

**UAMS MEDICAL CENTER  
TRAUMA SERVICES MANUAL**

**SUBJECT:** Trauma Team Activation

**SECTION:** Trauma Services

**SUPERSEDES:** New

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**RECOMMENDATION(S):** Dr. Ron Robertson

**APPROVAL:** 07/01/2015

**CONCURRENCE(S):**

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**Revised:** 12/2018

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## **Trauma Team Activation and Evaluation Criteria**

### **Purpose**

To identify those patients with actual or potential serious injuries based on physiological changes altered anatomy, mechanism of injury and risk factors. A three-tier response to trauma maximizes appropriate resource utilization while assuring timely, organized and appropriate care.

### **Access to the System**

Trauma patients enter the system in one of three ways:

- Helicopter
- Paramedic/EMT Ambulance
- Private Car

### **Definitions:**

**Trauma Triage:** Trauma Triage is an estimation of injury severity.

**Level I (Life Threatening):** A Level of Trauma evaluation for a patient who meets mechanism of injury criteria with unstable vital signs or potential life threatening injuries.

**Level II (Potentially Life Threatening):** A Level of Trauma evaluation for a patient who meets mechanism of injury criteria with stable vital signs pre-hospital and upon arrival.

**Level III (No obvious life threatening injuries):** A Level of Trauma evaluation for a patient whom meets mechanism of injury criteria with stable vital signs and no obvious life threatening injuries.

**Trauma Team Leader:** The trauma surgery or emergency department senior resident assigned to lead the care team for the individual patient resuscitation.

### **Procedure:**

- 1) **All patients presenting with potential injury will be screened based on Trauma Team Activation Criteria.**
  - a. If presenting via Helicopter or ambulance, the ED charge nurse and/or ED attending will provide this screening.

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b. If presenting via private car, the ED triage nurse will provide this screen and consult with the ED charge nurse and/or the ED attending as needed.

2) **The screener will determine the level of activation based on the following criteria:**

a. **Level I Activation Criteria (SCENE):**

- Penetrating injury to the Neck, Chest, Abdomen, or Extremities proximal to the elbow/knee
- Signs of Shock (BP  $\leq$  90 reported at any time, absent carotid, femoral or radial pulse, or SBP  $<$  HR)
- Neurological injury with GCS  $<$  9 without sedation
- Severe uncontrolled hemorrhage or transfer patients receiving blood products to maintain hemodynamic stability
- Unable to intubate or intubated from the scene or airway compromise (including blunt neck injury with evidence of potential airway injury)
- Emergency surgical airway placed at the scene or at the referring hospital
- Major vascular injuries, including significant crush or amputation proximal to the elbow or knee or need for prehospital tourniquet application
- Suspected spinal cord injury from the scene or not stabilized at referring hospital
- Major impalement to torso
- Open or unstable pelvic fracture
- Pregnancy with  $>$  20 weeks gestation if other activation criteria of Level 2 or greater present
- Trauma Code
- Emergency Physician discretion

b. **Level I Activation Criteria (TRANSFER):**

- Hemodynamic instability-requiring blood transfusion or pressors to maintain blood pressure
- HR  $>$  SBP
- Penetrating Thoracoabdominal Trauma
- Lack of definitive airway
- Intubated patients transferred from another facility
- Acute decompensation enroute
- MD/Charge RN discretion

c. **Level 2 Activation Criteria: (SCENE):**

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- Penetrating Injury to Extremity distal to elbow or knee
  - Flail Chest, multiple rib fractures
  - Major burns of >20% BSA or any signs of inhalation injury
  - Neurologic injury with GCS > 9 or < 14
  - Open and depressed skull fracture
  - Two or more long bone fractures (ulna with radius fracture or tibia with fibula count as 1 long bone)
  - Extremity trauma with loss of distal pulse or sensation
  - Severe maxillofacial injury with stable airway
  - Near drowning
  - Trauma patient < 15 years old or >65 years old or known history of anticoagulant use
  - Trauma patient currently on anticoagulants (not including aspirin) with any supraclavicular injury
  - Trauma patient >65 with HR >90 and /or BP <110
  - Pregnancy with >20 weeks gestation without other level 2 criteria present
  - Major MVC; ejection from the vehicle, extrication > 20 minutes, death of an occupant in the same vehicle, or impact speed > 50 mph
  - Pedestrian struck by vehicle or auto-bike crash > 10 mph
  - Falls > 20 feet
  - Motorcycle crash/ATV > 20 mph or with separation of rider from bike
  - Trauma patient with a seatbelt sign
  - Emergency physician discretion
- d. **Level 2 Activation Criteria (TRANSFER):**
- Must meet all of these criteria:
    - Transfer with multiple system trauma or CHI
    - Less than 6 hours from original injury
    - Hemodynamically stable
  - MD/Charge RN Discretion
- e. **Level 3 Activation Criteria (SCENE):**
- Stable Trauma Transfer > 6 hours post injury not meeting higher activation criteria.
  - MVC with rollover or intrusion into passenger compartment > 12 inches not meeting higher activation criteria

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- Hanging mechanisms (without evidence of airway compromise or evidence of airway injury)
- Trauma patient > 65 years of age from the scene
- Stable pelvic fractures not meeting higher activation criteria
- Single system injury with high index of suspicion based on mechanism
- Traumatic injury with hypothermia not meeting higher activation criteria
- Any other trauma related injury where two or more systems are involved that does not meet a higher activation criteria
- Emergency physician discretion

f. **Level 3 Activation Criteria(TRANSFER):**

- Not meeting Level 1 or Level 2 transfer activation criteria
- Single system trauma excluding transfer for ENT, ophthalmology, or hand
- ED evaluation with direct consult to trauma team or responsible service

g. **Evaluation of Other Traumatic Injuries:**

Patients who do not meet the above trauma activation criteria may be evaluated by the emergency department physicians alone. These will typically be low impact/low energy mechanisms of injury with actual or potential single system injury. The ED physician will evaluate the patients as appropriate. If admission is warranted, a Trauma Consultation (Level III Activation) will be obtained and the decision of admitting service will be made in conjunction with the trauma team. It is not necessary to use the paging system to alert the Trauma Surgery service for this type of consultative request unless the patient is unstable or at the discretion of the ED attending.

Patients may be directly admitted to the hospital for single system trauma or as a transfer from another hospital when the injury occurred greater than 24 hours prior and the patient is stable.

In instances where the patient has been admitted to another hospital and/or has been taken to the Operating Room prior to transfer, the patient may be transferred directly to the UAMS Emergency Department from the outside facility inpatient setting. These patients will generally have been injured less than 24 hours prior to transfer. This will facilitate further resuscitation and interventions as deemed necessary for that patient upon their arrival.

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### 3) Activation of the Trauma Team

- a. The goal of pre arrival activation is to have the trauma team in position ready to receive the patient upon arrival. In order for this to enhance patient care there must be sufficient time for the team to make their way to the ED, assemble and make assignments prior to patient arrival.
- b. Upon determination of activation criteria for the patient by the screener, the trauma team will be activated through the paging system under the following instances based on timing of advanced notification:
  - i. The ETA is less than 15 minutes – the screener will activate immediately.
  - ii. The ETA is greater than 15 minutes – the screener will send a heads up notification with a projected ETA. A REPEAT PAGE will be sent when ETA is 15 minutes.
  - iii. The ETA is unknown will be treated the same as (ii.) above with repeat page once a more established ETA is known.
- c. Trauma Page Information: The following information will be included on trauma pages
  - i. Level of Activation and Heads Up Notification vs Activation
  - ii. Brief mechanism of injury or actual identified injury (e.g. GSW Chest, MVA, Open Femur Fracture)
  - iii. Mode of arrival (e.g. Helicopter, Ground, POV/Triage)
  - iv. ETA
  - v. Trauma band number if appropriate

### 4) Trauma Team Leader

- a. There is a need for experience and expertise among the house staff in the initial management of the trauma patient in both the Department of Surgery and the Department of Emergency Medicine.
- b. The Trauma Team Leader role will be split between the two services for Trauma Team Activations using the schedule in Appendix A of this policy. This will be reviewed at least every three years and may be amended from time to time as necessary by the Trauma Medical Director.

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- c. This role assignment is designed to cover the conduct of the initial resuscitation from pre arrival through the decision to leave the trauma bay.
- d. Communication between the Trauma Team Leader and the surgical service accepting responsibility for the admission and further workup of the patient is critical to smooth transition of care.
  - i. The ED will be notified of patient disposition prior to admitting team leaving the ED.
  - ii. In instances where the patient is to be discharged, the team completing the workup will coordinate the patient being turned back over to the ED prior to that service leaving the ED.

**5) Based on Activation Level, the following personnel will respond to the ED Trauma Bay:**

**a. Level 1 Response Team Members:**

**Inner Core Team Members**

- a. Trauma Surgery Attending
- b. Emergency Department Attending
- c. Trauma Team Leader
- d. Airway Physician
- e. Trauma Physician #1(Right) – ED Resident
- f. Trauma Physician #2(Left) – Surgery Service Resident
- g. ICU Physician
- h. Recording Physician
- i. Emergency Department Nurse Right
- j. Emergency Department Nurse Left
- k. Trauma Documentation/Primary Nurse
- l. Respiratory Therapist
- m. Emergency Department Technician

**Outer Core Team Members**

- a. Trauma APN
- b. Trauma Coordinator
- c. Blood Bank
- d. Chaplain
- e. Radiology Technician
- f. Patient Registration Representative

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- g. Students/Interns
- h. OR Supervisor
- i. House Supervisor

**b. Level II Response Team Members:**

**Inner Core Team Members**

- a. Trauma Surgery Attending
- b. Emergency Department Attending
- c. Trauma Team Leader
- d. Airway Physician
- e. Trauma Physician # 1(Right)
- f. Trauma Physician # 2(Left)
- g. ED Nurse Right
- h. ED Nurse Left
- i. Trauma Primary Nurse
- j. Respiratory Therapist
- k. ED Tech

**Outer Core Team Members**

- a. Trauma APN/Trauma Coordinator
- b. Radiographer
- c. Chaplain
- d. Students/Interns
- e. Patient Registration Representative

**c. Level III Activation**

**Inner Core Team Members**

- a. Trauma Surgery Attending
- b. Emergency Department Attending
- c. Trauma Team Leader
- d. Airway Physician
- e. Trauma Physician # 1(Right)
- f. Trauma Physician # 2(Left)
- g. ED Nurse Right
- h. ED Nurse Left
- i. Trauma Primary Nurse

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- j. Respiratory Therapist
- k. ED Tech

**Outer Core Team Members**

- f. Trauma APN/Trauma Coordinator
- g. Radiographer
- h. Chaplain
- i. Students/Interns
- j. Patient Registration Representative



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## Appendix A

### Rotation of the Trauma Team Leader Responsibility

In an effort to ensure adequate exposure of the ED and Surgery house staff to the role of conducting an appropriate and efficient trauma resuscitation the role of Trauma Team Leader will be assigned based on the following guidelines. At any time the Trauma Surgery Attending or in his/her absence the ED Attending may assume this role and is ultimately responsible for the conduct of the resuscitation.

- Level 1 Activations - The Trauma Team Leader will be the Senior Surgery Resident
- Level 2 Activations – The Trauma Team Leader role will be rotated based on the day of the week.
  - The day of the week will rotate at 7 am and run 24 hours to the following 7am.
  - Even Number Days – The Trauma Team Leader will be the Emergency Department Senior Resident
  - Odd Number Days – The Trauma Team Leader will be the Surgery Department Senior Resident
- Level 3 Activations – The Trauma Team Leader will be the Emergency Department Senior Resident

In circumstances where the Emergency Department Senior Resident is the Trauma Team Leader, this role can be joint with the Airway Physician Role and conducted from the head of the bed.

Reviewed May 2015

Reviewed August 2016