

DEPARTMENT: ED, Lab, Registration, Radiology, Respiratory	POLICY TITLE: Trauma Team Activation
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EFFECTIVE DATE: 05/2016	REFERENCE NUMBER: 780-013

PURPOSE:

To establish standards and guidelines for care and management of trauma patients and to establish roles for team members assigned to the Trauma Team. The Trauma Team provides care in an organized, systematic manner by coordinating the efforts of a multi-disciplinary team. It addresses the physical, psychosocial and spiritual needs of the trauma patient and their family.

POLICY:

Departments will assign Trauma Team responsibility to their staff members on a shift basis. Team members will be mobilized per Trauma Activation Criteria and individual patient requirements. The membership of the Trauma Team is a **fluid process** which is dependent upon the needs of the patient. The table below lists the minimum expectation for team member response based on level of team activation.

Team Member	Level One	Level Two	Level Three
Emergency Medicine Physician	X	X	X
Emergency Medicine Mid-Level	<i>Responds on all team activations as available - <u>does not</u> replace ED Physician</i>		
Trauma Surgeon	X	X (within 30 minutes from arrival time)	
General Surgery Resident	<i>Responds on Level 1 and 2 activations as available. See responsibilities for detail</i>		
Trauma Mid-Level	<i>Responds on Level 1 and 2 activations as available. See responsibilities for detail</i>		
Anesthesiologist	X		
ED Nurse #1	X	X	X
ED Nurse #2	X	X	X
ED Nurse Recorder	X		
ED Technician	X	X	
Radiology Technologist	X	X	X
CT Technologist	X	X	X
Respiratory Therapist	X	X	
Phlebotomist	X	X	X
Registration Specialist	X	X	X
OR Team Member	X		
Security Officer	X	X	X
Trauma Services Personnel	X		

- Composition of the team is a fluid process and based on the needs of the patient when the team is activated. Response of team members is expected for at least the first 15 minutes of all team activations.
- The nursing supervisor and chaplain will be activated as necessary at the direction of the ED Nurse in Charge.
- Additional personnel and physician specialists from the Emergency Department or other hospital departments may be consulted or requested as patient condition dictates.

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- d. Deterioration in patient condition with decreasing GCS/RTS, vital signs or other significant findings should initiate immediate consultation with the Trauma Services physician on call.
- e. The Trauma Team should be activated for each and every trauma patient meeting activation criteria, even when multiple patients are presenting at the same time. For example, if two activations are presenting to the department at the same time, then the team should be paged two times. Paging the team for each patient will give each team member responding a better idea of potential resources needed if there are multiple patients.
- f. The blood bank maintains a trauma pager within their department and monitors all activations. When a Level One activation is paged, the blood bank will be responsible for having two units of the appropriate blue card blood in the cooler and ready to go if the ED should call for it.
- g. Patients presenting to the ED with a mechanism of injury meeting activation criteria that occurred greater than 24 hours prior to arrival do not meet activation criteria unless they are unstable at the time of presentation.
- h. For patients not meeting activation criteria but needing admission or further evaluation of an injury, the ED physician will notify the trauma surgeon or appropriate specialist for a trauma consult.
- i. For injured patients being transferred to the facility, the trauma team should be activated according to the established team activation criteria and the reason for transfer to the hospital. Regardless of activation status, the trauma flow sheet should be used for all transfers.
- j. In the event that the ED Physician is involved in the care of another emergent patient, the Trauma Surgeon is in house 24/7 and can be activated to assist in the care of any incoming trauma patient.

PROCEDURE:

1. Upon identification of arrival of a patient meeting Trauma Activation criteria, the Nurse in Charge and/or designee should activate the appropriate trauma response level.

The Nurse in Charge or designee should instruct the Unit Secretary to active the Trauma Team group pager by dialing (214) 314-1672. The following information should be entered into the pager:

- Level of Activation
- Approximate age and sex of patient
- Mechanism of injury (ex. MVC at 45 mph)
- Identified injuries and or chief complaint (ex. neck pain, femur fracture)
- Vital signs if available
- ETA (estimated time of arrival)

2. The Nurse in Charge or designee will announce over the internal ED radio system, "Trauma Level ___ to room ___, ETA ___ minutes."
3. Additional physicians/consultants will be paged to care for the trauma patient at the direction of the Nurse in Charge, Emergency Department Physician, and or Trauma Surgeon.

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Trauma Activation Criteria

Level One: Physiologic Signs of Risk to Life or Limb

With adequate pre-hospital notification, the trauma surgeon should be available prior to patient arrival of the patient and at minimum within 15 minutes of notification. All other team members are expected to be at the bedside upon patient arrival.

- a. Trauma with unstable VS:
 - Hypotension
 - Age 0 to 9: Systolic BP less than $70 + 2x \text{ age}$
 - Age 10 to 64: Systolic BP < 90
 - Age ≥ 65 : Systolic BP < 100
 - Tachycardia
 - Age < 65 : HR > 130
 - Age ≥ 65 : HR > 120
 - RR < 10 or > 29
 - GCS < 13
- b. Airway compromise or intervention. (Ex: intubation, needle decompression)
- c. Penetrating wound to the head, neck, chest, abdomen, groin, or extremity proximal to elbow or knee.
- d. Traumatic amputation proximal to wrist or ankle.
- e. Extremity trauma with absent pulse.
- f. Profuse uncontrolled bleeding.
- g. CPR as a result of trauma.
- h. Any trauma patient in the ED deteriorating to the above criteria.
- i. Incoming transfers to facility with unstable vital signs, as defined above, or receiving blood transfusion to maintain vital signs.
- j. Physician discretion.

Level Two: High Likelihood of Admission

The Emergency Department Physician will evaluate and initiate stabilization of the patient. The Trauma Surgeon will ensure evaluation of the patient within 30 minutes of patient arrival. The evaluation can be performed by the General Surgery Resident or Mid-level provider as deemed appropriate by the Trauma Surgeon on duty as long as communication with the trauma surgeon is documented. Disposition decision should be made within 3 hours of patient arrival. The following criteria, especially those based on mechanism of injury, are included for consideration of risk for injury only and do not indicate a definite need for admission:

- a. MVC > 55 mph.
- b. MVC with major damage
- c. Complete or partial ejection from vehicle.
- d. Open or unstable pelvic fracture
- e. Acute traumatic paralysis
- f. Flail chest
- g. Open or depressed skull fracture
- h. Crushed, degloved, or mangled extremity.

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- i. Femur fracture or two or more long bone fractures (excludes tib-fib or radius-ulna fractures on the same extremity)
- j. Blunt abdominal injury with firm or distended abdomen or with seatbelt sign.
- k. Falls ≥ 20 feet (one story = 10 feet) in adults or > 10 feet or 2-3 times height in children
- l. Motorcycle or ATV Crash ≥ 20 mph or separation of bike and rider
- m. Auto vs pedestrian/bicycle thrown, run over, or with significant impact (≥ 15 mph)
- n. Any patient age ≥ 65 with any MVC mechanism or fall. Excludes fall from standing unless meeting other activation criteria.
- o. Burns $> 20\%$ TBSA or airway combined with traumatic mechanism.

Level Three: Low Potential for Admission

The Emergency Department Physician will evaluate and initiate stabilization of the patient. The following criteria, especially those based on mechanism of injury, are included for consideration of risk for injury only and do not indicate a definite need for admission. Disposition decision should be made within 3 hours of patient arrival. If admission is warranted, the Trauma Surgeon will ensure evaluation of the patient within 45 minutes of notification. The evaluation can be performed by the Trauma Surgery Resident or Mid-level provider as deemed appropriate by the Trauma Surgeon on duty as long as communication with the trauma surgeon is documented:

- a. MVC ≥ 45 mph and ≤ 55 mph
- b. MVC Rollover and/or intrusion
- c. Death of occupant in same vehicle
- d. High-energy dissipation or rapid decelerating incidents from striking fixed object with momentum and blast/explosion to head, chest, neck, or abdomen
- e. Ground level fall with evidence of head strike in the presence of blood thinners
- f. Hanging
- g. Drowning with potential traumatic mechanism

**Consider elevation of activation level for patients age ≥ 65 with traumatic mechanism except ground level fall.

**Consider elevation of activation level for pregnant trauma patients of ≥ 20 weeks.

Roles and Responsibilities of Trauma Team Members:

Emergency Department Physician

- 1. Manages pre-hospital care via medical control as necessary.
- 2. Directs and manages patient care upon arrival in the emergency department, including resuscitation and evaluation and primary and secondary assessment survey, in absence of the Trauma Surgeon.
- 3. Performs airway evaluation and emergency intervention, in conjunction with the Trauma Surgeon, if present.
- 4. Verbally communicates findings/interventions/orders to Nurse Recorder.
- 5. Consults Trauma Surgeon or specialists as needed.
- 6. Maintains direct responsibility for patient care until relinquished to the trauma surgeon/specialist.

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7. Coordinates admission/transfer of the patient when the trauma surgeon or other specialist is not consulted to see the patient. Goal: two hours to disposition.
8. Note: The ED mid-level, when available will respond and assist with evaluation and ongoing management of the patient at the direction of the ED Physician. The mid-level is not a substitution for the ED Physician.

Trauma Surgeon

1. Present in the Emergency Department within 15 minutes of patient arrival for Level One Activations.
2. Ensures evaluation of the Level Two trauma patient within 30 minutes of trauma team activation. The evaluation can be performed by the Trauma Surgery Resident or Mid-level provider as deemed appropriate by the Trauma Surgeon on duty as long as communication with the trauma surgeon is documented.
3. In conjunction with the Emergency Department Physician, directs initial evaluation, diagnosis, and treatment.
4. Coordinates ongoing diagnostics and transition to the operating room, critical care unit, radiology, potential transfer, etc.
5. Consults necessary specialists.
6. Maintains responsibility for patient care throughout evaluation/admission/transfer, or relinquishes care to an appropriate specialist.
7. Note: The Trauma Surgery mid-level provider and/or Surgery Resident when available will respond for Level One activations with the Trauma Surgeon and assist with evaluation and ongoing care at the direction of the Trauma Surgeon.

Anesthesiologist

1. In house 24/7.
2. Activated by OR staff for all Level One Activations.
3. Assists with surgical cases, airway issues, and vascular access as determined by the Trauma Surgeon and/or ED Physician.
4. Ensures anesthesia is ready for emergent transfers to OR.

Emergency Department Nurse in Charge

1. Activates appropriate Trauma Level response in conjunction with Emergency Department Physician.
2. Assigns patient to treatment room, Emergency Department Nurse #1 and #2, Emergency Department Nurse Recorder, and Emergency Department Technician as patient condition and flow of department necessitates. Reassigns patient load of trauma team members as necessary. (ED Nurse #1 is normally the nurse assigned to the particular room in which the trauma patient will be cared for.)
3. Monitors and facilitates Trauma Team response.
4. Ensures Trauma Activation form is initiated and appropriately maintained by the Unit Secretary.
5. At the time of patient disposition, ensures documentation on the Trauma Activation Form is complete and includes any issues or concerns that need follow-up and referral to the Trauma PI process.
6. For all admitted patients, ensures a copy of the trauma flow sheet is made and attached to the patient charge paperwork.
7. Evaluates staffing needs in the Emergency Department.

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8. Assists with coordination of resources, communicates anticipated needs as appropriate, i.e. Critical Care, CT, OR, Radiology, Lab, Nursing Supervisor, Blood Bank, etc.
9. Discusses patient priority needs with the CT Technologist and Emergency Department Physician as necessary. In conjunction with the Emergency Department Physician, determines prioritization of CT exams ordered for the trauma patient compared to the pending CT exams on existing ED patients.
10. Ensures specialists are notified when requested, ensures documentation of notification time.
11. Facilitates patient transfer process as indicated.
12. Assists with contacting family and ensures support services are available for their needs.
13. Ensures organizational flow of the department throughout the trauma activation, ensuring that all other patients continue to be cared for in an efficient manner.

Emergency Department Nurse #1

(ED Nurse #1 is considered the patient's primary nurse. As primary nurse, this nurse will be the responsible party for ensuring all tasks related to documentation and coordination of care are completed appropriately and according to guidelines.)

1. Ensures pre-assigned room is maintained in state of readiness as dictated in room assignment responsibilities. This is checked at the beginning of each shift and as needed throughout the shift.
2. Prepares room for announced patient arrival.
3. With ED Tech, places patient on cardiac, blood pressure, and oxygen saturation monitor.
4. Assists Emergency Department Physician and Respiratory Therapist with airway as needed.
5. Assists ED Physician and Trauma Surgeon with primary and secondary assessment as indicated.
6. Establishes IV access as needed and assists physician with procedures as warranted.
7. Administers medications as ordered.
8. Communicates vital sign interventions and changes in patient status to Recorder as indicated.
9. Assumes primary care of patient once evaluation and resuscitation are complete and stabilized.
10. Transports patient to CT Scan, Special Procedures, Operating Room, and/or Critical Care.
11. Coordinates plan of care with primary care physician.
12. Responsible for patient documentation if Nurse Recorder or Nurse #2 not available. Copies chart of all admitted patients and places with charge paperwork. Documents on Trauma Team Activation form any concerns regarding the care of the trauma patient.
13. The Trauma Team Activation form will remain in the notebook at the Unit Secretary's desk and is retrieved by Trauma Services Personnel.

Emergency Department Nurse #2

1. Establishes IV access as indicated. Carries out fluid resuscitation as ordered.
2. Inserts OG Tube and Foley catheter as ordered. Assists physician with procedures as indicated.
3. Assists Nurse #1 with coordination of care, carries out instructions of Nurse #1.
4. Initiates and maintains patient documentation as directed by the ED Nurse #1, unless Nurse Recorder being utilized.
5. Returns to pre-trauma ED patient assignment as soon as trauma patient condition allows.

Emergency Department Nurse Recorder

1. Assigned as necessary by the Nurse in Charge on all Level One activations and only as warranted

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based on patient condition for other trauma team activations.

2. Ensures ongoing documentation of patient assessment, interventions and responses to treatment.
3. Ensures physician and ancillary response times are accurately documented.
4. Communicates needs or anticipated needs to the Nurse in Charge.
5. Performs any other tasks delegated by Nurse #1.
6. Returns to pre-trauma ED patient assignment as soon as trauma patient condition allows.

Trauma Services Personnel

1. When in-house, responds as available to ED for all Level One activations.
2. Assists with documentation and resuscitation as indicated.
3. Assists Nurse #1 and Nurse in Charge with coordination of patient care.
4. Assists in contacting family members, and provides family support as indicated.
5. Assists with facilitation of transfer arrangements and documentation as indicated.

Emergency Department Technician

1. Assists Nurse #1 to prepare room for announced patient arrival.
2. Ensures availability of supplies and sterile trays prior to patient arrival.
3. Assists Nurse #1 with application of monitoring devices and measurements of vital signs.
4. Performs CPR as indicated.
5. Assists with removal of patient clothing and completion of patient valuables list.
6. Assists with bedside x-rays, blood draws, and EKG.
7. Performs wound care, Foley catheter insertion, OG tube insertion, and applies dressings and splints as delegated by licensed personnel.
8. Obtains additional supplies as warranted.
9. Assists nurse with patient transport requirements.

Radiology Technologist

1. Responds to Emergency Department for all Trauma Activations. If current patient load does not allow for immediate response, calls the Emergency Department Nurse in Charge immediately with estimated time of arrival.
2. Ensures portable equipment and film cassettes are immediately available for films of the C-Spine, Chest, Abdomen, and Pelvis.
3. Processes films in a timely manner and notifies Emergency Department physician and or Trauma Surgeon when films are available for viewing.
4. Prints hard copies of films at the request of the ED physician, Trauma Surgeon, and or other specialists for viewing at the patient's bedside.
5. Once patient condition has been stabilized, assists with coordination of any additional films ordered.
6. Ensures prompt processing of film copies or disc for patient transfer to another facility.

Radiology Supervisor/Lead Technologist

1. Responds to the ED for all Trauma Activations. If current patient load does not allow for immediate response, calls the ED Nurse in Charge immediately with an estimated time of arrival.
2. Ensures that a Radiology Technologist is immediately (within 5 min) available to perform portable

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exams.

3. Assists with coordination of CT, plain films, sonogram, and special procedures for the trauma patient.

CT Technologist

1. Responds to the ED for all Trauma Activations.
2. If the CT technologist is performing an exam on a patient at the time of the Trauma Team Activation, the technologist will complete the exam that is in progress and not start another exam until checking with the Emergency Department for clarification of the trauma patient needs.
3. If the CT scanner will be occupied by a non-emergent patient for greater than 20 minutes after notification of Trauma activation, the CT technologist will notify the Radiology Supervisor and ED Nurse in Charge so that a plan and alternatives for diagnostic studies can be discussed.

Respiratory Therapist

1. Responds to the Emergency Department for all activations.
2. Ensures availability of airway supplies and portable ventilator.
3. Assist Emergency Department Physician and/or Trauma Surgeon with airway management.
4. Performs needed diagnostic studies and treatments as ordered by the physician.

Phlebotomist/Blood Bank

1. Responds to the Emergency Department for all Trauma Activations.
2. Coordinates with Emergency Department Nurse #1 the collection and labeling of blood specimens.
3. Ensures blood specimens are received by the laboratory within 5 minutes of collection. Notifies laboratory staff of pending arrival of STAT trauma patient specimen.
4. Blood Bank personnel monitor pager in department and will assist with coordination of STAT blood products on all Level One activations as necessary.

Registration Specialist

1. Responds immediately to the Emergency Department.
2. Ensures "Quick Patient Registration" is completed and returned to the Emergency Department as soon as possible to include labels and patient ID band.
3. Ensures that the appropriate ID band is placed on the patient as soon as possible.
4. If the patient ID is not available, then an "unidentified" chart will be completed to allow for patient registration and entry into the system. When positive ID of the patient has been received, edit the unidentified chart with the appropriate patient information and merge according to Patient Access Registration policy.

OR Team Member

1. Responds on all Level One activations.
2. Ensures the anesthesiologist is notified.
3. Remains in ED until patient is cleared by Trauma Surgeon that emergent admission to OR is not required.
4. Ensures OR staff and room is ready if emergent admission to the OR is required.

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Security Officer

1. Coordinates safe helicopter landing zone when indicated.
2. Assists with visitor/crowd control in the Emergency Department.
3. Assists with securing patient valuables.
4. Acts as a liaison with police or sheriff departments when warranted.

Support/Resources:

Emergency Department Secretary

1. Activates Trauma Team pagers immediately upon instruction by ED Nurse in Charge, and documents notification time on the Trauma Activation Form, ensuring QI information collection is begun and maintained in a timely and accurate manner.
2. Documents each return call, including who has responded and the response time.
3. If any member has not responded within 5 minutes, provides a second text or call and notification of the Nurse in Charge.
4. Documents arrival time of each member in Emergency Department.

Nursing Supervisor

1. Notified by the Nurse in Charge as needed.
2. At the request of the Nurse in Charge, assists with coordination of emergent admissions to the Critical Care Unit and or Operating Room, facilitation of transfer process if transferring to another facility and interfacing with family members.

Chaplain

1. Notified by Nurse in Charge as indicated, **with permission** from patient/next of kin.
2. At the request of the Nurse in Charge or Trauma Services personnel, assists with contacting family members.
3. Receives family on arrival and provides ongoing support and resources.
4. Acts as liaison between family and staff.
5. Notifies requested ministers as requested.