Trauma Team Activation and Notification

SCOPE

This policy is applicable to the Emergency Department and Trauma Response Team personnel at the University of Kansas Hospital.

PURPOSE

To provide criteria for activation of the trauma resuscitation team at the appropriate response level for any patient who meets defined criteria**.**

POLICY

Patient Classification for Trauma Team Activation and Consult: When utilizing the patient classification tool for trauma activation and consult triage, a patient may have clinical criteria that appear in different levels, select the HIGHEST level where applicable criteria are found. . (Example – fall greater than 20 ft with SBP < 90 would be a type one unstable because of blood pressure, not a Type 2 because of mechanism).

Notification of the Trauma Team: Upon radio notification that The University of Kansas Hospital will be receiving a trauma patient or upon patient arrival if patient self-presents, the Trauma Team will be notified based on one of two pathways.

> **Activation:** The Triage RN will notify the page operator to initiate Type 1 trauma activation (specify stable or unstable) or Type 2 trauma activation, if the patient meets those specific criteria. Activation of the trauma team is an independent nursing function.
> **Consult:** The Emergency Medicine Physician or designee will notify the page operator to initiate a Trauma Consult after initial patient evaluation, if the patient meets those specific criteria. A Trauma Consult is an independent physician function.

For patients meeting trauma activation criteria that have concurrent cutaneous burns and/or inhalation injury (suspected or confirmed), the Burn Team must also be activated.

TYPE 1-UNSTABLE (Shock)

A. Traumatic Cardiac Arrest
B. Transfer patients from other hospitals receiving blood to maintain vital signs
C. Adult shock
    1. CONFIRMED Blood pressure < 90 at any time (pre-hospital or trauma bay), even if subsequent BP is within normal limits. If SBP < 90 after arrival, upgrade patient to Type 1-unstable.
    2. Consider based on mechanism- elderly (age > 65) with SBP < 110
D. Pediatric shock
    1. Confirmed Systolic BP
        a. Birth- 6 months < 60 mmHg
        b. 7 months-5 years < 70 mmHg
        c. 6-12 years < 80 mmHg
        d. 13-18 years <90 mmHg
    2. Pediatric heart rate

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a. Birth – 6 months > 160 bpm
b. 7 months – 5 years >140 bpm
c. 6-12 years > 120 bpm
d. 13-18 years >120bmp

3. Capillary refill > 2 seconds

TYPE 1-STABLE

A. SBP consistently > 90 mmHg or within age specific acceptable norms for pediatrics **AND**
   1. Respiratory compromise secondary to trauma:
      a. Obstruction (may be manifested as retractions in pediatric patient)
      b. Stridor
      c. Prehospital intubation
      d. Adult respiratory rate <10 or >29
      e. Infant < 1 year respiratory rate < 20 or > 60 or grunting respirations
   2. Gunshot wounds to the head, neck, chest, or abdomen or extremities proximal to the elbow/knee
   3. GCS <9 with mechanism attributed to trauma. For pediatric patients, AVPU: responsive to pain only or unresponsive.
   4. Any other injured patient by ED physician's discretion

TYPE 2 (must be STABLE with SBP consistently > 90 mmHg and any of the following)

A. Mechanism Criteria
   1. High Risk Auto Crash
      a. Patient ejection from a vehicle (partial or complete)
      b. Motorcycle or ATV crash
      c. Signs of, or report of, improper restraint in the pediatric MVC patient
      d. Child pedestrian or cyclist struck by motor vehicle.
   2. Fall
      a. Adults >20 feet (one story = 10 ft),
      b. Children > 10 feet or over 3 times the height of the child
   3. Burns (Burn Team must also be activated)
      a. Found down in a house fire or unknown mechanism
      b. High Voltage Electrical Injury (>1000 volts)
      c. Explosion
      d. Combined burn with other trauma mechanism (eg fall, MVC)
   4. Drowning/asphyxiation
      a. Adult and Pediatric

B. Physiologic Criteria
   1. GCS between 9 and 13
   2. Pregnant trauma patients >16 wks gestation meeting trauma activation criteria

C. Anatomic Criteria
   1. Stab, cut or puncture injuries to head, neck, torso, and extremities proximal to elbow and knee
   2. Chest wall instability or deformity (e.g. flail chest)
   3. Crushed, degloved, mangled or pulseless extremity
   4. Open and depressed skull fractures

5. Two or more proximal long bone fractures
6. Open long bone fractures
7. Pelvic injury
8. Paralysis
9. Amputation proximal to wrist or ankle
10. Any other injured patient by ED physician's discretion

TRAUMA CONSULT

A. Mechanism of Injury Criteria
   1. Death in the same vehicle
   2. Rollover MVC
   3. Extrication time >20 minutes
   4. High speed motor vehicle crash
   5. Adult pedestrian or cyclist struck by motor vehicle

B. Patient Criteria
   1. All injured patients transferred to KUH from another facility or transported directly to the KUH ED with any of the following:
      a. Suspected vascular injury to the thorax or extremities
      b. Injuries to the face/head, chest, abdomen, or pelvis (excluding isolated hip fracture) requiring admission for observation or treatment of injury
      c. Long bone injury proximal to the knee or elbow requiring admission for observation or treatment
      d. Any mechanism with positive loss of consciousness requiring admission
      e. Elderly trauma patients age > 65 and trauma mechanism requiring admission
      f. Patients with a history of daily anticoagulation use and trauma mechanism
      g. Any injuries necessitating trauma consult in the judgment of the ED physician

Upgrade: A trauma consult or Type 2 Activation may be upgraded to a higher level of activation at any time at the discretion of the Emergency Department or Trauma Attending Staff.

Downgrade: A trauma activation may be downgraded to a lower level of activation at the discretion of the Emergency Department or Trauma Attending Staff when upon initial evaluation if it is clear that the patient failed to meet activation criteria.

A. The trauma activation and consult alpha-numeric message will include the following information:

1. Type of Trauma, 1 or 2 or consult
2. If Type 1, Stable or Unstable

Note: In the event of an upgrade from a Type 2 to a Type 1 trauma, the notification must include Stable or Unstable.

3. Number of patients if more than one
4. Age of Patient, age under 18 should be activated as a pediatric trauma
5. Gender of Patient
6. Mechanism of injury

7. Estimated time of arrival
8. Method of Transport (mode of arrival- ground, air or private vehicle)
9. Transferring facility if a referral patient
10. Trauma Attending Surgeon call back number for Type 1 trauma activations

B. The trauma activation and consult alpha-numeric message is sent by the page operator to the following:

Type 1 and type 2 trauma team activations:

1. **Attending Trauma Surgeon:** Must arrive at patient bedside within 15 minutes of patient arrival for Type 1 activations and to Type 2 trauma activations as defined by the American College of Surgeons.
2. **Emergency Medicine Physician:** Responds immediately to trauma bay upon notification.
3. **Senior Level Resident:** Responds immediately to trauma bay upon notification.
4. **Post Graduate Year 1, 2 or 3:** Responds immediately to trauma bay upon notification- as per weekly assignment by chief.
5. **Trauma Nurse Practitioner:** Responds immediately to trauma bay upon notification, when residents are unavailable.
6. **Trauma Nurse 1:** Responds immediately to trauma bay upon notification.
7. **Trauma Nurse 2:** Responds immediately to trauma bay upon notification.
8. **Trauma Resources Nurse (SICU):** Responds immediately to trauma bay upon notification.
9. **ED Supervisor:** responds when available
10. **Respiratory Therapist:** Responds immediately to trauma bay upon notification.
11. **Radiology technician:** Responds immediately to trauma bay upon notification. Leaves portable machine outside double doors to bay until called.
12. **ED Tech:** Responds immediately to trauma bay upon notification.
13. **Blood Bank:** Responds only to Type 1 Unstable activations.
14. **Trauma Case Manager:** Responds to Trauma activations when available.
15. **PICU Resident/Hospitalist:** Responds for patients < 18 years of age.

16. **Chaplain:** Responds weekdays routinely. Off shifts as needed.

17. **OR (Unit Coordinator):** Non-responder, information only.

18. **Nursing Administrative Coordinator (NAC):** Non-responder, information only.

19. **SICU Coordinator:** Non-responder, information only.

20. **Anesthesia Resident:** Responds only to Type 1 Pediatric Activations
21. **Anesthesia Attending:** Responds only to Type 1 Pediatric Activations

22. **PICU UC/Charge RN:** Responds when available for patients <18 years of age.

Trauma Consults:

1. Senior Level Resident: Responds to patient's bedside in ED within 30 minutes of notification.

2. Trauma Consults are paged to the same team as Type 1 and 2 Activations above. Everyone but the Senior Surgery Resident is information only, non-responders.

REFERENCES

Committee on Trauma American College of Surgeons: Resources for Optimal Care of the Injured Patient: 2014.
ATLS Student Course Manual, 9th Edition
CDC Field Triage Guidelines
O'Neil, K. et al. Pediatric Triage: A 2-Tier, 5-Level System in the United States. Pediatric Emergency Care. Vol 19, No 4, August 2003.
Williams, D. et al. Trauma Activation: are we making the right call? A 3 year experience at a Level 1 pediatric trauma center. Journal of Pediatric Surgery. (2011) 46, 1985-1991.

REVIEWED BY

Burn Peer Review Committee
Burn Attending
Trauma Attending
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SUPPORTING DOCUMENTS: There are no supporting documents associated with this policy