Exclusion criteria:

- SCI secondary to underlying congenital condition
- SCI secondary to acquired medical or surgical condition

Complications to Consider During Primary Survey • C1 - C4 injuries: highly likely to require

• Low cervical and high thoracic injuries:

• Neurogenic shock or bradycardia: may

• If intubating, consider utilizing atropine

• Spleen or liver laceration: may develop

may require airway or respiratory

require fluid resuscitation or

to minimize bradycardia

hemodynamic instability

mechanical ventilation

support

vasopressors

Patient presenting to ED with suspected spinal cord injury (SCI) following traumatic event (e.g., motor vehicle accident, sports or recreational injury, fall).



mobile view

Initiate Advanced Trauma Life Support (ATLS) per Trauma Surgery and ED

Early Priorities:

- Avoid hypotension
- Avoid hypoxia
- Provide adequate analgesia
- Restrict spinal movement (refer to Spinal Stabilization Guidance)

Primary Survey

Complete organized evaluation to identify life threatening injuries and intervene as necessary

Secondary Survey

- **Complete** organized evaluation to identify all injuries
- Order CT scan
- Consult Spine Surgery if not already involved (Neurosurgery for identified neurologic deficit)
- **Place** admission order to PICU

Complete initial disposition

- If spinal cord impingement is identified
 - Decompression by neurosurgery is indicated within 24 hours
- **Determine** need for MRI spine surgeon and trauma physician
 - If MRI needed, spine surgeon and trauma physician to discuss timing of MRI with neuroradiology and anesthesia service -MRI completion is not required for admission-

Neuroprotection and Early Monitoring Treatment

- *Initiate* early neuroprotection and treatment for neurogenic shock
 - Maintain mean arterial pressure (MAP) to support spinal cord perfusion
 - Provide fluid resuscitation with crystalloid or blood products
 - Utilize inotropic support for refractory hypotension:
 - First line = norepinephrine for isolated SCI
 - Consider epinephrine or alternate agents for poly trauma or mixed shock physiology
- Complete abbreviated SCI exam
 - Performed by Spine Service (NP, resident, fellow, or attending)
- Document within 30 minutes of consultation
- Place Foley catheter to manage bladder dysfunction and evaluate resuscitation
- **Consider** placement for NG tube SCI patients at risk for ileus

Finalize disposition and prepare for transfer to ICU See ICU algorithm

