*You may be asked to show documentation of this process at the site visit.***

3. Does the trauma medical director and trauma program manager/coordinator work together with guidance from the trauma peer review committee to identify events, develop corrective action plans, and ensure methods of monitoring, reevaluation, and benchmarking? (CD 2–17) (Yes) (No)

#### C. Physicians and Mid-Level Providers

1. List all physicians and mid-level providers (Physician Assistants, Nurse Practitioners, and Advance Practice Nurses) currently participating in the initial resuscitation and evaluation of trauma patients as well as admitting trauma patients to the hospital on **Appendix #4**.

**D. Trauma Program Manager/Coordinator (TPM/C)**

1. How long has the trauma program coordinator been in this position?

- Months/Years \_\_\_\_\_

**E. Trauma Activation**

1. Does the facility have a multilevel activation response that addresses the minimum requirements listed below? (CD 5-13) (Yes) (No)

- Confirmed blood pressure less than 90 mm Hg at any time in adults and age specific hypotension in children
- Gunshot wounds to the neck, chest, or abdomen or extremities proximal to the elbow/knee
- Glasgow Coma Scale score less than 9 with mechanism attributed to trauma
- Transfer patients from other hospitals receiving blood to maintain vital signs
- Intubated patients transferred from the scene or patients who have respiratory compromise or are in need of an emergent airway (Includes intubated patients who are transferred from another facility with ongoing respiratory compromise (does not include patients intubated at another facility who are now stable from a respiratory standpoint)
- Emergency physician’s discretion

2. Attach the facility’s activation policy (**Label as Attachment #4**). (CD 5-16)

3. Fill in the following:

Statistics for activation levels (reporting year)		
Level	Number of activations	Percent of total activations
Highest		
Intermediate		
Lowest		
Total		

4. Who has the authority to activate the trauma team? (Circle all that apply)

- a. EMS
- b. ED Physician
- c. ED Nurse
- d. Surgeon
- e. Midlevel

5. The highest level of activation is communicated by: (Circle all that apply)

- a. Group pager
- b. Telephone page
- c. Other

6. Which trauma team members respond to each level of activation? (Check all that apply)

Responder	Activation Level		
	Highest	Intermediate	Lowest
General Surgeon			
Emergency Physician			
Emergency Department Nursing			
Laboratory Technician			
Radiology Technician			
Anesthesiologist or CRNA			
Scribe			
Mid-level			
Other			

7. Is the physician or mid-level provider in the emergency department within 30 minutes for the highest trauma activation tracked from the patient arrival? (CD 5–15). (Yes) (No)

**Using the data collected from the date range listed on page 2 complete the following:**

8. What is the total number of trauma patients seen by your facility? \_\_\_\_\_

9. What is the total number of trauma patients admitted to your facility? \_\_\_\_\_

10. What is the total number of trauma patients transferred to a higher level of trauma care from your facility? \_\_\_\_\_

11. What is the total number of trauma deaths at your facility? \_\_\_\_\_

**F. Trauma Transfer**

1. Is there a process and documentation of direct contact of the physician or mid-level provider with a physician at the receiving hospital? (CD 4-1) (Yes) (No)

2. Does the facility have input from, feedback to, and adequate communication with the personnel responsible for the transport process and the referring hospital? (CD 4-3) (Yes) (No)

3. Have transfer guidelines and plans between all possible transfer facilities been developed? (CD 2-13) (Yes) (No)

4. Have written transfer agreements with burn facilities been developed? (CD 14-1) (Yes) (No)

5. Trauma Transfers:

Number of Trauma Transfers	Air	Ground	Private Vehicle	Total
Transfers Out				

6. A very important aspect of inter-hospital transfer is an effective PI program that includes evaluating transport activities. Is your facility performing a PI review of all transfers?  
(CD 4–3) (Yes) (No)
7. Provide information on the facility’s criteria that are used to prompt identification and consideration of transfer for patients who require a higher level of care and are reviewed by the trauma PI program on **Appendix #5**.

### G. Trauma/Hospital Statistical Data

Tables should not include Dead on Arrivals and direct admits.

#### 1. Total Trauma Admissions by Service:

Service	Number of Admissions
General Surgery	
Other Surgical Specialties	
Non-Surgical	

#### 2. Injury Severity Score/Mortality/General Surgery:

ISS	Total Number of Admissions	Number of Deaths from Total Trauma Admissions	Number Admitted to General Surgery
0-9			
10-15			
16-24			
> or = 25			
Total			

3. Are patients with isolated hip fractures included in your registry data? (Yes) (No)

### H. Trauma Diversion

1. When a trauma facility is required to divert, the facility must have a system to notify dispatch and EMS agencies. (CD 3-7). Does your hospital do the following when on diversion?
  - a. Prearrange alternative destinations with transfer agreements in place? (Yes) (No)
  - b. Notify other facilities (hospitals, 911, dispatch, etc.) of divert status? (Yes) (No)
  - c. Maintain a divert log? (Yes) (No)
  - d. Review all diversions in PI program? (Yes) (No)
2. Does the facility have a diversion policy? (Yes) (No)
  - *If 'Yes', please send the policy as an attachment. (Label as Attachment #5)*
3. Has the facility gone on trauma diversion during the previous year? (Yes) (No)
  - *Information regarding diversion date, length of time, and reason for occurrence should be documented on Appendix #6.*

#### IV. HOSPITAL RESOURCES

##### A. Emergency Department (ED)\*

1. Does your emergency department have a physician director? (CD 2-15) (Yes) (No)
2. Does the emergency department have coverage by a registered nurse and physician or midlevel provider continuously available for resuscitation? (CD 2-15) (Yes) (No)
3. Check the certifications required for ED nursing staff (may choose more than one):
  - Trauma Nursing Core Course (TNCC)
  - Advanced Trauma Care for Nurses (ATCN)
  - Emergency Nursing Pediatric Course (ENPC)
  - Other \_\_\_\_\_

***\*Have a copy of the ED trauma flow sheet and trauma protocols available on site at the time of the review. An example of a trauma flow sheet can be found at [www.michigan.gov/traumasystem](http://www.michigan.gov/traumasystem).***

##### B. Radiology

1. Is conventional radiography available 24 hours per day? (CD 11-29) (Yes) (No)

##### C. Clinical Laboratory and Blood Bank

1. Does the facility have a massive transfusion protocol developed collaboratively between the trauma service/program and the blood bank? (CD 11-84) (Yes) (No)
  - *If 'Yes', attach the protocol (**Label as Attachment #6**)*
2. Is the blood bank capable of blood typing and cross matching? (CD 11-81) (Yes) (No)
3. Are laboratory services available 24 hours per day for the standard analysis of blood, urine, and other body fluids, including micro-sampling when appropriate? (CD 11-80) (Yes) (No)

##### D. Other Protocols, Policies and Procedures

1. Are there written protocols for declaration of brain death? (CD 21-3) (Yes) (No)
2. Does the facility have a written disaster plan described in the hospital's policy and procedure manual? (CD 20-4) (Yes) (No)

##### E. Trauma Equipment/Resources

Site reviewers will review available equipment and resources during the site visit.

## V. TRAUMA REGISTRY

1. What trauma registry software does the hospital use? \_\_\_\_\_
2. Is trauma registry data collected and analyzed using the minimum data collection set (National Trauma Data Bank)(CD 15-1) (MI-CD 1-1) (Yes) (No)
3. Is the trauma registry data submitted to the State Registry? (MI-CD 1-2) (Yes) (No)
  - Date of most recent data submission (mm/dd/yyyy): \_\_\_\_\_
4. Is there a process in place to submit data quarterly? (MI-CD 1-3) (Yes) (No)

## VI. PERFORMANCE IMPROVEMENT

### A. Performance Improvement (PI) Program

All trauma facilities shall develop and have in place a performance improvement process. An effective performance improvement program demonstrates through clear documentation that identified opportunities for improvement lead to specific interventions that result in an alteration in conditions such that similar events are less likely to occur. (CD 16-10).

1. Does the facility have a written PI plan\* that addresses the criteria in questions 2 and 3? \*\* (Yes) (No)

*\*Plan needs to be available for reviewers.*

*\*\*Use Appendix #7 to summarize your responses to questions 2 and 3 below by submitting an example of process improvement and loop closure.*

2. The processes of event identification and levels of review must result in the development of corrective action plans, and methods of monitoring, reevaluation, and benchmarking must be present. Please submit an example of the process the facility uses to identify PI problems and how they are tracked, documented and discussed. (CD 2-17) **See Appendix #7**
3. Problem resolution, outcome improvements, and assurance of safety (“loop closure”) must be readily identifiable through methods of monitoring, reevaluation, benchmarking, and documentation. Please submit an example of how loop closure (resolution) is achieved and who is responsible for both system and peer review issues. (CD 16-2) **See Appendix #7**
4. Are all process and outcome measures documented within the trauma PI program written plan and reviewed and **updated at least annually**? (CD 16–5) (Yes) (No)
5. Are all criteria for trauma team activation that have been determined by the trauma program evaluated on an ongoing basis in the PI process? (CD 5–16) (Yes) (No)

## B. Audit Filters

Fundamental to the performance improvement process is monitoring and measuring the outcome of specific processes or procedures. Another name for process and outcomes measures is audit filters. Audit filters require defined criteria and metrics. Appendix #7 has an Audit Filter Tool to help track and measure system and facility metrics. The trauma system is in development and some facilities are in the early stages of audit filter tracking and performance improvement. To assist in prioritizing, the audit filters that are bolded are the required audit filters for this verification/designation cycle.

1. Does the PI program identify, review, and document findings and corrective actions on the following audit filters? Check yes or no depending on whether the facility is tracking the audit filter. **Bolded MUST be included. See Appendix #8 for Audit Filter Tool.**
  - a. **Does the facility have a policy in place to review issues that revolve predominately around (1) system and process issues such as documentation and communication; (2) clinical care, including identification and treatment of immediate life-threatening injuries (ATLS®); and (3) transfer decisions? (CD 16-10)** Y\_\_\_N\_\_\_
  - b. **All trauma deaths in house or in emergency department (CD 16-6) (Audit Filter A)** Y\_\_\_N\_\_\_
  - c. **Any issues regarding transfer decisions? (CD 16-10) (Audit Filters B, C, D, E, F)** Y\_\_\_N\_\_\_
    1. **All trauma transfers (CD 2-13, 4-3)** Y\_\_\_N\_\_\_
    2. **Transfer to a level of higher care within the hospital (CD 16-8)** Y\_\_\_N\_\_\_
  - d. **Trauma team activation times to trauma activation, including consultants (CD 5-15) (Audit Filter G)** Y\_\_\_N\_\_\_
  - e. All pediatric trauma admissions, and all pediatric trauma activations (CD 2-19) Y\_\_\_N\_\_\_
  - f. General surgeon response times to trauma activation (**Only applies to Level IV trauma facilities that have trauma surgeons on their trauma team**) (CD 5-15, 2-8, 5-16) Y\_\_\_N\_\_\_
  - g. Emergency provider response time to trauma activation (CD 2-8) Y\_\_\_N\_\_\_
  - h. Bypass and diversion events (CD 3-7) Y\_\_\_N\_\_\_

## VII. EDUCATION ACTIVITIES/OUTREACH PROGRAMS

1. Is the trauma facility engaged in public and professional education? (CD 17-1) (Yes) (No)
2. Is there an injury prevention/public trauma education program based on local/regional trauma registry and epidemiologic data? (CD 18-1) (Yes) (No)



**ADDENDUM**

**I. SURVEY QUESTIONS**

1. Does the facility have inpatient rehabilitation or a transfer agreement to an approved rehabilitation facility? (Yes) (No)
2. Does the facility have acute spinal cord management in-house or a transfer agreement with regional acute spinal cord injury rehabilitation center? (Yes) (No)

**II. NETWORK AUDIT FILTERS**

The following audit filters will be monitored by the Regional Trauma Networks in the future. Is the following data readily available?

1. Ground transport trauma patients with an ED Revised Trauma Score (RTS) less than or equal to 5.5 and scene transport times (scene departure to ED arrival) greater than 20 minutes list (and sort by) transport mode, EMS agency, scene to hospital transport time, injury county, mechanism of injury (MOI), ISS, and outcome for each patient meeting these criteria.

<b>Ground transport trauma patients with an ED RTS less than or equal to 5.5 and scene transport times (scene departure to ED arrival) greater than 20 minutes</b>			
<b>Filter</b>	<b>Yes</b>	<b>No</b>	<b>Not Available</b>
Transport Mode			
EMS Agency			
Scene to hospital time			
Injury County			
Mechanism of Injury			
ISS			
Patient Outcome			

2. Trauma patients who die with a probability of survival (TRISS) >50%. (TRISS score for trauma patients using physiologic measures collected at the first presenting hospital): list age, MOI, transport mode, ISS, outcome, length of stay (LOS), and TRISS for patients meeting criteria.

<b>Trauma patients who die with a probability of survival (TRISS) &gt;50%</b>			
<b>Filter</b>	<b>Yes</b>	<b>No</b>	<b>Not Available</b>
Mechanism of Injury			
Transport mode			
ISS			
Outcome			
Length of stay			
TRISS			

**Appendix #1 – Sample of a Trauma Facility Commitment to Level IV Trauma Care**

WHEREAS, traumatic injury is the leading cause of death for Michigan residents between the ages of 1 and 44 years; and

WHEREAS, [HOSPITAL] strives to provide optimal trauma care; and

WHEREAS, treatment at a trauma hospital that participates in a standardized system of trauma care can significantly increase the chance of survival for victims of serious trauma; and

WHEREAS, participation in the Michigan Statewide Trauma System will result in an organized and timely response to patients' needs, a more immediate determination of patients' definitive care requirements, improved patient care through the development of the hospital's performance improvement program and an assurance that those caring for trauma patients are educationally prepared:

THEREFORE; BE IT RESOLVED that the board of directors of [HOSPITAL] resolve to provide the resources necessary to achieve and sustain a level [III or IV] trauma hospital designation.

IN WITNESS THEREOF, I have hereunto subscribed my name this [DAY] day of [MONTH], [YEAR].

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Chairperson of the Board

**Appendix #2 – Sample of a Medical Staff Resolution**

WHEREAS, traumatic injury is the leading cause of death for Michigan residents between the ages of 1 and 44 years; and

WHEREAS, [HOSPITAL] strives to provide optimal trauma care; and

WHEREAS, treatment at a trauma hospital that participates in a standardized system of trauma care can significantly increase the chance of survival for victims of serious trauma; and

WHEREAS, participation in the Michigan Statewide Trauma System will result in an organized and timely response to patients' needs, a more immediate determination of patients' definitive care requirements, improved patient care through the development of the hospital's performance improvement program and an assurance that those caring for trauma patients are educationally prepared:

THEREFORE; BE IT RESOLVED that the medical staff of [HOSPITAL] resolves to support the hospital's trauma program and to participate with initiatives in the furtherance of the standards published by the Michigan Statewide Trauma System for level [III or IV] trauma hospitals.

IN WITNESS THEREOF, I have hereunto subscribed my name this [DAY] day of [MONTH], [YEAR].

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Chief of Staff

### **Appendix #3 - Trauma Medical Director**

1. Name:
2. Medical School:
3. Year Graduated:
4. Type of Residency:
5. Post Graduate Training Institution (Residency):
6. Year Completed:
7. Board Certified: (Yes/No)
  - Year:
  - Specialty:
  
8. List added qualifications/certifications giving the Specialty and date received:
  
  
9. Date of ATLS : (CD 17-5) (mm/dd/yyyy)

*\* MDCH reserves the right to review certifications.*





## Appendix #5 – Trauma Transfer Guidelines

Check the criteria below that the facility uses to prompt identification and consideration of transfer for patients who require a higher level of care and are reviewed by the PI program.

### Michigan Administrative Rules Criteria

1. Central nervous system:
  - Depressed skull fracture
  - Penetrating injury/open fracture, with or without cerebrospinal fluid leak
  - GSC <14 or deterioration
  - Spinal cord injury or cerebral vascular injury
2. Chest:
  - Major chest wall injury or pulmonary contusion
  - Wide mediastinum or other signs suggesting great vessel injury
  - Cardiac injury
  - Patients who may require prolonged ventilation
  - Flail chest/multiple rib fractures
3. Pelvis/Abdomen:
  - Unstable pelvic ring disruption
  - Pelvic fracture with shock or other evidences of continuing hemorrhage
  - Open pelvic injury
  - Intra-abdominal visceral injury
  - Acetabular injury
4. Major Extremity Injuries:
  - Fracture/dislocation with loss of distal pulses
  - Open long-bone fractures
  - Extremity ischemia
  - Compartment syndrome
5. Multiple-system injury:
  - Head injury combined with face, chest, abdominal, or pelvic injury
  - Burns with any combination of multi-system, injury including inhalation injury
  - Multiple long-bone fractures
  - Injury to more than two body regions
6. Comorbid Factors for consideration:
  - Age > 55
  - Children < 5 years
  - Cardiac or respiratory disease
  - Insulin-dependent diabetes
  - Morbid obesity
  - Pregnancy
  - Immunosuppression
  - Liver or renal insufficiency
7. Secondary deterioration (late sequelae) as a result of trauma:
  - Prolonged mechanical ventilation > 48 hours
  - Sepsis
  - Single or multiple organ system failure (deterioration in central nervous, cardiac, pulmonary, hepatic, renal, or coagulation systems).
  - Major tissue necrosis/soft tissue injury





## Appendix #8 – Audit Filter Tool

On the audit filters below, please check yes or no to indicate whether the facility is tracking the filters or not. Refer to page 10 of this document for further details on audit filters.

- (A) Trauma related deaths. The following data should be captured for each patient: list elapsed time, ED admission time, Mechanism of Injury (MOI), age, transport mode, Glasgow Coma Scale (GSC), Revised Trauma Score (RTS), Abbreviated Injury Scale (AIS), International Classification of Diseases-9 (ICD-9), Current Procedural Terminology codes (CPT), and Injury Severity Score (ISS) for all trauma deaths in house or in emergency department (CD 16-6).

Trauma Related Deaths			
Filter	Yes	No	Not Available
Total time from initial injury to time of death			
ED Admission Time			
Mechanism of Injury			
Patient Age			
Transport Mode			
Glasgow Coma Scale			
Revised Trauma Score (RTS)			
AIS			
ICD-9			
CPT			
Injury Severity Score (ISS)			

- (B) Trauma patients with more than one inter-hospital transfer prior to definitive care: list all trauma transfers, any issues regarding transfer decisions, and transfer to a level of higher care within the hospital (CD 2-13, CD 4-3, CD 16-8, CD 16-10).

General Trauma Transfer Information			
Filter	Yes	No	Not Available
Multiple transfers before definitive care			
Transfer to a higher level of care within the facility			

- (C) Trauma patients with EMS scene times (EMS scene arrival to EMS scene departure) greater than 20 minutes: list EMS agency, transport mode, scene time, scene procedures (oxygen, CPR, fluids), trauma type, injury zip code (injury county), ISS, and outcome for patients meeting criterion.

Trauma patients with EMS scene times (EMS scene arrival to EMS scene departure) greater than 20 minutes			
Filter	Yes	No	Not Available
EMS Agency			
Transport Mode			
Scene time			
Scene Procedures (CPR, Fluids, Intubation)			
Trauma type			
Injury county			
ISS			
Patient Outcome			

**Appendix #8 – Audit Filter Tool (continued)**

- (D) Transferred trauma patients with an ISS greater than 15 and transfer time (ED admit to definitive hospital admit) greater than 6 hours for rural place of injury or 4 hours for urban place of injury: list definitive hospital, urban or rural place of injury, transfer time, MOI, ISS, and outcome for patients meeting criteria.

<b>Transferred trauma patients with an ISS greater than 15 and transfer time (ED admit to definitive hospital admit) greater than 6 hours for rural place of injury or 4 hours for urban place of injury</b>			
<b>Filter</b>	<b>Yes</b>	<b>No</b>	<b>Not Available</b>
Definitive Hospital			
Urban/Rural location			
Transfer time			
Mechanism of Injury			
ISS			
Patient Outcome			

- (E) Trauma patients with an ISS greater than 15 and ED time (ED admit to ED discharge) greater than 2 hours: list patient transfer (yes or no), MOI, and ED time for patients meeting criteria.

<b>Trauma patients with an ISS &gt; 15 and ED time (ED admit to ED discharge) greater than 2 hours</b>			
<b>Filter</b>	<b>Yes</b>	<b>No</b>	<b>Not Available</b>
Transfer			
Mechanism of Injury			
ED Time			

- (F) Trauma patients transported by EMS without an associated EMS report in the medical record: list percentage of missing run reports by transport mode and EMS agency.

<b>Trauma patients transported by EMS without an associated ambulance report in the medical record</b>			
<b>Filter</b>	<b>Number/Percent</b>	<b>Number/Percent</b>	<b>Not Available</b>
Number of missing run reports for the reporting period			
Percentage of missing run reports by mode (air/ground)			
Percentage of missing run reports by agency			

- (G) Tracking general surgeon response times to trauma activation, Emergency provider response time to trauma activation, and trauma team activation times to trauma activation, including consultants (CD 5-15, CD 2-8, CD 11-60, CD 5-16).

<b>Response Times Monitored for Trauma Activation</b>			
<b>Filter</b>	<b>Yes</b>	<b>No</b>	<b>Not Applicable</b>
General Surgeon			
Emergency Department Physician			
Trauma Team Members			

**Appendix #8 – Audit Filter Tool (continued)**

(H)\* Pediatric trauma patients (14 years of age or younger) who either had an ED GCS less than or equal to 8, intubation, or ISS greater than 15 and not transferred to a regional pediatric trauma center list hospital, age, ED GCS, ISS, MOI, LOS, and transport mode for each patient meeting criteria.

<b>Pediatric trauma patients (14 years of age or younger) who either had an ED GCS less than or equal to 8, intubation, or ISS greater than 15 and not transferred to a regional pediatric trauma center</b>			
<b>Filter</b>	<b>Yes</b>	<b>No</b>	<b>Not Available</b>
Age			
ED Glasgow Coma Scale			
ISS			
Mechanism of Injury			
Length of Stay			
Transport mode			

(I)\* All pediatric trauma admits and pediatric trauma activations (CD 2-19).

<b>Pediatric Trauma Patients</b>			
<b>Filter</b>	<b>Yes</b>	<b>No</b>	<b>Not Available</b>
Pediatric trauma admits			
Pediatric trauma activations			

***\*These audit filters should be monitored but not required for current verification/designation.***

## General Information and Instructions

### I. HOSPITAL INFORMATION

For the purposes of this document hospitals seeking verification will be referred to as trauma facilities.

### C. Hospital Commitment

Requested Documents:

**Trauma Facility Commitment to Level IV Trauma Care** – The hospitals administrative structure must support the trauma program. Documentation of administrative commitment is required from the governing body and the medical staff (CD 5–1). Administrative support of the trauma program helps provide adequate resources for the optimal care of injured patients. The participation of an administrator helps ensure that the written commitment to the trauma program is aligned with optimal multidisciplinary trauma care. See Appendix #1 for a sample.

**Medical Staff Resolution** – Medical staff commitment ensures that the members of the medical staff support the trauma program by their professional activities. This support includes a current written commitment acknowledging the medical staff’s willingness to provide enough specialty care to support the optimal care of injured patients. See Appendix #2 for a sample.

### D. Michigan Criteria/ACS Criteria/Critical Deficiencies

Certain criteria are fundamental to establishing and maintaining a trauma facility. These criteria have been identified as critical in nature and the failure of the healthcare facility to meet these criteria is considered a “critical deficiency” (CD). If a Type I deficiency or more than three Type II deficiencies are present at the time of the initial in-state verification visit a facility will not be recommended for designation as a Michigan trauma facility. There are two categories of critical deficiencies that must be met; one category is the **Michigan Criteria** which is derived from the Statewide Trauma System Administrative Rules 325.125-325.138 filed with the Secretary of State on October 2009. The second category of criteria outlined in the PRQ is based on the **American College of Surgeons Committee on Trauma (ACS)**. Resources for Optimal Care of the Injured Patient 2014.

#### 1. Michigan Criteria:

Michigan criterion are noted throughout the document and preceded by a reference number Ex: MI-CD 1, MI-CD 2, MI-CD 1-2 etc. Not meeting these requirements is considered a Type I critical deficiency. References for these critical deficiencies can be found [www.michigan.gov/traumasystem](http://www.michigan.gov/traumasystem).

#### 2. ACS Criteria:

American College of Surgeons criteria are noted throughout the document and are preceded by a reference number CD 5-13 etc. Not meeting these requirements is considered a Type I or Type II critical deficiency. References for these critical deficiencies can be found at <https://www.facs.org/quality-programs/trauma/vrc/resources>.

## **II. PRE-HOSPITAL SYSTEM**

A Medical Control Authority (MCA) in Michigan is a hospital or group of hospitals that operate a service that treats patients 24 hours a day 7 days a week. The Medical Control Authority may include a group of hospitals in a county or region operating under one agency staffed by personnel from out the hospital setting. Hospitals in the MCA may agree to confer their oversight responsibilities to an executive director. There are currently 62 MCA's in Michigan.

1B. For the purposes of this document EMS Education refers to any interaction between the trauma facility staff and the EMS providers for the purposes of improving trauma care in the injured patient. This may include case reviews, trauma courses such as Pre-Hospital Trauma Life Support (PHTLS), offering EMS continuing education, joint exercises and drills.

## **III. TRAUMA PROGRAM**

### **A. Trauma Staff**

At a minimum, all trauma facilities should have a Trauma Program Manager/Coordinator (TPM/C) and a Trauma Medical Director (TMD).

- The TPM is most commonly is a nurse, with trauma/emergency care experience.
- The TMD is a physician on staff who has a role in leadership for the trauma program and acts as a liaison for trauma care.
- Injury prevention staff can be a nurse or other personnel involved in injury prevention activities. This is not a required role.
- Other staff could include data collection personnel or administrative assistants.

### **C. Physicians and Mid-Level Providers**

Education requirements for trauma care providers:

- Emergency Department mid-level providers that function as a member of the team caring for trauma activation patients via assessment or interventions must be current in ATLS. If the ED mid-level's only role is as a scribe or entering orders they would not need to meet the ATLS requirement.
- The Trauma Medical Director must have taken ATLS once.
- General surgeons treating trauma patients must have taken ATLS once.
- Emergency Medicine physicians who are board certified in emergency medicine must have taken ATLS once.
- Physicians who work in the emergency department and are board certified in something other than emergency medicine, for example family practice, internal medicine, etc. al, must be current in ATLS.

## **F. Trauma Transfer**

4. Transfer guidelines and agreements between facilities are crucial and must be developed after evaluating the capabilities of rural hospitals and medical transport agencies (CD 2-13). Transfer agreements to facilities with higher levels of care, capacity, and burn facilities are crucial. A burn facility is typically a hospital which specializes in the treatment of severe burn injuries. The highest level being hospital designated as burn centers by the American Burn Association and the American College of Surgeons.

For additional resources, see the ACS book, “Resources for Optimal Care of the Injured Patient 2014”, Chapter 4.

## **H. Trauma Diversion**

**Hospital Trauma Diversion:** A trauma facility may re-route a trauma patient to an alternate trauma care facility if one or more of its essential trauma resources are currently functioning at maximum capacity, or is otherwise unavailable, in order to serve the best interest of the trauma patient.

**Trauma Bypass:** Pursuant to the trauma triage guidelines in this protocol, the EMS provider may bypass the nearest trauma care facility in order to transport the trauma patient to a trauma care facility whose resources are more appropriate to the patient’s injury.

## **IV. HOSPITAL RESOURCES**

### **B. Radiology**

Rural facilities often need to transfer patients to higher levels of definitive care. It is recommended that imaging protocols be acceptable to both sending and receiving facilities to reduce and prevent the unnecessary repetition of radiographic studies. Level I and Level II centers must be able to read images from referring centers.

### **C. Laboratory**

All required resources will be reviewed during the site visit. (DO NOT include equipment list with this document).

### **G. Trauma/Hospital Statistical Data**

Dead on Arrival (DOA) – pronounced Dead on Arrival with no additional resuscitation efforts initiated in the emergency department.

## **V. TRAUMA REGISTRY**

Ongoing, accurate data collection and analysis is crucial to trauma system development, performance improvement, and injury prevention. The American College of Surgeons requires trauma registries and analysis by every trauma center. Michigan requires data collection to be designated. For the purposes of this document trauma patients are defined by trauma registry inclusion criteria. The trauma registry inclusion criteria include:

- ICD-9 discharge diagnosis 800.00 – 959.9
- Excluding 905-909 (late effects of injury)
- Excluding 910-924 (blisters, contusions, abrasions, insect bites)
- Excluding 930-939 (foreign bodies)
- Excluding drowning, unless consequence of MVC
- Excluding strangulation/asphyxiation
- Excluding poisoning or drug overdose

## **VI. PERFORMANCE IMPROVEMENT**

Performance improvement process focuses on structure, process and outcomes evaluations. Improvement efforts identify root causes of problems, intervene to eliminate these causes and take steps to correct the process. This process must be implemented for facility and regional performance improvement.

A strong PI program must address the following:

- Process improvement contains a detailed audit of all trauma related deaths, major complications and transfers
- A multi-disciplinary trauma peer review committee that includes all members of the trauma team
- Participation in the trauma system data management system
- The ability to follow up on corrective actions to ensure performance improvement activities
- The hospital participates in the regional performance improvement activities
- Practice Guidelines, protocols, algorithms, derived from evidenced validated resources are used to stratify benchmarking and measure performance improvement

For additional resources, see the ACS book, “Resources for Optimal Care of the Injured Patient 2014”, Chapters 15 and 16.

## **IX. TRAUMA PROGRAM STRENGTHS AND WEAKNESSES**

Use this section to honestly assess the strengths and opportunities the trauma program has addressed over the past year and what the expectations for the future are. Consider developing two to three measurable objectives to track and report on.

## **ADDENDUM**

### **I. SURVEY QUESTIONS**

These questions are for informational purposes only and will not affect the designation determination.

### **II. NETWORK AUDIT FILTERS**

A Regional Trauma Network is an organized group comprised of the local MCA's within a region, which integrates into existing regional emergency preparedness regions. The Regional Trauma Network is the governing body, ultimately responsible for decisions, policy, procedure and any subcommittee work related to trauma. The Regional Trauma Networks were established to provide system oversight of the trauma care provided in each region of Michigan. The audit filters in this section will be monitored by the Regional Trauma Network in the future.

## PRQ Level IV Checklist

Before submitting the PRQ, ensure the following has been completed:

- All questions on the PRQ are complete
- Appendix #3 - Complete with Trauma Medical Director information
- Appendix #4 – Staff information table complete
- Appendix #5 – Trauma transfer criteria that applies is checked
- Appendix #6 - Trauma diversion table complete
- Appendix #7 - Examples to questions 1 and 2
- Appendix #8 – Bolded audit filters complete
- The following attachments are included:
  - Trauma Facility Commitment to Level IV Trauma Care – Signed by Chair of the Board, labeled as Attachment #1
  - Medical Staff Resolution – Signed by Chief of Staff, labeled as Attachment #2
  - Position descriptions for Trauma Manager and Trauma Medical Director, labeled as Attachment #3
  - Hospital’s activation policy, labeled as Attachment #4
  - If applicable, the hospital’s diversion policy, labeled as Attachment #5
  - If applicable, the hospital’s massive transfusion protocol, labeled as Attachment #6