POLLICY:

Englewood Hospital Trauma Guidelines

Englewood Hospital is not a trauma center and recognizes that some major trauma victims who present here may be better served by transferring them to a trauma center. Patients who are not stable for transfer will be stabilized here to the best of our ability. Decision to transfer will be made on clinical grounds only.

On Page 1 is a list of trauma centers in New Jersey.

On page 2 is a guideline algorithm that can be referred to.

On pages 3, 4 and 5 are the current State EMS recommendations regarding triage of adult and pediatric trauma victims by pre-hospital personnel.

Level I Trauma Centers
- UMDNJ-University Hospital, Newark
- Robert Wood Johnson University Hospital, New Brunswick
- Cooper Hospital/University Medical Center, Camden

Level II Trauma Centers
- Hackensack University Medical Center, Hackensack
- St. Joseph's Hospital and Medical Center, Paterson
- Jersey City Medical Center, Jersey City
- Morristown Memorial Hospital, Morristown
- Capital Health System - Fuld Campus, Trenton
- Jersey Shore Medical Center, Neptune
- Atlantic City Medical Center, Atlantic City
Englewood Hospital Trauma Guidelines

Trauma Guidelines
(Guidelines are for reference only, and represent one suggested approach which may be changed as required by the clinician.)

Major Trauma
Mechanism of injury examples:
- Ejection from automobile
- Falls from > 20 feet or > 10 feet in children
- Rollover MVA victim
- High speed MVA or death of another occupant
- Pedestrian runover
- Severe motorcycle/bicycle accidents
- Proximal gunshot / knife or penetrating injuries

Types of injuries, examples:
- Any trauma with abnormal vital signs
- Unstable pelvic fractures
- Traumatic spinal injuries
- Head injuries with altered mental status or depressed skull fx
- Flail chest with other injuries
- Traumatic hemothorax
- Intra-abdominal injuries
- Multiple fractures of proximal bones
- Proximal amputations
- Penetrating proximal / trunk injuries

Trauma code will be called for all major trauma at the discretion of the ED attending. Surgical subspecialists will be contacted as needed.

Unable to stabilize or unfit for transfer. Treat as required, stabilize and then transfer later to trauma center if needed.

Stabilize and either admit or transfer to trauma center if appropriate.
STATEMENT OF INTENT:

The following trauma triage guidelines are provided to assist in determining the disposition of adult trauma patients. These guidelines are intended to be utilized in conjunction with clinical judgment. It is understood that these are guidelines only and are to be used whenever possible in communication with a base station physician.

STEP 1: PHYSIOLOGY

- Glasgow Coma Scale +/-12 or AVPU = P or U
- Systolic BP < 90
- Pulse < 60/min or > 130/min
- Respiration < 10/min or > 29/min

To TRAUMA CENTER with ALS if available

STEP II: ANATOMY

- Penetrating Injuries (ex., Gunshot Wounds, Stab Wounds) to Head, Neck, Torso, Extremities (above the elbow and knee)
- Flail Chest
- Fractures - More Than One Fracture Involving Humerus and/or Femur
- Pelvic Fractures
- Paralysis or Evidence of a Spinal Cord Injury
- Amputation Above Wrist or Ankle
- Burns When Combined with Other Major Injuries
- High Voltage Electrical Injury

To TRAUMA CENTER with ALS if available
STEP III: MECHANISM OF INJURY (Required Consult with Medical Command, when Available)

- Ejection from Motor Vehicle
- Extrication > 20 min with an injury
- Falls > 20 feet
- Unrestrained Passenger in Vehicle Roll Over
- Pedestrian, Motorcyclist or Pedalcyclist Thrown or Run Over

To TRAUMA CENTER with ALS if available

STEP 1: PHYSIOLOGY (any one of the parameters listed below)

- AVPU = responsive to voice, pain, or unresponsive
- Evidence of poor perfusion (skin pallor, cool extremities, weak distal pulses, cyanosis/mottling, etc.)
- Heart rate:
  - child < 5 yr. old: < 80/min or > 180/min
  - child > 6 yr. old: < 60/min or > 160/min
- Respiratory rate > 60, or respiratory distress, or apnea
- Capillary refill > 2 seconds (evaluated on warm body part)

To TRAUMA CENTER with ALS if available
### STEP II: ANATOMY (any one present)

- Penetrating injuries (ex. gunshot/stab wounds) to the head, neck, torso or extremities (above the elbow and knee)
- Flail chest
- Difficulty or inability to maintain a patent airway
- Fractures - more than one involving the humerus and/or femur
- Pelvic fractures
- Paralysis or evidence of spinal cord injury
- Amputation above the wrist or ankle
- Burns when combined with other major injuries
- Seat belt mark on the torso

**YES**
To TRAUMA CENTER with ALS if available

**NO**

### STEP III: MECHANISM OF INJURY (any one present)

- Ejection from motor vehicle
- Falls > 3x patient's height
- Extrication time > 20 minutes with an injury
- High voltage electrical injury
- Unrestrained passenger in vehicle roll over
- Pedestrian, motorcyclist or pedal cyclist thrown or run over
- Front seat passenger with deployment of air bag (same side)

**YES**
To TRAUMA CENTER with ALS if available

**NO**

**TO LOCAL HOSPITAL**
When a patient with traumatic injuries arrives in the ED the triage nurse or charge nurse will triage the patient as per usual ED triage protocol.

**Trauma patients may be categorized as follows:**

- Category I patients are severely injured and require emergent resuscitation.
- Category II patients present with multiple injuries, change of mental status, or a severe mechanism of injury. These patients have a high potential for clinical deterioration.
- Category III patients have non-life-threatening injuries such as fractures, lacerations, etc. that require stat specialty consultation.
- Category IV patients have minor injuries that do not require stat specialty consultation.
- Patients may change categories if their condition changes or, as diagnostic information becomes available.

A trauma code will be paged through the hospital operator for all Category I and II patients at the discretion of the ED physician. For all other trauma patients, a trauma consult will be called at discretion of the ED attending. Surgical subspecialists will be consulted as needed.

**TRAUMA CODE GROUP NOTIFICATION:**

**Report directly to ED (goal 5 minute response time).**

- Surgical resident on call (if unable to report to ED call extension 3760 to speak to the ED attending)
- General surgeon on call (if not in-house or unable to report to the ED call extension 3760 to speak to the ED attending)
- ED Radiology x-ray technician
- ED Respiratory therapist
- Nursing supervisor

Additionally the following will be included in the group notification, and will be paged directly as determined by the ED attending:

- Radiologist on call
- Anesthesiologist on call
- OR supervisor
- Blood bank
- Lab
- ED chief
- ED PCD
MANAGEMENT OF TRAUMA PATIENTS

- **Category I** patients are severely injured (Glasgow coma score < 13, shock, respiratory distress, etc.) and should be examined by the ED attending on arrival. Simultaneously, resuscitation and evaluation should be started. The ED attending should order all immediately needed diagnostic tests, blood products and therapies. If blood is needed acutely a special uncross matched blood form should be filled out and type specific or type “O” blood can be transfused using a blood warmer. Bloodless patients should be identified. Upon patient arrival the surgical resident, on-call general surgeon, and anesthesiologist should be stat-paged to the ED. The surgical team in conjunction with the ED attending should then continue to care for the patient.
  - If the case involves chest trauma with possible aortic or cardiac involvement, the cardiothoracic team should be stat-paged to the ED.
  - Other services and specialists such as vascular surgery, neurosurgery, orthopedics, anesthesiology, pediatrics, respiratory therapy, etc. can also be stat-paged to the ED as appropriate.
  - Any person who requires admission to the ICU will be considered to be Category I.

- **Category II** consists of patients with multiple trauma or severe mechanism of injury who are initially stable but have a high probability of serious injury. The surgical resident and surgeon on call should be paged to the ED and evaluate and treat the patient in the ED.

- **Category III** patients are those who have multiple injuries, but are clinically stable with a low probability of serious injury. In these cases the ED physician will evaluate and treat the patient. The surgical resident may be paged in consultation and should respond to the ED. Attending surgeon involvement will depend on the individual case. The appropriate specialists will be called and evaluate the patient in the ED.

- **Category IV** patients are those with minor injuries. The ED physician will evaluate and treat these patients and call the appropriate specialists as needed.

**ON CALL**

- A schedule of the surgeons on call will be kept in the ED and written daily on the ED on-call board. 0800 hours is the start and end of the call day.
**TRANSFER OF CARE**

- For category I and II trauma patients, the ED physician directs the initial assessment and resuscitation of the trauma patient. The ED attending has ultimate responsibility until the surgeon on call arrives. When the surgical attending arrives a definite transition of leadership should follow as appropriate.
- Transfer of care from the on-call surgeon to another surgical attending can occur later as appropriate. In these circumstances, the on-call surgical attending is responsible for caring for the patient until there has been a definitive transfer or care and direct communication between the surgical attendings.

**PATIENT REQUEST**

While a patient’s request for a specific doctor should be followed, delays in contacting this physician should not be allowed to jeopardize patient care and the on-call doctor should be called as needed and appropriate. All category I and II patients should be initially referred to the general surgeon on call to expedite care and prevent delays. Transfer of care from the on-call surgeon to a private attending can occur later as appropriate.

**PEDIATRIC TRAUMA**

- Pediatric surgery covers pediatric trauma below the age of 9, however a pediatric surgeon may be called for consult if requested by the general surgeon.

**PATIENT DISPOSITION**

- At the time of disposition either the emergency physician or general surgeon will reassess the patient’s triage category. The category may stay the same or change as appropriate.

- Category I and II patients should be stabilized and transferred to the trauma referral center as early as possible, following the procedure outlined above. Other trauma patients may require transfer for sub-specialty services. The trauma surgeon at the transfer facility may request further studies prior to transport. Clinically unstable or actively hemorrhaging patients should be stabilized prior to transfer.

- If the trauma patient requires admission to Englewood Hospital the following guidelines will apply: Category I and II patients who cannot be transferred will be admitted to general surgery until appropriate for transfer to the trauma center. Category III and IV patients have had all relevant injuries identified and there is no concern for significant chest, abdominal, brain or vascular injury that will require surgical intervention. Category III and IV patients who require admission, and do not require transfer to the trauma center should be admitted to the appropriate surgical subspecialist or the hospitalist service.
PATIENT TRANSFER

- Adult and Pediatric trauma patients that need to be transferred to a trauma center can be transferred to Hackensack Hospital and Medical Center. Patients who require treatment at a burn center should be transferred to St. Barnabas Hospital.

TRAUMA REGISTRY

- A trauma registry will be kept for all Category I and II patients in accordance with State and Local Regulations.

SOURCE:

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