

Trauma

- There are over 60 million injuries and 150,000 deaths each year in the US.
- Trauma is the 4th leading cause of death in the United States.
- Trauma is the leading cause of death for individuals age 1-44.
- Among all individuals involved in an MVA, 75% will be injured.
- There are 2 million brain injuries and 10,000 spinal cord injuries per year.
- 70% of MVA deaths occur in rural areas.

% of pts who will have these injuries

Head	70-80%
Neck/spine	5-10%
Chest	35%
Upper extremities	29%
Abdomen, pelvis	15%
Lower extremities	40%

There are 3 Mortality Peaks

1. Immediately, due to massive head injury or exsanguination.
2. Hours after injury, usually due to exsanguination or cardiopulmonary compromise
3. Days to weeks later, usually due to severe head injury, sepsis, or multiple organ failure

Primary Survey

Airway	Look, listen, feel for air movement. Look for chest wall movement. Look for direct injury to airway, presence of edema, foreign bodies, secretions. Listen for stridor. Can the patient protect his airway.	Immobilize C-spine. Chin lift, jaw thrust, suction. Intubate if: apnea, GCS < 8, upper airway obstruction, or respiratory distress Emergency cricothyrotomy if: • Oral/nasal attempts fail • Penetrating neck not amenable to oral/nasal approach • Significant maxillofacial trauma
Breathing	Assess chest for defects, instability, asymmetry. Assess respiratory rate/depth character of respirations. Listen for breath sounds	Oxygenate with FiO ₂ > 85%. Ventilate with bag-valve-mask Seal an open pneumothorax. Emergent chest tube for tension pneumo or large hemothorax.
Circulation	Assess pulses, HR, rhythm, blood pressure, heart sounds, neck veins, skin color, temp. Sources of bleeding: chest, abd, open extremity wounds.	Direct pressure to external bleed. Insert two large bore IV catheters Rapidly infuse Lactated Ringers. Start blood if hypotension does not respond to crystalloids.
Disability (Neuro)	What is patient's response? A Alert V responds to Verbal P responds to Pain U Unresponsive Check motor ability/strength. Assess pupils size, equality, reaction to light.	Protect from secondary injury: avoid hypothermia, hypoxemia, hypercapnea, hypotension, hypoglycemia, volume excess. Urgent neuro consult for signs of increased ICP or SCI.
Exposure	Remove all of pt's clothing. Check front, back, all orifices, haired areas Assess for hypothermia.	Presume SCI in all patients. Detect easily missed injuries. Rewarm with blankets, air devices, reflective shield, warm IV fluids.
Adjuncts	ABG's, or pulse oximeter ECG monitor, DPL, FAST (focused assessment with sonography in trauma), X-rays of chest, pelvis, C spine.	Foley: keep UO 0.5-1.0 mL/kg/hr No foley if evidence of urethral injury (blood at meatus, ecchymosis of scrotum or labia) NG tube to empty the stomach. Initial lab work.

History	A Allergies M Medications (especially beta blockers and warfarin) P Past History, Illness, Surgery, Pregnancies L Last Meal, Last Menstrual period E Events leading up to admission Environment surrounding event.
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