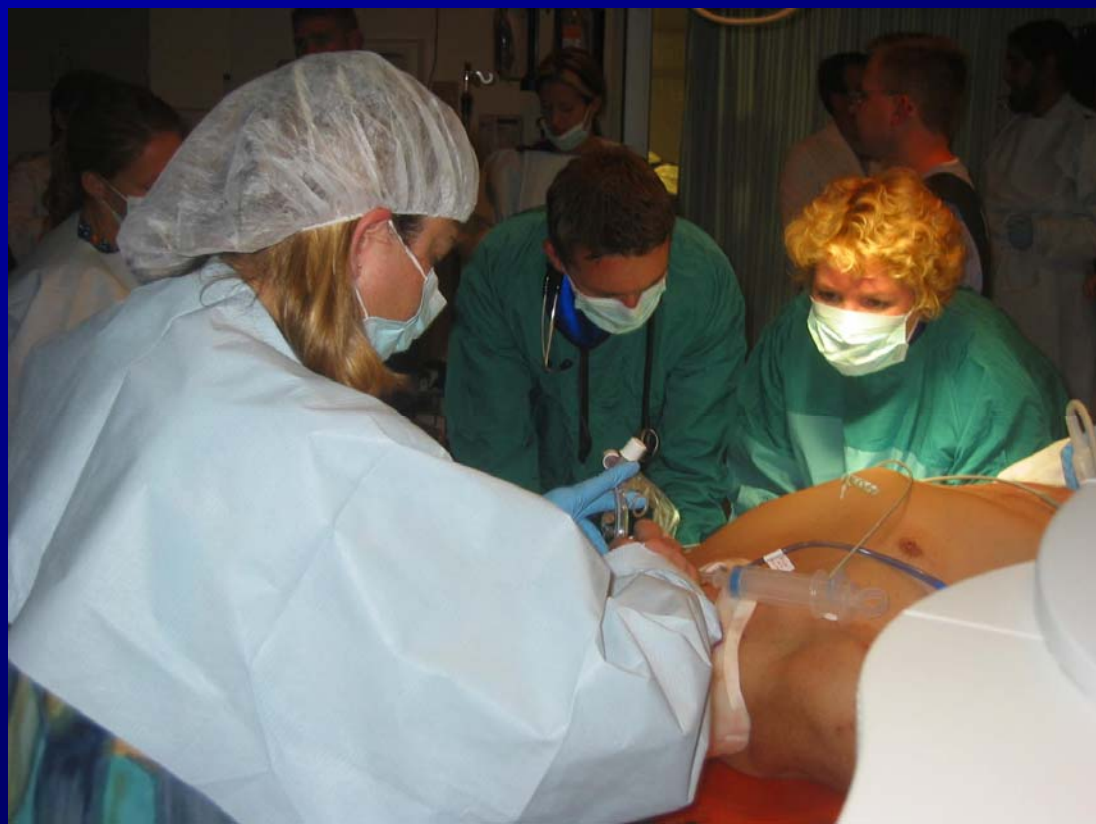
Initial Assessment Of the Critically Injured Trauma Patient

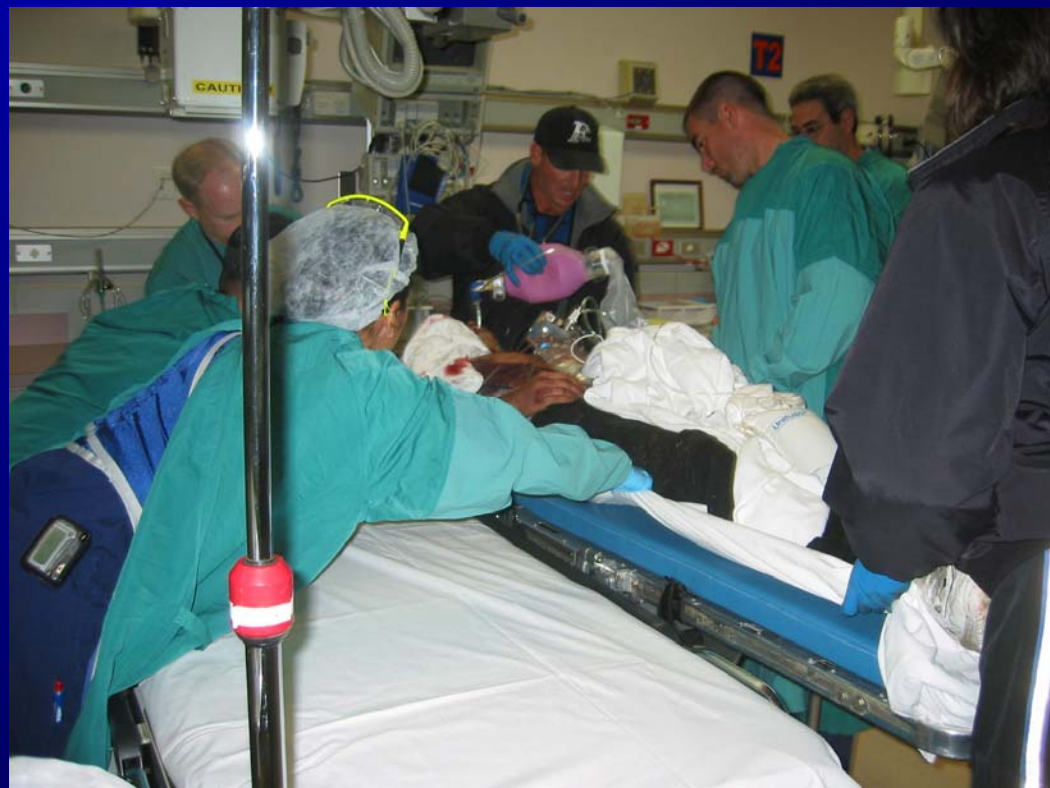


Objectives

- 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

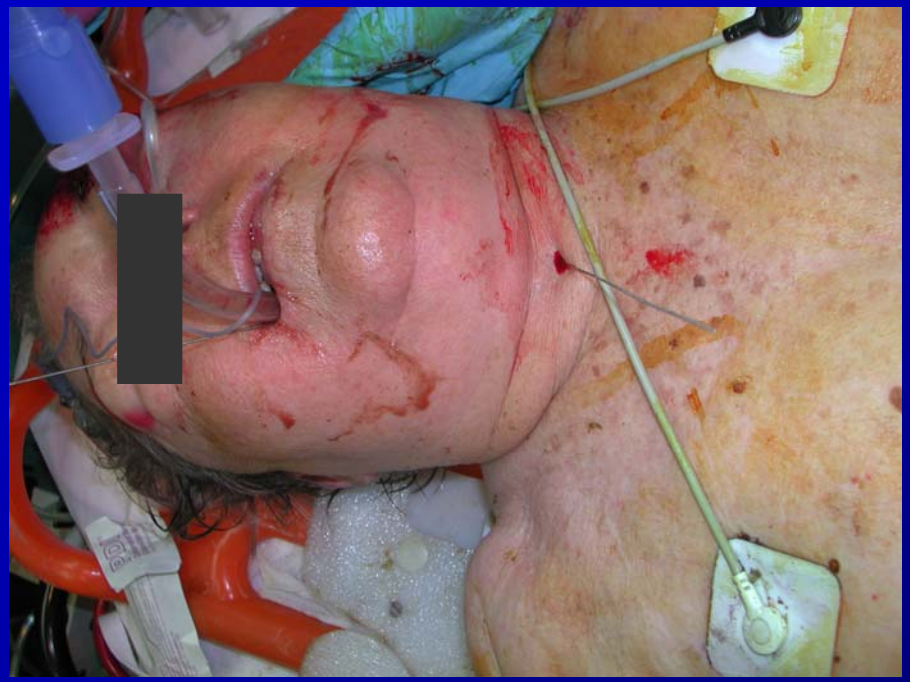
H History and Head-to-toe assessment

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

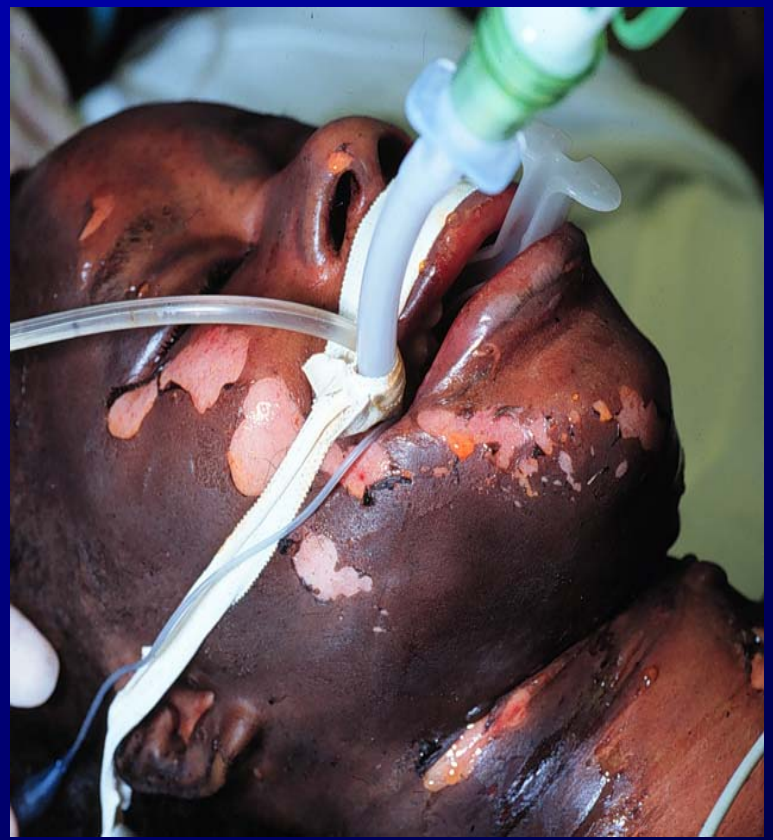
- Altered mental status
- Cyanosis
- Asymmetrical chest wall expansion
- Accessory and/or abdominal muscle use
- Sucking chest wounds
- Paradoxical movement of chest wall
- Tracheal shift from midline

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

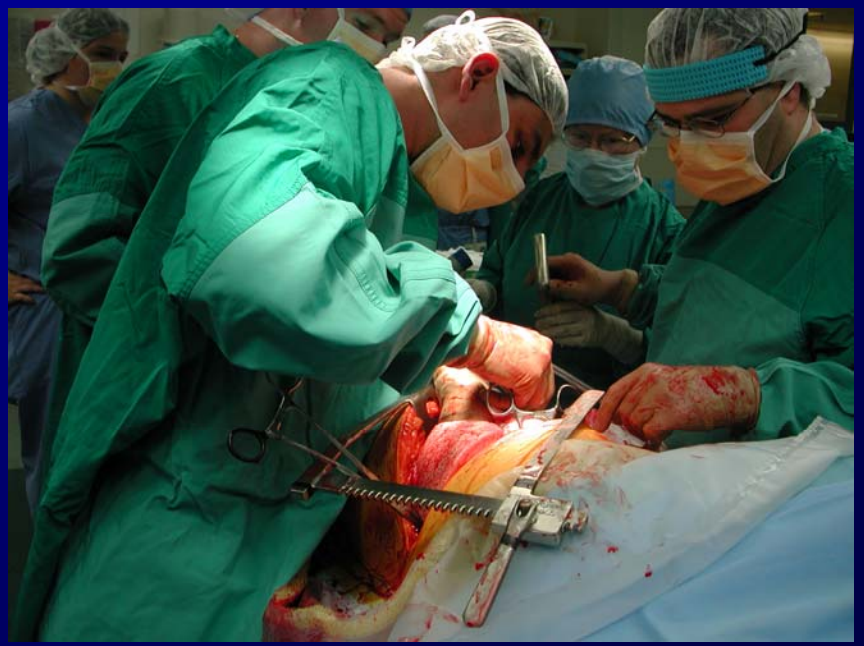
- Tachycardia
- Altered level of consciousness
- Uncontrolled external bleeding
- Distended or abnormally flat external jugular veins
- Pale, cool, diaphoretic skin
- Distant heart sounds

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

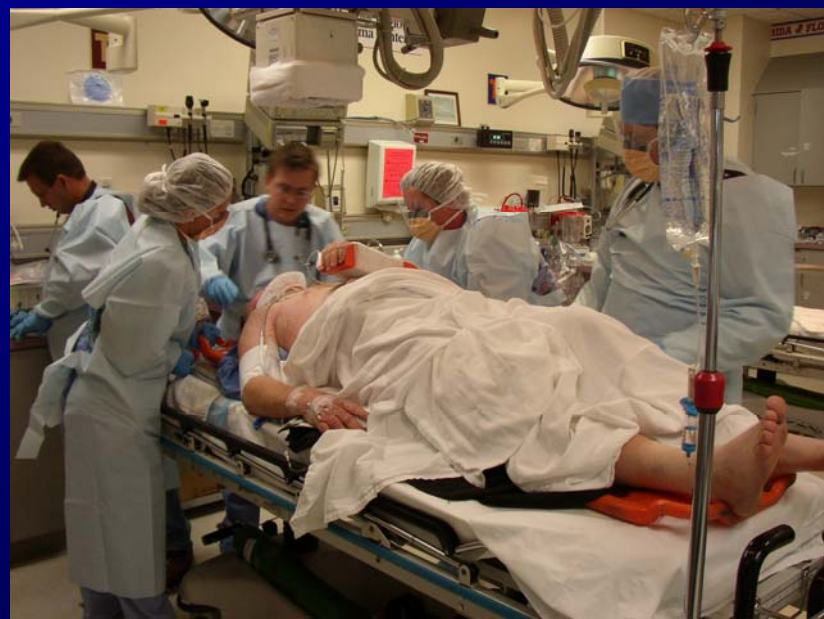
A Alert

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

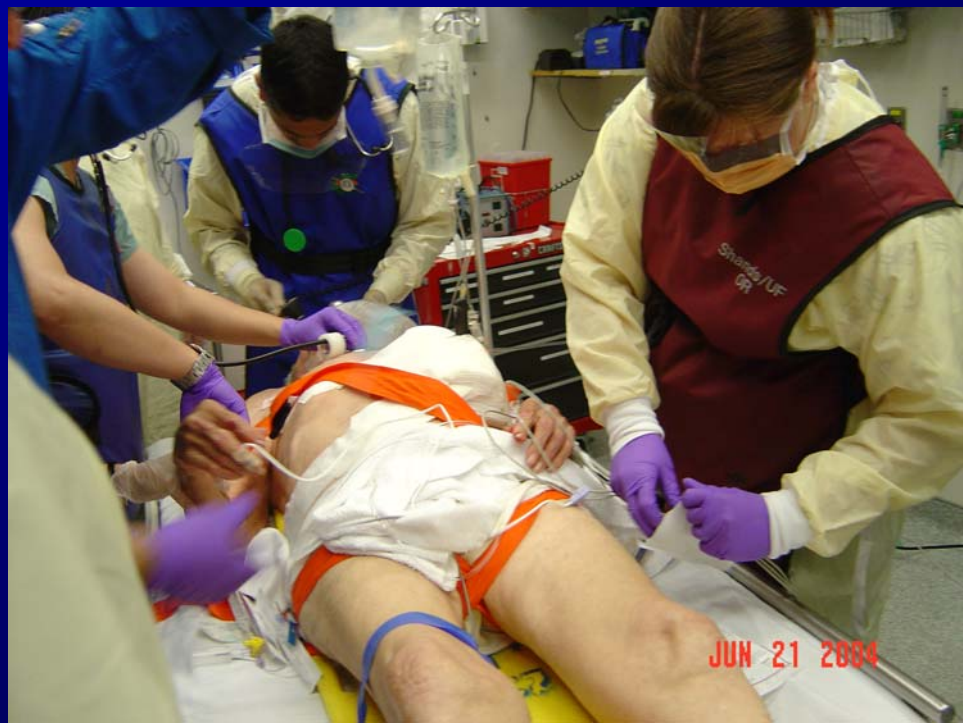
Environmental control

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