FOOTHILL COLLEGE EMS PROGRAMS
SPINAL IMMOBILIZATION ADULT (SEATED PATIENT)
SKILLS LAB

PERFORMANCE OBJECTIVE
Rescuer will demonstrate the ability to immobilize and extricate an auto crash victim with a suspected
cervical spine fracture using the KED. Taking more than 15 minutes is a "FAIL" for this skill.

CONDITIONS
The situation presented will be a conscious patient sitting in the driver's seat of a car. The patient evaluation
will have been completed. The patient will be complaining of neck pain and tingling in both arms. Two
untrained helpers will be available if needed.

EQUIPMENT
PPE C-Spine bag   KED case with padding   Forehead strap

Rescuer States: "I would perform PENMAN and report the General Impression of the patient
Rescuer Approach Patient from SIDE and Performs the following.   1. Immobilizes the patient's head and neck using the left hand, placing the thumb on the near side of the mandible.   2. Using left hand places middle and index finger on far side of mandible   3. Rests left forearm against patient's chest for stabilization.   4. Does not place pressure on the patient's anterior neck.   5. Place the right hand encircling the base of the skull for stabilization.   6. Patient's nose and sternum are in alignment   7. Patient's neck is not flexed or extended
Rescuer States the Following as You Introduce Self and Reassures Patient: 1. Explain procedure   2. Directs helper to position self behind patient   3. Instructs helper now to take over head and neck immobilization.   4. Place little finger and ring finger under patient's mandible at angle of jaw   5. Place index finger and long finger on cheek (zygoma arch)   6. Place thumbs behind ears.   7. Rest wrists on patient's shoulders (if possible)
Rescuer Performs Nerve Function Check on Patient.   1. **Sensation** - Ask the patient which finger is being touched as you apply pressure.   2. **Hand grip** - Ask the patient to grip the index and middle fingers of each of your hands simultaneously.
Rescuer Performs the Following-Applies Cervical Collar on Patient.   1. **Size Selection -** Using fingers, visually measures height from the top of the patient's shoulder at the base of the neck to the patient's chin, and adjusts the collar to correct size. (From the sizing post to the bottom edge of the collar, not to the edge of the foam!)   2. Using the above measurement, select the correct collar with the same measurement from black sizing post to the bottom edge of the plastic.   3. Collar placement: Slides assembled collar up chest wall.   4. Ascertains that the chin is well supported by the collar chin piece. Chin must come to the plastic button in chin support.   5. Maneuvers the velcro attachment behind and around the patient's neck. Assure that the shoulder portion of the collar is resting on both shoulders. Attaches velcro securely.   6. Patient's nose and sternum are in alignment. Patient's neck is not flexed or extended   7. Instructs helper to maintain immobilization holding both collar and patient's mandible and maxilla.
Rescuer Performs: Places KED behind the patient.   1. Directs first helper to maintain head & neck position   2. Neutral (No flexion or extension of c-spine).   3. Nose to sternum (No rotation of c-spine).

Directs second helper to:

4. Place one hand behind the patient's shoulder.
5. Using the other hand: Place thumb on near side of mandible.
6. Place the middle and index finger on the far side of the mandible.
7. Rests forearm against patient's chest for stabilization.
8. Does not place pressure on the patient's anterior neck.
9. Assists a patient to lean forward from the waist.
10. Inserts "head" end of KED. Notes position of all straps.
11. Notes KED is "centered" behind the patient. Positions KED snugly under armpits.
12. Moves patient back against seat
13. Directs second helper to release patient

1. **Rescuer Performs: Secures Middle Torso Strap First**
   Using countertraction to tighten
2. **Rescuer Performs: Secures Bottom Torso Strap Second**
   Using countertraction to tighten
3. **Rescuer Performs: Secures Top Torso Strap Third**
   Using countertraction to tighten
4. **Rescuer Performs: Secures Leg Straps Last**
   Using countertraction to tighten

Rescuer Performs: Places Padding Behind Hollow Area of Neck and/or Shoulder Area
- **Does not extend or flex neck**
- **Checks for neutral neck alignment**

Rescuer Performs: Secures Patient's Head to KED
1. Brings KED to patient DO NOT HYPER-EXTEND NECK

Instructs helper #1 to:
2. Removes thumbs from back of patient's head.
3. Places thumbs on temporal area over side flaps
4. Keeps palms of hands on sides of head over side flaps

Instructs helper #2 to:
5. Bring KED as close as possible to the patient's head.
6. Moves KED side flaps over patient's ears
7. Keeps KED centered.
8. Place forehead strap.
9. Angles forehead strap downward.
10. Keeps strap centered.
11. Does not allow the head to move side to side while securing the strap.
12. Does not flex or hyperextend the patient's neck during steps II-XV. (Margin of 10 degrees from anatomic position acceptable.)
13. Does not obstruct the patient's airway with material used to secure the head and neck.

Instructs helper #1 to release head immobilization.
1. Use strap/tie to gently secure wrists.
2. **States**: would have helpers place a long-spine board or stretcher in position.
3. **States**: would move patients by supporting legs and using side straps.
4. **States:** would lay patient on a long backboard or stretcher with knees and hips flexed.
5. **States:** would check forehead straps and retighten if necessary.
6. **States:** would loosen leg straps. Does not release leg straps.
7. **States:** would partially extend legs and would pad for comfort under knees and feet.

Rescuer Secures to Longboard and States:
1. "I would secure patients to long- board with appropriate straps for safe transportation."
2. "I would further immobilize the head to prevent lateral movement by using tape across the forehead which would be secured to both sides of the board."

Rescuer Performs: Rechecks Nerve Function –
1. **Sensation** - ask the patient which finger is being touched as you apply pressure.
2. **Hand grip** - Ask the patient to grip the index and middle fingers of each of your hands simultaneously.

Rescuer States: If the patient starts to vomit I would turn the patient's head to one side to protect the airway. Assure alignment of head and neck Upon completion, patient will be sufficiently immobilized to prevent:

1. Flexion/hyperextension movement of head.(Margin of 10 degrees.)
2. Lateral movement of head (margin of 1/2 inch).

Critical Criteria
___ Did not immediately direct or take manual stabilization of the head
___ Did not properly apply appropriately sized cervical collar before ordering release of manual stabilization
___ Released or ordered release of manual stabilization before it was maintained mechanically
___ Manipulated or moved the patient excessively causing potential for spinal compromise
___ Head immobilized to the device **before** device sufficiently secured to torso
___ Device moves excessively up, down, left or right on the patient's torso
___ Head immobilization allows for excessive movement
___ Torso fixation inhibits chest rise, resulting in respiratory compromise
___ Upon completion of immobilization, head is not in a neutral, in-line position
___ Did not reassess motor, sensory and circulatory functions in each extremity after securing the patient to the device and to the long backboard
___ Failure to manage patient as a competent EMT
___ Fails to apply KED in 15 minutes