MDHHS
Michigan Department of Health & Human Services

Michigan Statewide Trauma System
Sample Site Review Report

This sample final report illustrates the sort of detail that should be incorporated into a report and provides examples of what reviewers may find while evaluating trauma programs. This report's varied samples of comments are meant to be illustrative, not prescriptive. Reviewers will report in their own style.

The Michigan Administrative Rules recognize that a site review is integral to the assessment of resources and the determination of destination decisions. In addition, the site review is a method to provide consistency for trauma care (levels) and a means to benchmark care regionally and nationally. The site review findings are foundational to deciding if a facility has the resources to provide trauma care at a pre-determined level.

The site review report must provide documentation that addresses the regulatory role of the visit to ensure requirements have been met and if not, provide careful descriptions of deficiencies and areas of opportunity, as well as strengths.

The site review and the site report must be approached as a teaching tool with clear, unambiguous suggestions for process and performance improvement. The site review assesses a facility's current status and suggests how it may reach the goal of an efficient, effective trauma program. Advice and sharing of recommendations during the visit are appropriate as long as there is a clear explanation of the distinction between recommendations and requirements. Liberal use of the areas of opportunity will help facilities focus on goals and strategies for their trauma program.

The medical record review of the report will involve case summaries. Case summary reports should be de-identified by avoiding identifiers such as medical record number, age, name of receiving facility, or any other information that might identify the case. Only include gender, description of age (young/elderly) and a summary of pertinent information.

The reviewers will collaborate on a report draft before leaving the review site. The lead author will be responsible for reviewing, revising and completing a final report for submission to the Verification/Designation Coordinator. Future site visits will be predicated on the findings of the report in order to track and monitor progress and the resolution of deficiencies.

The in-state site review teams were chosen from leading experts in the field. The site review is an important opportunity to demonstrate good teaching principles and to share in the passion of providing excellent care to the injured.

Michigan Statewide Trauma System
Sample Site Review Report

Hospital:

Date of Site Visit:

Designation Level:

Date of Report:

Reviewers:

Introductory Comments

The hospital is a 20-bed critical access facility that serves a catchment area of approximately 850 square miles. The emergency department experiences about 420 visits each year. There were 18 trauma activations last year. Most of the major trauma presenting to the hospital is blunt motor vehicle trauma. Coverage in the emergency room is provided by family practice physicians, nurse practitioners, and physician assistants who all staff the attached clinic and share emergency department calls. The facility utilizes locum coverage less than 10% of the time. Emergency medical services consist of municipal, volunteer basic life support ambulance services staffed by 12 dedicated volunteers. The average transport time is 25 minutes. The remoteness of the area frequently necessitates the use of air transportation, the flight times of which are approximately 40 minutes to the nearest definitive care facility. Available ground transportation services include the local ambulance service and a neighboring advanced life support service, which is approximately 25 minutes away. Community support includes dedicated physicians, nursing, ancillary and pre-hospital provider involvement.

Trauma Program Overview

Deficiencies
Cite each deficiency (i.e. CD 5-15, Type II)

Level III Examples:
The general surgeons' compliance in arriving to the ED for the highest level of trauma activations within 30 minutes is 70%. (CD 2-8, Type I)

The performance improvement committee minutes and documentation identifies opportunities for improvement but the minutes do not consistently provide the documentation of the specific interventions or action plans to prevent future adverse events. (CD 16-18, Type II)

Based on information from chart review (first case summary under trauma transfers), the facility did not have a transfer agreement with a similar or higher-verified trauma facility that provides specialty care. (CD 8-5, Type II)

Based on information from chart review (first case summary under trauma team activations), the facility's trauma team activation criteria did not include "gunshot wound to abdomen." (CD 5-13, Type II)

Level IV Examples:
The Emergency Department employs one ED physician who is not current in ATLS. (CD 2-16, Type II).

Multidisciplinary Peer Review Committee meeting minutes do not consistently show documentation of loop closure. There is documentation of action plans but not of loop closure and outcomes. (MI CD 2-3, Type I).

Data entry into ImageTrend is the responsibility of multiple staff in the billing/coding department. The facility does not have a designated person responsible for trauma registry activities. (MI-CD 1-4, Type I)

Based on information from chart review (first case summary under trauma deaths), the facility has no Massive Transfusion Policy. (CD 11-84, Type I)

Strengths

Staff members were eager to learn how to improve their system and willing to make necessary changes to assist them in the management of trauma patients.

There is clear and apparent administrative support for the trauma program.

The facility has dedicated a registrar to the trauma program.

The Trauma Medical Director demonstrated enthusiasm for the trauma program.

The Trauma Program Manager demonstrated passion and commitment to providing excellent care through an efficient system.

The facility's low turnover rate suggests a dedicated and satisfied staff.

The facility is supported by a dedicated and involved EMS provider that collaborates well with the trauma program.

There are several board-certified emergency medicine physicians on staff.

There is quick and easy access to the trauma call schedules in the emergency department.

There is collegial collaboration between the emergency department physicians and the surgeons.

Radiology and laboratory staffs are in-house 24 hours/day.

There are simple and clear criteria as to which patients are transferred.

On-call physicians live close by.

The EMS staff assists in the emergency department.

There is a clear commitment to staff the emergency department with clinically proficient physicians who are diligent about maintaining their ATLS certification.

Staff is offered many educational opportunities that are encouraged and supported financially by the administration.

Nursing staff are all TNCC or ATCN certified illustrating a clear commitment to providing high-quality care.

All physicians are board-certified.

There is strong leadership from the Trauma Medical Director and Trauma Program Manager to pursue an aggressive performance improvement process.

The peer review committee maintains minutes of their activities and shares the pertinent results with their locum providers.

Excellent documentation is demonstrated.

Charting by mid-level practitioners is co-signed by physicians.

Areas of Opportunity

The organizational chart should illustrate the Trauma Medical Director's ability to control the members of the trauma panel and administer the performance improvement program across all necessary departments.

The program needs to improve documenting the emergency physician, surgeon and specialist arrival times.

Documentation of trauma resuscitation seems to be fragmented.

There does not appear to be a mechanism to document the activation of the trauma team making it difficult to track whether or not it is being activated appropriately.

The Trauma Medical Director should become involved in national, state and regional trauma organizations.

Even though the surgeons are responding to trauma activations, their participation and activities are not well documented.

The trauma program believes the radiology and OR staffs are meeting the response time requirements but there does not appear to be a method to track it.

Twenty percent of the nursing staff has yet to complete appropriate trauma education.
Documentation of current ATLS is missing for some locum physicians.

The peer review committee does not involve all of the physicians who care for trauma patients, including all of the trauma surgeons.

The trauma team activation criterion is comprised of two distinct tiers, but the team members seem to be the same people.

Documentation of PI loop-closure is informal and without documentation.

The facility does not regularly receive feedback from the definitive care facilities it refers to.

The facility does not currently utilize a trauma flow sheet to document the resuscitation of trauma patients, resulting in inconsistent documentation and difficulty tracking times.

Recommendations

Recommend re-considering the trauma program's location on the organizational chart.

Recommend designating one person, perhaps the Health Unit Coordinator, to record the arrival times of providers as they arrive at resuscitation.

Recommend using a trauma flow sheet (available on the state trauma website) to document emergency department course of seriously injured patients.

Recommend utilizing a deliberate procedure to activate the team every time and recording this on a trauma flow sheet.

Recommend encouraging the surgeons to write or dictate a note following their participation in trauma resuscitations.

Recommend developing a system to track response times and report them to the trauma PI program.

Recommend establishing expectation that the training for nursing staff be completed within a reasonable time after being hired, and include the training requirements of the trauma system into the nursing job descriptions for emergency department and ICU nurses.

Recommend requiring the locum agency to provide a credentialing packet that contains evidence of compliance with trauma system educational requirements.

Recommend modifying the membership of the morbidity and mortality committee to include physicians and surgeons who care for trauma patients, or establishing a separate peer review committee to deal with trauma cases.

Recommend formalizing the entire PI process, using appropriate documentation tools and documenting all phases of PI.

Recommend establishing a process to routinely receive information on the outcomes of patients from facilities patients are referred to.

Site Tour

Department-Specific Equipment Capabilities:
Is required equipment present for all ages? *Yes*

Specify missing equipment:
Suction and ventilation equipment should also be in the room with the CT scanner.

Comments:
There is an ultrasound machine dedicated to the emergency department.

All radiological images are digitized.

Chest tubes up to size #20 present. Larger chest tubes are suggested for trauma patients. Recommend stocking up to size #34.

IV fluids are stored in the warming cabinet. Recommend dating these bags to minimize the risk of bacterial growth. One option is to use the warm fluids for all IV starts, thus automatically rotating the stock in the cabinet.

Case Summaries

Trauma Deaths

Case summaries, facility PI findings, reviewer's comments

The patient was a young, male adult that fell off a second story balcony onto soft ground/grass. The patient was presented to the ED with a GCS 12, B/P 100/50, HR 98, RR 28, and SpO2 96%. The patient also had an ETOH level of 200. At 0200, within 30 minutes of arrival to the ED, the patient exhibited B/P 70/40, HR 110, RR 28, and SpO2 94%. The abdomen was distended and firm. Emergent blood ordered at 0215. IV fluids infused via the Level I Rapid Infuser. The patient was taken to a CT scan at 0300. CT scan showed a spleen and liver injury. At 0330 the patient was transported back to ED with IV fluids infusing, B/P 70/40, and HR 126. Emergent blood arrived to ED at 0350. The patient was given 2 units PRBC at 0355. At 0430, the patient's condition deteriorated, SBP 50 palp, HR 132. After aggressive resuscitation, infusion of blood products and fluids the patient was pronounce dead at 0530.

The patient was involved in a snowmobile versus car crash. The EMS run sheet was in the chart. The physician was present upon patient arrival. Transport was accomplished with the patient on his side due to blood from the mouth and air coming out of the ear with bagging. A Combitube was placed to manage the airway as direct intubation was not successful. The patient was in asystole. An interosseous catheter was used. Throughout the resuscitation, monitoring appeared appropriate as was the documentation. A rhythm could not be established. The patient was declared dead. Peer Review: The chart was reviewed in the performance improvement process and no issues were identified. In my review of the case, care of this patient was timely, and excellent use of the recently obtained interosseous needle provided access that was difficult to establish. In addition, a backup plan was used when intubation was not successful. An ET tube was attempted followed by a Combitube. Care was appropriate. In my opinion, this death was non-preventable.

The patient was an unbelted driver involved in a single vehicle collision with a telephone pole who sustained severe traumatic brain injury with CPR performed en route. The vehicle sustained significant damage requiring prolonged extraction from the vehicle. Documentation from the physician notes indicated physician arrival prior to patient arrival. The trauma team activation sheet listed caregivers. However, arrival times were not present. ATLS guidelines appeared to be appropriately followed and commendable efforts were made at resuscitating the patient. Peer Review: This case was not reviewed by the peer review committee. In my review of the case I found physician response was excellent with appropriate care. Documentation could be improved with respect to times and maneuvers. This case, like all trauma deaths, should be referred to the morbidity and mortality committee for review. However, the case occurred prior to the implementation of a trauma program. In my opinion, this death was non-preventable.

Trauma Transfers

Case summaries, facility PI findings, reviewer's comments

The patient was an adult female who sustained a near amputation of the left arm, distal to elbow. The patient was using large farm equipment when her shirt became entangled in the machine. The patient's left arm was pulled into the machinery before a bystander shut the machine off. Upon arrival to the ED, at 1500, vital signs were B/P 130/78, HR 80, RR 28, and GCS 15. After ED workup, no other injuries were identified. The patients left arm was intact with severe lacerations present to posterior and anterior forearm. Documentation shows faint Doppler pulses to left fingers and faint palpable, left radial pulse present. Microvascular surgery was required for this injury and after multiple phone calls and conversations to three different facilities, the patient was transferred. Documentation stated the patient was transported to a level I trauma facility at 1730. (Level III)

The patient was a belted driver involved in a motor vehicle accident with complaints of abdominal and neck pain. The EMS record was present. Vital signs were stable. A physician was present within five minutes of the patient's arrival. The patient was ready to be transferred in approximately one hour, but the helicopter could not fly due to weather conditions so the patient was transferred with basic life support with a registered nurse on board. Drive time to transfer facility was approximately 90 minutes. Peer Review: The case was not reviewed. In my review, I found that the system functioned well, serial vital signs including temperature were well documented and there were no patient care issues.

The patient was a pedestrian who was struck by a car while riding her bicycle. She fell onto some rocks, striking her chest. She experienced chest pain of 10/10 with dyspnea. The GCS was 15. The EMS record was present but several times were missing. There was no evidence that EMS administered oxygen pre-hospital. The trauma team did not appear to be activated. Oxygen and an IV were started in the emergency department. The patient was found to have multiple rib fractures and pneumothorax. A chest tube was inserted one hour after arrival and the patient was transferred to a level I trauma facility 1 ½ hours after arrival. Peer Review: The case was reviewed by the Committee which found the EMS care to have been insufficient and the placement of a chest tube and facilitation of the transfer to have been delayed. There is proper documentation of follow-up with the emergency department providers and the EMS agency. In my review I found that the hospital properly identified the case for review and followed up appropriately. They continue to closely watch for recurrences of similar problems with the addition of two PI filters.

Trauma Team Activations

Case summaries, facility PI findings, reviewer's comments

A young adult female was presented to the ED with a small caliber gunshot wound to the middle abdomen. This case was not called out as a Trauma Team Activation. Upon arrival to the ED, the patient had a B/P 136/68, HR 80, and RR 22. Documentation stated the wound was 2-3 mm to center of abdomen, inferior to epigastric area. No external bleeding noted. Abdomen was soft, flat, and slightly tender to palpation. No exit wound was identified. CT scan and KUB showed a small pellet lodged in the subcutaneous layer. The patient was admitted to Med/Surg unit by the trauma surgeon and antibiotics started in the ED.

The patient was a belted passenger of a motor vehicle involved in a collision with another vehicle. The patient required extrication from the wreckage. The EMS crew activated the trauma team from the field. The patient arrived with a GCS of 15, with stable and satisfactory vital signs and complaining of neck and head pain. The patient was eventually discharged home from the emergency room. Peer Review: The case was not reviewed by the committee. In my review I found that the patient did not meet the criteria for trauma team activation. Recommend that the facility continue to observe for occurrences of over-triage and work with EMS to reduce them.

The patient was a male who arrived via basic life support EMS after he crashed his snowmobile into a tree. The patient was noted to have significant neurologic deficit and was subsequently found to have a T-11 fracture. He was transferred to a level I trauma facility after a 3 ½ hour length of stay. Peer Review: The Committee found the patient's care to have been unreasonably delayed but there is no evidence that any action was taken as a result. In my review I found that there were no times indicating when radiological studies were ordered or performed, making it difficult to track the care of the patient. The PI process was successful in identifying a need for improvement.

Trauma Patients Admitted by Non-Surgeons
Case summaries, facility PI findings, reviewer's comments

The patient was an elderly female who slipped on the ice and fell on the sidewalk, striking the back of her head. She was not unconscious but later that day developed some confusion. She was seen in the clinic by a family practice physician who admitted her directly to the hospital. She was not seen in the emergency department. The following day she was evaluated by neurosurgery and a CT was ordered. A small subdural bleed was discovered. The patient's condition improved and she was discharged four days later. Peer Review: The case was not reviewed by the committee. In my review I found that the patient's assessment was delayed because she was not admitted through the emergency room. As a result, the PI process failed to identify this patient. Recommend that the facility establish a policy to ensure that all trauma patients are evaluated by a surgeon or ATLS certified emergency physician early in their course.

The patient was a female who was the driver of a vehicle involved in a rollover. She was amnestic to the event, found to have a low-grade splenic laceration with small hemoperitoneum and a concussion. She was admitted by a family practice physician and did well during her stay. Peer Review: The case was not reviewed by the committee. In my review I found that there was no documentation that the patient was seen by a surgeon in the emergency department, although those familiar with the case remember that the surgeon did see the patient in the emergency room. The first note in the chart written by a surgeon does not appear until day three. While there was evidence to indicate that surgeons are managing trauma patients, trauma patients continue to be admitted by family practice physicians. Since trauma is a surgical disease, I recommend that the facility work toward having their surgeons become the admitting physicians for trauma patients.

Closing Comments

Number of Type I Deficiencies: 4

Number of Type II Deficiencies: 5

I recommend that the trauma program staff continue to improve their PI process, focusing on documenting loop closure. As the system matures, the facility should continue to evaluate their trauma activation criteria and their trauma transfer criteria, modifying it as necessary until they end up with a well-refined protocol. Finally, I recommend employing some kind of trauma flow sheet that can be used to concisely and comprehensively document the resuscitation of trauma patients. The facility will find that tracking PI issues, entering registry data and abstracting the trauma charts will become easier by employing this tool. A sincere thank you to the trauma program staff who hosted us during the site visit: Jean, TPM and Dr. Nelson, TMD. Also, thank you to the other facility staff that assisted us during the facility tour.

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Lead Author Signature