Initial Assessment Of the Critically Injured Trauma Patient
Objectives

- At the end of this lecture, the participant will be able to:
  - Identify the components of the primary, secondary and tertiary assessment.
  - Discuss interventions for the primary and secondary assessment.
Initial Assessment

- Divided into three assessment phases
  - Primary
  - Secondary
  - Tertiary

- Adherence to standard and transmission-based precautions
Primary Assessment

A Airway (with simultaneous cervical spine stabilization and/or immobilization)
B Breathing
C Circulation
D Disability (neurologic status)
Secondary Assessment

E Expose/Environmental control
F Full set of vital signs, Focused adjuncts and Family presence
G Give comfort measures
H History and Head-to-toe assessment
I Inspect posterior surfaces
Airway

- Maintain cervical spine stabilization and/or immobilization.

- Any patient whose findings suggest spinal injury should be stabilized or remain immobilized.
Airway

Assessment

- Vocalization
- Tongue obstruction
- Loose teeth or foreign objects
- Bleeding
- Vomitus or secretions
- Edema
**Airway Obstructed**

- Position the patient
- Stabilize the cervical spine
- Open and clear the airway
- Insert airway
- Consider endotracheal intubation
- Stop and intervene before proceeding
Breathing

- **History**
  - Blunt or penetrating
  - Steering wheel
  - Other forces

- **Assess**
  - Spontaneous breathing
  - Chest rise and fall
  - Skin color
Breathing

- Assess (continued)
  - Respiratory rate
  - Chest wall integrity
  - Accessory and/or abdominal muscle use
  - Bilateral breath sounds
  - Jugular veins/trachea
Breathing: Effective

- Administer oxygen via a nonrebreather mask at a flow rate sufficient to keep the reservoir bag inflated (12 to 15 L/min or more)
Breathing: Ineffective

- Altered mental status
- Cyanosis
- Asymmetrical chest wall expansion
- Accessory and/or abdominal muscle use
- Sucking chest wounds
- Paradoxical movement of chest wall
- Tracheal shift from midline
Breathing: Ineffective

- Inspect for distended external jugular veins
- Auscultate breath sounds to determine if absent or diminished
- Administer oxygen via nonrebreather mask or with a bag-valve-mask or assist with intubation
Breathing Absent

- Ventilate patient with bag-valve-mask with attached oxygen reservoir
- Assist with endotracheal intubation
- Stop and intervene if there are any life-threatening injuries
Circulation

- **Palpate**
  - Pulse for quality and rate
  - Central pulse (carotid or femoral)
  - Skin for temperature and moisture

- **Inspect**
  - Skin for color
  - Any obvious signs of bleeding
Circulation

- Auscultate blood pressure if other team members are available
- If not, proceed with primary assessment and auscultate blood pressure at beginning of secondary assessment
Circulation: Effective

- If the circulation is effective, proceed with assessment
Circulation: Ineffective

- Tachycardia
- Altered level of consciousness
- Uncontrolled external bleeding
- Distended or abnormally flat external jugular veins
- Pale, cool, diaphoretic skin
- Distant heart sounds
Circulation: Effective or Ineffective

- Control any uncontrolled external bleeding
- Cannulate 2 veins with large bore (14- or 16-gauge) catheters and initiate infusions of lactated Ringer’s solution
- Obtain blood sample for typing
- Administer blood as prescribed
Circulation: Absent

- Begin cardiopulmonary resuscitation (CPR)
- Initiate advanced life support (ALS)
- Administer blood as prescribed
- Prepare for and assist with emergency thoracotomy
- Prepare for definitive operative care
Disability

- Determine level of consciousness using the AVPU mnemonic
  - A Alert
  - V Verbal stimuli
  - P Painful stimuli
  - U Unresponsive

- Brief neurologic assessment
Disability

- If decreased level of consciousness is present, conduct further investigation in secondary assessment
- Monitor ABCs for the patient who is not alert or verbal
- If the patient demonstrates signs of herniation or neurologic deterioration, consider hyperventilation
Secondary Assessment

Identify ALL injuries

E  Expose patient
   Environmental control

F  Full set of vital signs
   Focused adjuncts
   Family presence

G  Give comfort measures
Secondary Assessment

- **History**
  - Prehospital information
    - M Mechanism of injury
    - I Injuries
    - V Vital signs
    - T Treatment
  - Patient-generated information
  - Past medical history (PMH)
Secondary Assessment

- Head-To-Toe Assessment
Secondary Assessment

- General appearance
- Head and face
- Neck
- Chest

- Abdomen and flanks
- Pelvis and perineum
- Extremities
- Posterior surfaces
Secondary Assessment

- Focused Survey
- Pain Management
- Tetanus Prophylaxis
Glasgow Coma Scale

Areas of Response

- Eye opening
- Best verbal response
- Best motor response
Nursing Diagnoses

- Ineffective airway clearance
- Aspiration risk
- Impaired gas exchange
- Fluid volume deficit
- Decreased cardiac output
Nursing Diagnoses

- Altered tissue perfusion
- Hypothermia
- Pain
- Anxiety and fear
- Powerlessness
Tertiary Evaluation and Ongoing Assessment

- Airway patency
- Breathing effectiveness
- Arterial pH, PaO$_2$, PaCO$_2$
- Oxygen saturation (SpO$_2$ or SaO$_2$)
- Level of consciousness
- Skin color, temperature, moisture
- Pulse rate and quality
- Blood pressure
- Urinary output
Summary

A Airway (with simultaneous cervical spine stabilization and/or immobilization)
B Breathing
C Circulation
D Disability (neurologic status)
E Expose/Environmental control
F Full set of vital signs/Focused Adjuncts/Family presence
G Give comfort measures
H History and Head-to-Toe Assessment
I Inspect posterior surfaces