Status **Active** PolicyStat ID **15536057**

Origination	06/2001
Last Approved	04/2025
Effective	04/2025
Last Revised	04/2025
Next Review	04/2028

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Area	Trauma Surgical Critical Care
Applicability	Erlanger Health - Baroness

Trauma Alert Policy - Adult

A. Policy statement:

In order to provide an immediate systematic approach to the care of the critically injured adult trauma patient, we have developed a tiered trauma response based on the American College of Surgeons COT guidelines, to identify patients with actual or potential serious injuries based on physiological changes, altered anatomy, mechanism of injury and risk factors. This is done in an effort to maximize appropriate resource utilization while assuring timely, organized and appropriate care for the traumatically injured patient.

B. Who Should Read This Policy:

Trauma Services, Trauma Attending Physicians, Emergency Department Physicians, Emergency Department Nursing and Support Staff, Trauma Committee Members, Critical Care Nurse Clinician, Surgery House Staff, Operating Room, Anesthesiology, Radiology, Respiratory Therapy, Laboratory, Medical Affairs and Executive Management.

C. Purpose:

Purpose aligns with policy statement.

D. Definitions:

CCNC - Critical Care Nurse Clinician: Highly trained and experienced trauma nurse with 24/7 availability to respond within 5 minutes.

E. Trauma Team Activation (TTA) Criteria

1. Level 1 TTA Criteria

- GSW head, neck or torso
- GCS <9 with traumatic mechanism
- Confirmed Systolic BP <90 at any time
- New onset quadriplegia from trauma mechanism
- Intubated patients transferred from the scene of trauma
- Receiving blood transfusions or volume resuscitation to maintain vital signs
- Patients who have respiratory compromise **or** are in need of an emergent airway as follows:
    - Patients who have oxygen saturation < 90% on supplemental oxygen, rescue airway, or cricothyrotomy
    - 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 Discretion

2. Level 2 TTA Criteria

- Stab wounds to the head, neck and/or torso
- GSW proximal to the elbow or knee
- HR>130 SUSTAINED
- New onset hemiplegia or paraplegia from trauma mechanism
- Two or more humerus and/or femur fractures
- Signs of significant blunt torso trauma including, but not limited to:
    - Absent breath sounds, chest wall instability, or deformity
    - Pre-hospital chest decompression arriving from scene
- GCS 9-13 with mechanism attributed to trauma
- Crushed, degloved, mangled, amputated, or pulseless extremity proximal to the elbow or ankles
- Any patient with tourniquet in use for hemorrhage control
- Pregnancy >20 weeks with injury or significant MOI
- Trauma Transfers:
    - Intubated and hemodynamically stable patient or
    - Received blood product at outside facility and currently hemodynamically stable or
    - Injuries to two or more core body systems (head, thorax, abdomen, pelvis)

- > 60 Geriatric Trauma : HIGH ENERGY
    - Example: MVC, MCC< ATV with significant impact
    - Fall greater tan standing height

3. Level 3 TTA Criteria

- Fall from any height on anticoagulation medication with signs of head trauma AND GCS</= 14
- Fall > 20 feet with obvious signs of trauma
- Trauma with altered mental status
    - Amnesic to events
    - GCS 14
    - Positive LOC
- High suspicion of chest, abdominal, or pelvic injury including abdominal seat belt sign (linear abrasion and/or ecchymosis /contusion to lower abdomen)
- Diminished pulses in an extremity with signs of trauma
- High energy ejection and/or impacts >20 MPH
    - Rider thrown from motorized vehicle
    - Auto vs. pedestrian
- Transfers not meeting Level 1 or 2 activation criteria
- ≥ 60 Geriatric Trauma: LOW ENERGY mechanism of injury with SBP < 110 and/or HR > 100
    - Example: Fall from standing, wheelchair or bed
    - Does not meet found down policy
    - Has obvious signs of trauma

4. Additional Criteria Information

- Any traumatic burns should follow the activation criteria listed above
- The Trauma Attending or Emergency Medicine Attending may activate/downgrade/upgrade at their discretion
- If the CCNC (redshirt) feels a patient should be upgraded based on criteria, they will call either the Trauma Attending or Trauma Chief

F. Communication - Team Activation Process

In the event the pre-hospital information or initial examination (for cases that arrive without prior notification) indicates a need for a Trauma Alert, Emergency Department (ED)personnel should initiate the appropriate Trauma Team Activation. ED personnel responsible for monitoring EMS and MedComm Communications (ED charge nurse, ED clinical staff leader, ED patient flow coordinator, etc.) will utilize the TTA criteria to activate the most appropriate trauma team response, regardless of mode of access to system (air medical, paramedic/EMT ambulance, private vehicle, etc.).

1. LEVEL 1, 2 and 3 TTA Alerts:

- **Trauma BEH group - paging system is used to activate/notify the Trauma Team**
- **Alerts/pages for ALL levels of activation will contain the following information**:
    - Level of activation: Level 1, Level 2 or Level 3
    - Mechanism of Injury - (MVC, Fall, GSW, etc. (if penetrating state location of injury)
    - Age
    - Sex
    - Vital Signs - stable or unstable
    - Intubated - Yes/No
    - Estimated time of arrival (ETA) in minutes ("now" if patient is already in ED)
    - Mode of arrival - Air/Ground
    - Emergency Department room number
    - ED will overhead announce trauma patient arrival to the trauma bay for all levels of alert
- **Pregnant Trauma**
    - **Trauma OB group - used in the paging system if a pregnant trauma patient meets the level 1 or 2 criteria (includes Trauma Services, L&D, and NICU)**
        - OB Resident will call Maternal Fetal Medicine attending to notify of pregnant trauma patient
        - All pregnant patients greater than or equal to 24 weeks' gestation with trauma mechanism should receive OB consult and fetal monitoring
- **Trauma Chief Communications**
    - Notify Operating Room if applicable
    - Trauma Chief or Trauma Attending will notify the Pediatric Trauma Surgeon on duty should an emergency Cesarean become necessary
    - Will notify all applicable sub specialists

G. Trauma Team Response • Roles • Responsibilities

1. LEVEL 1 TRAUMA TEAM

a. PERSONNEL: The following personnel will be alerted and are required to respond

- Trauma Attending: Ultimate responsibility for initial evaluation and management and should be at bedside within 15 minutes of patient arrival to the ED.
- Designated Trauma Chief or Senior Resident (PGY 4 or above): Immediate response to lead pre-brief. Chief or Senior is the team leader: Facilitate EMS report, assist log rolling patient, assure FAST exam completed and calls out results, verify additional orders with EM resident, transport patient to CT/OR/IR if needed.
- Designated Trauma Junior Resident: Immediate response. Secondary assessment, check bilateral fem/ radial pulses, assess back of head, c-spine, back, rectal exam, chest, upper and lower extremities, abdomen, pelvis, groin, and perineal assessment.
- Emergency Department Attending Physician: Immediate response. Oversee airway management
- Emergency Department Resident: Immediate response. Hold c-spine/count/control move from EMS stretcher, call out airway, assist with airway management, breathing assessment. Assess head, midface, ears, oral nose, eyes, pupil assessment, and GCS. Cascade level 1 orders, and any additional orders requested by the trauma chief.
- Critical Care Nurse Clinician (CCNC): Immediate response. Primary CCNC Nurse. "All quiet", call out access, obtain immediate vital signs (manual BP if needed), cut off clothes, check radial pulse on BP cuff side, placement of additional IV/IO access, administer Massive Transfusion Protocol, call out meds/dosages, package patient and transport for CT/OR/IR. Remains as the primary RN until determination of post ED disposition.
- Emergency Department Nurse: Immediate response. Acts as scribe, other tasks as needed. May resume as primary RN if no traumatic injuries identified and Trauma defers patient disposition to the ED.
- Emergency Department Technician: Immediate response. Place patient on monitor, bag clothes/ belongings, label and walk blood samples to the lab.
- Emergency Radiology Technician: Complete chest x-rays and pelvis films if necessary.
- Respiratory Therapist: Immediate response. Connect patient to ventilator, draw and run ABG.
- Obstetrician-Gynecologist with any pregnancy greater than or equal to 20 weeks' gestation
- Maternal Fetal Medicine (MFM)/OB/GYN with unstable pregnant patient
- Optional Response:
    - Guest Representative and/or Chaplain
    - Blood Bank

- Operating Room
- Anesthesia
- Security
- Trauma Nurse Practitioner
- Students
- Patient Registration Representative

b. LEVEL 1 Labs, Radiology, Documentation

- **LEVEL 1 LABS/Trauma Panel:**
    - ISTAT EG7+ and ISTAT Chem8+
    - Fibrinogen
    - PT/PTT
    - Platelet Count
    - TEG (with platelet mapping if known intracranial hemorrhage)
    - Type and Screen
    - Serum Pregnancy test on all females of childbearing age
- **LEVEL 1 RADIOLOGY:**
    - Portable Chest X-Ray
    - AP Pelvis on all blunt level I with mechanism - if clinically indicated (Straight cath before x-ray if contrast already present)
    - CT Head, Cervical Spine, Thorax, Abdomen, and Pelvis as needed
        - For patients on anticoagulants with suspected head injury; CT of the head should be obtained immediately. Time to CT should not exceed 30 minutes from the patient's arrival to the Emergency Department
    - CTA per Blunt Cerebrovascular Injury PMG
    - Others as indicated/ordered
- **LEVEL 1 DOCUMENTATION**
    - The History and Physical form will be completed in EPIC by the trauma team.
    - The Trauma Narrator in Epic will be completed including Q5 minute vital signs until disposition is decided.Once disposition is determined patient can be changed to ICU vital signs or floor vital signs
        - ICU vital signs: every 15 minutes' x 4, then every 30 minutes x2, and then every hour, unless starting/titrating vasopressors or patient becomes unstable. If this occurs, vital signs should be every 5-15 minutes.
        - Floor vital signs: every 4 hours
- **LEVEL 1 ORDERS**
    - Emergency Medicine will cascade LEVEL 1 orders and enter any additional orders requested by the trauma chief or trauma surgeon.
- **LEVEL 1 CONSULTS**
    - Trauma Chief to notify and document any necessary consults.

2. LEVEL 2 TRAUMA TEAM

a. PERSONNEL: The following personnel will be alerted and are required to respond

- Trauma Attending: Ultimate responsibility for initial evaluation and management.
- Designated Trauma Chief or Senior Resident (PGY 4 or above): Immediate response. Lead pre-brief, team leader, facilitate EMS report, assist log rolling patient, assure FAST exam completed and call out results, verify additional orders with EM resident, transport patient to CT/OR/IR if needed.
- Designated Trauma Junior Resident: Immediate response. Secondary assessment, check bilateral fem/ radial pulses, assess back of head, c-spine, back, rectal exam, chest, upper and lower extremities, abdomen, pelvis, groin, and perineal assessment.
- Emergency Department Attending Physician: Immediate response. Oversee airway management.
- Emergency Department Resident: Immediate response. Hold c-spine/count/control move from EMS stretcher, call out airway, assist with airway management, breathing assessment. Assess head, midface, ears, oral nose, eyes, pupil assessment, and GCS. Cascade level 1 orders, and any additional orders requested by the trauma chief.
- Critical Care Nurse Clinician: Immediate response. Primary CCNC Nurse. "All quiet", call out access, obtain immediate vital signs (manual BP if needed), cut off clothes, check radial pulse on BP cuff side, placement of additional IV/IO access, administer Massive Transfusion Protocol, call out meds/dosages, package patient and transport for CT/OR/IR. Remains as the primary RN until determination of post ED disposition.
- Emergency Department Nurse: Immediate response. Acts as scribe for the initial resuscitation. May resume primary RN if post ED disposition anything other than Intensive Care Unit or if no traumatic injuries are identified.
- Emergency Department Technician: Immediate response. Place patient on monitor, bag clothes/ belongings, label and walk blood samples to the lab.
- Emergency Radiology Technician: Complete chest x-rays and pelvis films if necessary.
- Respiratory Therapist: Connect patient to ventilator, draw and run ABG.
- Obstetrics and gynecology with any pregnant patient greater than or equal to 20 weeks gestation (Mandatory Response)
  Maternal Fetal Medicine (MFM) with unstable pregnant patient (Mandatory Response).
- Optional Response:
  - Guest Representative and/or Chaplain
  - Blood Bank
  - Operating Room
  - Anesthesia
  - Security

- Trauma Nurse Practitioner
- Students
- Patient Registration Representative

b. LEVEL 2 Labs, Radiology, Documentation

- **LEVEL 2 LABS:**
    - ISTAT EG7+ and ISTATChem8+
    - PT/PTT
    - Platelet Count
    - Type and Screen
    - Serum Pregnancy test on all females of childbearing age
- **LEVEL 2 RADIOLOGY:**
    - Portable Chest X-Ray
    - AP Pelvis on all blunt level II with mechanism if clinically indicated (Straight cath before x ray if contrast already present)
    - CT Head, Cervical Spine, Thorax, Abdomen, and Pelvis as needed
        - For patients on anticoagulants with suspected head injury; CT of the head should be obtained immediately. Time to CT should not exceed 30 minutes from the patient's arrival to the Emergency Department
    - CTA per the Blunt Cerebrovascular Injury PMG
    - Other tests may include:
        - Electrocardiogram
        - FAST exam (unless deferred by physician)
        - Others as needed
- **LEVEL 2 DOCUMENTATION**
    - The History and Physical form will be completed in EPIC by the trauma team.
    - The Trauma Narrator in Epic will be completed including Q5 minute vital signs until disposition is decided.Once disposition is determined patient can be changed to ICU vital signs or floor vital signs
        - ICU vital signs: every 15 minutes' x 4, then every 30 minutes x2, and then every hour, unless starting/titrating vasopressors or patient becomes unstable. If this occurs, vital signs should be every 5-15 minutes.
        - Floor vital signs: every 4 hours
- **LEVEL 2 ORDERS**
    - Orders for LEVEL 2 activations will be placed by Emergency Medicine.
- **LEVEL 2 CONSULTS**
    - Trauma Chief to notify and document any necessary consults.

3. LEVEL 3 TRAUMA TEAM

a. PERSONNEL: The following personnel will be alerted to respond to the patient's bedside for evaluation and treatment immediately upon patient's arrival. The Emergency Department Physician should be at the bedside no more than 30 minutes after the patient's arrival:

- Emergency Department Physician: Ultimate responsibility for initial evaluation and management
- Emergency Department Resident: Immediate response for initial evaluation and management.
- Emergency Department Nurse: Immediate response, primary RN for patient
- Critical Care Nurse Clinician: Respond to assist in initial evaluation and management. Assists in facilitating any additional trauma response if needed. Expedites care and assures adherence to trauma protocols.
- Emergency Department Technician Immediate response. Place patient on monitor, bag clothes/ belongings, label and walk blood samples to the lab.
- Emergency Radiology: Complete portable x-rays as indicated/ordered.

b. LEVEL 3 Labs, Radiology, Documentation

- **LEVEL 3 LABS:**
    - I-stat EG7+ and Chem8+
    - PT/PTT
    - Platelet Count
    - Type & Screen
    - Urine Pregnancy test on all females of childbearing age
- **LEVEL 3 RADIOLOGY:**
    - Portable Chest X-Ray
    - Computerized Tomography Head, Neck, Thorax, Abdomen, and Pelvis as needed
        - For patients on anticoagulants with suspected head injury; CT of the head should be obtained immediately. Time to CT should not exceed 30 minutes from the patient's arrival to the Emergency Department
    - CTA per the Blunt Cerebrovascular Injury PMG
    - Others tests may include:
        - Electrocardiogram
        - FAST exam can be considered (Level three trauma activations with a

positive FAST should be upgraded to level two statuses due to the possible need for immediate surgical intervention)

- **LEVEL 3 DOCUMENTATION**
    - The History and Physical form will be completed in Epic documented in Epic; a documented consult will be completed as appropriate along with standard Emergency Department documentation.
    - The Trauma Narrator in Epic will be completed including Q5 minute vital signs until disposition is decided.Once disposition is determined patient can be changed to ICU vital signs or floor vital signs
        - ICU vital signs: every 15 minutes' x 4, then every 30 minutes x2, and then every hour, unless starting/titrating vasopressors or patient becomes unstable. If this occurs, vital signs should be every 5-15 minutes.
        - Floor vital signs: every 4 hours
- **LEVEL 3 CONSULTS**
    - Level 3 activations **with** trauma consult:
        - Trauma chief will ensure documentation of all additional necessary consults

4. TRAUMA EVALUATION/CONSULTS

Trauma consults/evaluations are obtained on patients who do not meet any Trauma Alert criteria, but do have injuries which require Trauma Service admission or further evaluation by a trauma surgeon. Trauma evaluation can occur anywhere in the hospital.

a. PERSONNEL: The following personnel will be notified

- Trauma Attending (not required for initial response)
- Designated Trauma Chief or Resident (PGY 4 or above)
- Additional support personnel and/or Critical Care Nurse Clinician optional – by request of Trauma Chief/Resident
    - The Emergency Department Physician will call the Trauma Chief, who will respond to the Emergency Department or designate someone to respond, to evaluate the patient within 1 hour.
    - If the patient deteriorates after arrival to the Emergency Department, the status may be changed at any time.

b. TRAUMA EVALUATION/CONSULT Labs, Radiology, Documentation

- **TRAUMA CONSULT - LABS**
    - I-stat EG7+ and Chem8+
    - PT/PTT
    - Platelet Count
    - Urine Pregnancy test on all females of childbearing age
- **TRAUMA CONSULT - RADIOLOGY**
    - Portable Chest X-Ray
    - CT Head, Cervical Spine, Thorax, Abdomen, and Pelvis as needed
        - For patients on anticoagulants with suspected head injury; CT of the head should be obtained immediately. Time to CT should not exceed 30 minutes from the patient's arrival to the Emergency Department
    - Other may include:
        - Electrocardiogram as needed
        - Others as ordered
- **TRAUMA CONSULT - DOCUMENTATION**
    - The History and Physical will be documented in the Epic, a documented consult will be completed as appropriate along with standard Emergency Department documentation.

- Trauma chief will ensure documentation of all additional necessary consults

References:

https://www.facs.org/quality-programs/trauma/vrc/resources. Resources for Optimal care of the Injured Patient: 2014.

Approval Signatures

Step Description	Approver	Date
COO	John Winks: Executive Vice President-COO	04/2025
Medical Executive Committee	Alisa Bolt: Medical Staff Svcs Manager	04/2025
Trauma Services Committee Approval	Stephanie Spain: Trauma Prgm Mgr Adult	01/2025
	Stephanie Spain: Trauma Prgm Mgr Adult	01/2025

Applicability

Erlanger Health - Baroness