PEDS TRAUMA: TRAUMA GUIDELINES

GUIDELINES FOR LOAD AND GO TRAUMA TRANSPORTS

INDICATIONS

- Uncorrectable airway obstruction
- Tension pneumothorax
- Pericardial tamponade
- Penetrating chest wounds with signs of shock
- Hemothorax with signs of shock
- Head trauma with unilaterally dilated pupils
- Head trauma with rapidly deteriorating condition
- Unconsciousness

KEY POINTS

- A trauma victim is considered to be a pediatric patient if they are LESS THAN 16 years old.
- Once the patient is determined to be an actual or potential major trauma / multiple system patient, personnel on scene and / or medical control must quickly determine the appropriate course of action including:
    1. Requesting aeromedical evacuation from scene. See AEROMEDICAL TRANSPORT PROCEDURE.
    2. Ground transportation directly to an appropriate facility.
- Major trauma patients are to be transported to the **closest Pediatric Trauma Center**.
- Contact the receiving hospital for all major trauma or critical patients.
- Cover open wounds, burns, and eviscerations.
- With the exception of airway control, initiate ALS enroute when transporting major trauma patients.
- If the EMT is unable to access patient airway and ventilate, transport to the closest facility for airway stabilization.
- The on scene time for major trauma patients should not exceed 10 minutes without a documented, acceptable reason for the delay.
- All major trauma patients should receive oxygen administration, an IV(s), and cardiac monitoring.
- Provide a documented reason if an intervention could not be performed.

Mass Casualty Incidents (MCI)

- Upon arrival at a MCI, the first arriving unit should notify their dispatch of the need to implement the mass casualty plan, call for additional resources, establish a safe staging area, and estimate the total number of victims.
- Each EMS service has a pre-defined coordinating hospital based on their county's mass casualty plan. It is the responsibility of the responding jurisdiction to notify their appropriate coordinating hospital as soon as possible, giving a brief description of the incident and the estimated number of victims. The coordinating hospital will then notify the receiving hospitals of the MCI. The transportation officer should maintain a constant contact with the coordinating hospital until the scene has been cleared of salvageable victims.

PEDS TRAUMA: TRAUMA GUIDELINES-Cont.

Emergency medical service personnel shall use the following criteria, consistent with their certification, to evaluate whether an injured person qualifies as an adult trauma victim or pediatric trauma victim, in conjunction with the definition of trauma according to the State of Ohio Trauma Triage Guidelines.

A Pediatric Trauma Victim is a person < 16 years of age exhibiting one or more of the following physiologic or anatomic conditions:

Physiologic conditions	**Anatomic conditions**

• Glasgow Coma Scale < 13;
• Loss of consciousness > 5 minutes;
• Deterioration in level of consciousness at the scene or during transport;
• Failure to localize to pain;
• Evidence of poor perfusion, or evidence of respiratory distress or failure.
  ▪ Pale mottled skin
  ▪ Delayed capillary refill
  ▪ Tachycardia (per age)
  ▪ Requires ETT
  ▪ Requires relief of tension pneumothorax
	• Penetrating trauma to the head, neck, or torso;
	• Significant, penetrating trauma to extremities proximal to the knee or elbow with evidence of neurovascular compromise;
	• Injuries to the head, neck, or torso where the following physical findings are present;
	• Visible crush injury;
	• Abdominal tenderness, distention, or seatbelt sign;
	  ○ Pelvic fracture;
	  ○ Flail chest;
	• Injuries to the extremities where the following physical findings are present:
	  ○ Amputations proximal to the wrist or ankle;
	  ○ Visible crush injury:
	  ○ Fractures of two or more proximal long bones;
	  ○ Evidence of neurovascular compromise.
	• Signs or symptoms of spinal cord injury;
	• 2nd or 3rd Degree burns > 10% total BSA, or other significant burns involving the face, feet, hands, genitalia, or airway.

Field Trauma Triage Criteria: Mechanism of Injury (MOI) & Special Considerations

Co-Morbid Diseases and Special Considerations:	**Mechanisms of Injury (MOI)**
• Age < 5 • Cardiac disease • Respiratory disease • Diabetes • Immunosuppression • Morbid obesity • Pregnancy • Substance abuse / intoxication • Liver disease • Renal disease • Bleeding disorder / anticoagulation	• High speed MVC • Ejection from vehicle • Vehicle rollover • Death in same passenger compartment • Extrication time > 20 minutes • Falls greater than 10 feet or 2 times height of child • Vehicle versus bicycle / pedestrian • Pedestrian **struck**, thrown or run over • Motorcycle crash > 20 mph with separation of rider from bike • **Fall from any height, including standing, with signs of traumatic brain injury**

PEDS TRAUMA: TRAUMA GUIDELINES-Cont.

PEARLS and KEY POINTS

Exceptions to Mandatory Transport to a Trauma Center:

- Emergency Medical Service personnel shall transport a trauma victim directly to an adult or pediatric trauma center that is qualified to provide appropriate adult or pediatric care, unless one or more of the following exceptions apply:

  1. It is medically necessary to transport the victim to another hospital for initial assessment and stabilization before transfer to an adult or pediatric trauma center;
  2. It is unsafe or medically inappropriate to transport the victim directly to an adult or pediatric trauma center due to adverse weather or ground conditions or excessive transport time;
  3. Transporting the victim to an adult or pediatric trauma center would cause a shortage of local emergency medical service resources;
  4. No appropriate adult or pediatric trauma center is able to receive and provide adult or pediatric trauma care to the trauma victim without undue delay;
  5. Before transport of a patient begins, the patient requests to be taken to a particular hospital that is not a trauma center or, if the patient is less than eighteen years of age or is not able to communicate, such a request is made by an adult member of the patient's family or a legal representative of the patient.

Glascow Coma Scale

INFANT *Birth to age 4*	**Eye Opening** *Adult*	**ADULT** *Age 4 to*
4 Spontaneously		Spontaneously 4
3 To speech		To command 3
2 To pain		To pain 2
1 No response		No Response 1
	Best Verbal Response	
5 Coos, babbles		Oriented 5
4 Irritable cries		Confused 4
3 Cries to pain		Inappropriate words 3
2 Moans, grunts		Incomprehensible 2
1 No response		No response 1
	Best Motor Response	
6 Spontaneous		Obeys commands 6
5 Localizes pain		Localizes pain 5
4 Withdraws from pain		Withdraws from pain 4
3 Flexion (decorticate)		Flexion (decorticate) 3
2 Extension (decerebrate)		Extension (decerebrate) 2
1 No response		No response 1
___ = TOTAL	GCS $\leq$ 8? Intubate!	TOTAL = ___

PEDS TRAUMA: TRAUMA GUIDELINES-Cont.

GLASCOW COMA SCALE			
EYE OPENING	Spontaneous	Spontaneous	4
	To voice	To voice	3
	To pain	To pain	2
	None	None	1
VERBAL RESPONSE			
	Oriented	Coos, babbles	5
	Confused	Irritable cry, inconsolable	4
	Inappropriate	Cries to pain,	3
	Garbled speech	Moans to pain	2
	None	None	1
MOTOR RESPONSE			
	Obeys commands	Normal movements	6
	Localizes pain	Withdraws to touch	5
	Withdraws to pain	Withdraws to pain	4
	Flexion	Flexion	3
	Extension	Extension	2
	Flaccid	Flaccid	1

PEDIATRIC NORMAL VITAL SIGNS			
AGE	**HEART RATE**	**RESPIRATIONS**	**SYSTOLIC BLOOD PRESSURE**
Preterm, 1 kg	120-160	30-60	36-58
Preterm 1 kg	120-160	30-60	42-66
Preterm 2 kg	120-160	30-60	50-72
Newborn	126-160	30-60	60-70
Up to 1 yo	100-140	30-60	70-80
1-3 yo	100-140	20-40	76-90
4-6 yo	80-120	20-30	80-100
7-9 yo	80-120	16-24	84-110
10-12 yo	60-100	16-20	90-120
13-14 yo	60-90	16-20	90-120
15 + yo	60-90	14-20	90-130

Blood pressure is a late and unreliable indicator of shock in children
SBP Formula: 70 + 2(age in years)