



## Head Injury

### Aliases

None noted

### Patient Care Goals

1. Limit disability and mortality from head injury by limiting secondary brain injury through
  - a. Promoting adequate oxygenation and preoxygenating to protect against unanticipated deterioration
  - b. Promoting good cerebral perfusion and avoid hypotension
  - c. Preventing hypocapnia (by avoiding hyperventilation and overventilation)

### Patient Presentation

#### Inclusion Criteria

Adult or pediatric patient with blunt or penetrating head injury – loss of consciousness or amnesia not required

#### Exclusion Criteria

None noted

### Patient Management

#### Assessment

1. Maintain cervical stabilization [See [Spinal Care Guideline](#)]
2. Primary survey per the [General Trauma Management Guideline](#)
3. Monitoring:
  - a. Continuous pulse oximetry
  - b. Frequent systolic and diastolic blood pressure measurement
  - c. Initial neurologic status assessment [See [Appendix VII. Neurologic Status Assessment](#)] and reassessment with any change in mentation
  - d. Moderate/severe head injury: apply continuous waveform EtCO<sub>2</sub>, if available
4. Secondary survey pertinent to isolated head injury:
  - a. Head: Gently palpate skull to evaluate for depressed or open skull fracture
  - b. Eyes:
    - i. Evaluate pupil size and reaction to light to establish baseline
    - ii. Reassess pupils if decrease in mentation
  - c. Nose/mouth/ears: evaluate for blood/fluid drainage
  - d. Face: evaluate for bony stability
  - e. Neck: palpate for cervical spine tenderness or deformity
  - f. Neurologic:
    - i. Perform neurologic status assessment (GCS or AVPU)
    - ii. Evaluate for focal neurologic deficit: motor and sensory

#### Treatment and Interventions

*NOTE: These are not necessarily the order they are to be done, but are grouped by conceptual areas*

1. Airway: