



Section: Medical Operations General  
Subject: SPINAL MOTION RESTRICTION (SMR)  
Section #: 300.20  
Issue Date: March 21, 2011  
Revised Date: December 1, 2017  
Approved By: 

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1. Initiate manual in line cervical support if a potential for traumatic spinal injury exists or if the patient exhibits any neurologic signs or symptoms after a known or suspected traumatic event until a comprehensive examination can be performed to determine the appropriate level of SMR.
2. If SMR is indicated, but the patient resists, evaluate the mental status to determine if the patient is capable of making an informed refusal.
  - a. If the patient is able to make an informed refusal of SMR, document this clearly in the report, and have the patient or legally authorized representative sign a refusal for the procedure.
  - b. If the patient is able to make an informed refusal and refuses all care and transport, proceed as per **HCFR STANDARDS OF DOCUMENTATION**.
3. A detailed neurological exam must be documented before and after the application of SMR as applied. Documentation of the pre-SMR neurological examination may be deferred in cases where doing so would place the patient in greater danger (e.g. immediate life or limb threat in a vehicle or structure, unstable vital signs, etc.).
4. SMR guidelines for application
  - a. Immobilize with a cervical collar only (properly sized and secured) **low risk patients**.
    - i. All of the following shall be confirmed and documented
      1. Normal level of consciousness (GCS = 15)
      2. No midline spine pain, tenderness or anatomic deformity
      3. No neurological findings or complaints
      4. No distracting injuries present
        - a. Long bone fractures/multiple fractures
        - b. Visceral injury suspected to require surgical intervention
        - c. Soft tissue injury with significant pain (i.e. large laceration, degloving injury, crush injury, significant burn)
        - d. Any injury causing acute functional impairment
        - e. Patients  $\geq$  65 years of age shall be treated with a higher index of suspicion of C-Spine injury.
      5. No intoxication or impairment
      6. Patient  $\geq$  18 years old
    - b. Full SMR shall be applied for intermediate and high risk patients
      - i. Full SMR, as defined below, shall be indicated if the patient presents with any of the below findings
        1. Spinal tenderness or pain (midline)
        2. Neurological complaint (e.g. numbness, motor weakness etc.)
        3. Anatomical deformity of the spine
        4. Altered level of consciousness
        5. Drug or alcohol intoxication or impairment
        6. Presence of distracting injuries (defined above)
        7. Patient  $\leq$  18 years of age
        8. Trauma Alert due to blunt trauma
        9. When in doubt, apply full SMR
  5. Full SMR shall consist of:
    - a. Manual in-line support.

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- i. Head held in the neutral position in-line with the spine
    - ii. Just enough support to maintain C-spine in neutral position if in a standing or seated position.
    - iii. Pulling or traction on the head is contraindicated.
  - b. C-collar of proper size, properly secured per the manufacturer's instructions.
    - i. If return to the neutral position is contraindicated or the patient's neck is too short for a rigid cervical collar, provide support and immobilization with rolled towels around the neck, taking care not to compress the trachea.
    - ii. Document reasons for not using the cervical collar.
  - c. Head motion restriction device.
  - d. Multiple straps applied to sufficiently restrict longitudinal and lateral movement.
  - e. If the patient is found in a seated position and full SMR is indicated, the KED will be used unless it is otherwise contraindicated (e.g. patient size, need for rapid extrication, etc.).
- 6. QA Points:
  - a. SMR is not indicated for penetrating injuries in which the patient exhibits no signs or symptoms of neurological deficit upon initial examination and the patient does not have distracting injuries.
  - b. Not all patients will require full SMR, but if there are signs or symptoms of suspected spinal injury take full spinal motion restriction precautions.