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Contact	Tabitha Mills: Trauma Prgm Mgr Pedi
Area	Pediatric Trauma
Applicability	Tennessee Hospitals ONLY

Pediatric Trauma Activation Policy

1. Policy Statement

To provide a systematic approach to the care of the injured pediatric trauma patient. A tiered trauma response has been developed as recommended by the American College of Surgeons.

2. Who Should Read This Policy?

Pediatric Trauma Services, Pediatric Trauma Surgeons, Pediatric Emergency Medicine Physicians, Pediatric Emergency Department Nurses, Pediatric Emergency Department Paramedics, Pediatric Trauma Committee Members, Critical Care Nurse Clinicians, Pediatric Operating Room Staff, Adult Operating Room Staff, Anesthesiology, Laboratory, Radiology, Pediatric House Supervisor and Respiratory Therapy.

3. Purpose

To have traumatically injured pediatric patients receive the appropriate resources for care.

4. Definitions

N/A

5. The Policy

I. **A Level One Pediatric Trauma Alert** will be initiated by the Pediatric Emergency Medicine Physician, Pediatric Trauma Surgeon, Pediatric Emergency Room RN, or the Pediatric Emergency Room Clinical Staff Leader. This will occur within 15 minutes prior to the patient's arrival who meet one or more of the following criteria; or who after arrival are found to meet one or more of the following criteria after evaluation by the Emergency Department Physician

or Pediatric Trauma Surgeon:

- Confirmed age specific hypotension:
  Neonate (0-28 days) systolic <60
  Infants (1-12 months) systolic <70
  Children (1-10 years) systolic < 70 + (2 X's age in years)
  Children (>10 years) systolic <90
- Gunshot wounds or penetrating injury to the neck, chest, or abdomen.
- GCS < 9 with mechanism attributed to trauma.
- Any patients who requires ongoing blood transfusion.
- Patients intubated in the field and directly transported to the trauma center.
- Patients who have respiratory compromise or are in need of an emergent airway. Patients who have an 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 department attending physician discretion.
- Flail chest
- Combination of burn and trauma
- Two or more proximal long bone fractures
- Crushed, degloved, mangled, amputated, or pulseless extremity **proximal** to the elbow or ankle.
- New onset limb neurologic deficit secondary to spinal cord trauma. {New onset quadriplegia from trauma mechanism}
- Open and/or depressed skull fracture

Level One Trauma Activation Alert Notification/Trauma Response:
The following personnel are alerted and required to respond:

- Pediatric Trauma Attending
- Designated Trauma Chief Resident or Senior Resident (PGY 4 or above)
- Designated Trauma Junior Resident
- Pediatric Emergency Medicine Physician
- Critical Care Nurse Clinician
- Pediatric RN or CCP
- Pediatric Emergency Clinical Staff Leader
- Pediatric Emergency Room Patient Care Technician
- Pediatric Radiology Technician
- Pediatric Respiratory Therapy

The following personnel will be alerted and may respond:

- Chaplin
- Blood Bank
- Operating Room
- Anesthesia
- Security
- Registration
- Child Life Specialist

Documentation, Labs, and Radiology

- The History and Physical form will be completed in Epic by the trauma team.
- The Trauma Narrator in Epic will be completed including every 5 minute vital signs until disposition is determined, once disposition is determined patient can be changed to ICU vital signs or Floor vital signs.
    - ICU Vital Signs: every 15 minutes' x 4, every 30 minutes' x 2, and then every hour unless starting or titrating vasopressors or patient becomes unstable.
    - Floor Vital Signs: every 4 hours.
- A Level One Trauma Panel will be collected to include:
  Istat Chem-8 and G4 (including lactate)
  Lipase
  CBC
  CMP
  PT/PTT
  Type and Screen
  Serum Pregnancy for females of childbearing age
  Others as ordered.
- Radiology (as determined by trauma attending and/or emergency physician)
  Portable chest x-ray and/or pelvic x-ray
  CT Head
  CT Cervical Spine
  CT Thorax, Abdomen, Pelvis with contrast unless contraindicated
  Others as ordered.
- Adjuncts:
  Electrocardiogram
  FAST Exam per physician discretion
  Others as needed.

II. **A Level Two Pediatric Trauma Alert** will be initiated by the Pediatric Emergency Medicine Physician, Pediatric Trauma Surgeon, Pediatric Emergency Room RN, or the Pediatric Emergency Room Clinical Staff Leader. This will occur within 15 minutes prior to the arrival of trauma patients who do not meet Level One Trauma Alert Criteria but do meet one or more of

the following criteria: or who after arrival are found to meet one or more of the following criteria after examination by the Pediatric Emergency Medicine Physician or Pediatric Trauma Surgeon.

- High risk automobile crash with evidence of thoracic or abdominal trauma.
  Ejection from automobile
  Death in the same passenger compartment
  Extrication time >20 minutes
  Major auto deformity >20 inches and/or >12 inches' intrusion passenger compartment
  >40 mph at the time of impact
  Rollovers with evidence of trauma
- Auto-pedestrian/auto bicycle injury with significant (>20 mph) impact with evidence of trauma.
- Motorcycle/ATV crash > 20 mph or with separation of the rider from vehicle with evidence of trauma.
- Burns >10% BSA (2^{nd} or 3^{rd} degree) or inhalation injury – consider stabilization and/or intubation with rapid transfer to burn center.
- Fall 3 times the height of the child.
- Signs of significant blunt torso trauma including, but not limited to:
  Absent breath sounds
  Chest wall instability
  Suspected hemothorax/pneumothorax requiring pre-hospital chest decompression.
- GCS 9-13 with mechanism attributed to trauma.
- Hemodynamically stable, intubated patients that are transferred from another facility.
- New onset hemiplegia or paraplegia from trauma mechanism.
- GSW proximal to the elbow or knee.

Level Two Trauma Activation Alert Notification/Trauma Response:
The following personnel will be alerted and required to respond:

- Pediatric Trauma Attending
- Designated Trauma Chief Resident or Senior Resident (PGY 4)
- Designated Trauma Junior Resident
- Pediatric Emergency Medicine Physician
- Critical Care Nurse Clinician
- Pediatric Emergency Room RN or CCP
- Pediatric Emergency Room Patient Care Technician
- Pediatric Emergency Clinical Staff Leader
- Pediatric Radiology Technician

- Pediatric Respiratory Therapist

The following personnel will be alerted and may respond on request:

- Chaplin
- Blood Bank
- Operating Room
- Anesthesia
- Security
- Registration
- Child Life Specialist

Documentation, Labs, and Radiology

- The History and Physical form will be completed in Epic by the trauma team.
- The Trauma Narrator in Epic will be completed including every 5 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, every 30 minutes' x 2, then every hour unless starting / titrating vasopressors or patient becomes unstable.
    - Floor vital signs every 4 hours
- A Level 2 Trauma Panel will be collected to include:
  Istat Chem-8 and G4 (including lactate)
  PT/PTT
  Platelet Count
  Type and Screen
  Serum Pregnancy test on all females of childbearing age**.**
  Others as ordered.
- Radiology (as determined by trauma attending and/or emergency physician)
  Portable chest x-ray and/or pelvic x-ray
  CT Head
  CT Cervical Spine
  CT Thorax, Abdomen, Pelvis with contrast unless contraindicated.
  Others as ordered.
- Adjuncts:
  Electrocardiogram
  Fast Exam per physician discretion
  Others as ordered.

  *Orders for Level II activations will be entered by Emergency Department Physicians.

III. **A Level Three Pediatric Trauma Alert** will be initiated by the Pediatric Emergency Medicine Physician, Pediatric Emergency Room RN, or Pediatric Emergency Room Clinical Staff Leader within 15 minutes prior to the arrival of trauma patients who do not meet the Level One or Level Two Alert criteria but do meet one or more of the following criteria: or who after arrival are found to meet one or more of the following criteria after examination by the Emergency Department Physician:

- Fall from any height on anticoagulant medication with signs of head trauma but not meeting Level One or Two Criteria.
- Stab, BB, or pellet gun injuries to soft tissue without neurovascular injury.
- Any 2 of the following-Traumatic injury resulting in: amnesia to event, +LOC, GCS 14, altered mental status
- Questionable chest and/or abdominal injury from trauma.
- Abdominal seatbelt sign.
- Diminished pulses in an extremity with signs of trauma.
- Trauma transfers not meeting Level One or Level Two criteria.
- Animal bites involving the head, neck, and proximal to the elbow and knee.
- Physician Discretion.

*If the patients clinical condition should deteriorate or change in the Pediatric Emergency Physician may upgrade to a Level One or Level Two Trauma Alert.
Suspected non-accidental trauma: must be admitted to the appropriate surgical service.

Level Three Trauma Activation and Response: the following personnel will be alerted to respond to the patient's bedside for evaluation and treatment immediately upon patient's arrival. The pediatric Emergency Medicine Physician should be at bedside no later than 30 minutes after patient arrival:

- Pediatric Emergency Medicine Physician
- Pediatric Emergency Medicine Resident
- Pediatric Emergency RN or CCP

Documentation, Labs, and Radiology

- Standard Emergency Department Documentation will be completed in Epic.
- The Trauma Narrator will be completed in Epic. Vital signs will be completed every 15 minutes' x 4 then every hour until disposition 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, every 30 minutes' x 2, then every hour unless titrating vasopressors or patient becomes unstable.
    - Floor vital signs every four hours.

- A level Three Trauma Panel will be determined and ordered per Pediatric Emergency Medicine Physician discretion.
- Radiology Testing will be at the discretion of the Pediatric Emergency Medicine Physician.

IV. **Trauma Consult** will be obtained on patients who do not meet either Level One or Level Two Trauma Activation Criteria, but who after initial physician evaluation have injuries which require trauma service admission or further evaluation by a Pediatric Trauma Surgeon. A trauma consult may occur anywhere in the hospital.

Trauma Consult Response: the following personnel will be alerted:

- Trauma Attending (not required for initial response)
- Designated Pediatric Trauma Resident (PGY 4 or above)
- Critical Care Nurse Clinician (if requested by above)

Documentation, Labs, and Radiology:

- The History and Physical Form will be completed in Epic by the Trauma Team.
- Any additional testing will be ordered by the Pediatric Trauma Team as needed.

V. **Notification:**

In the event the prehospital information or initial examination (arrivals without prior notification) indicates a need for a Trauma Activation, the Pediatric RN or CCP should initiate the appropriate level of activation.

All activations will be paged out by EROC and the pediatric surgeon will receive a follow up call to verify incoming patient.

All pages should include the following information:

- Level of Pediatric Trauma Activation
  Level 1, Level 2, or Level 3
- Mechanism of Injury (Fall, MVC, GSW, penetrating should state location of injury)
- Age
- Sex
- Vital Signs
- Intubated (yes/no)
- Estimated Time of Arrival (ETA in minutes) and Now (if patient already in ER)
- Mode of Arrival: Ground /Air /POV
- Pediatric Emergency Room / Trauma Bay Number

References:

Approval Signatures

Step Description	Approver	Date
CNE	Rachel Harris: Chief Nursing Executive	03/2024
Clinical Effectiveness	Carrie Burton: Executive Asst-Chief	03/2024
Pediatric Trauma Committee	Tabitha Mills: Pediatric Trauma Program Mgr	01/2024
	Tabitha Mills: Pediatric Trauma Program Mgr	01/2024

Applicability

Erlanger Health - Baroness, Erlanger Health - Bledsoe, Erlanger Health - Children's, Erlanger Health - East, Erlanger Health - North, Erlanger Health - System