COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES
Policy Title: Spinal Motion Restriction		Policy Number 614
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I. PURPOSE: To define the use of spinal motion restriction by field personnel in Ventura County.

II. AUTHORITY: Health and Safety Code, Sections 1797.214, 1797.220, 1798, and 1798.200, CCR Division 9, Chapter 4, Sections 100175, 100179

III. DEFINITION:

A. Spinal motion restriction: the use of cervical collars, gurneys, and other commercial devices to limit the movement of patients with potential spine injuries. Spinal motion restriction refers to the same concept as "spinal immobilization," which traditionally incorporates the use of rigid backboards. This technique often limits movement but rarely provides true "immobilization." The goal of spinal motion restriction is to maintain spinal alignment and limit unwanted movement. "This can be accomplished by placing the patient on a long backboard, a scoop stretcher, a vacuum mattress, or an ambulance cot."[1]

IV. POLICY:

A. Spinal motion restriction is a procedure that should be performed judiciously.

B. Spinal Motion Restriction is ***not required*** if:

1. The patient is awake, alert , not under the influence of alcohol or drugs to the extent that appreciation of pain is altered, with whom you can communicate effectively, neurologically intact, who denies spine pain or tenderness, or who complains of isolated lumbar pain or tenderness but denies cervical pain or tenderness and does not have weakness, numbness, or a distracting injury.

C. At a minimum, a ***cervical collar should be applied*** to:

1. A patient 65 years or older with neck pain due to nonpenetrating trauma.
2. A patient with neck pain or neurologic deficit after an axial loading injury.
3. A trauma patient who complains of neck pain and/or back pain.
4. A patient with known or suspected trauma with altered level of consciousness to the extent that their appreciation of pain or ability to communicate is impaired.
5. Any trauma patient with a neurological deficit (e.g. numbness, weakness)
6. Any patient under the influence of drugs or alcohol to the extent that appreciation of pain or ability to communicate is impaired.

7. Patients suffering from severe distracting painful injuries for whom the mechanism of injury is unknown or suspicious for spinal injury.
8. Awake and alert, potentially ambulatory patients, not intoxicated, without neurologic symptoms and/or deficits, can self-extricate (after application of cervical collar if indicated).[2]

D. ***Backboards*** are a tool that may be utilized for patient movement to the gurney, then removed prior to transport. You may transport a patient on a backboard when necessary to continue patient care (e.g. unconscious patient, CPR, spinal motion restriction if needed, or stabilization of an ortho injury, such has a hip or femur).

E. Spinal Motion Restriction is ***contraindicated*** in:

1. Patients with isolated penetrating torso or neck injury. Transportation must be expedited. DO NOT place these patients in spinal motion restriction.

V. PROCEDURE:

A. Patients with or without a cervical collar should be secured to the gurney with gurney straps. Patient should then be instructed to remain as still as possible.

B. A slide board should be used to transfer the patient to the hospital gurney

C. In the event of simultaneous transport of more than one patient requiring spinal motion restriction, the second patient should be secured supine to the bench seat. A backboard can be used if necessary.

VI. Special Procedure for Care of Potentially Spine-Injured Football Athlete

A. The facemask should always be removed prior to transportation, regardless of current respiratory status.

1. Tools for facemask removal include screwdriver, FM Extractor, Anvil Pruners, or ratcheting PVC pipe cutter should be readily accessible.
2. All loop straps of the facemask should be cut and the facemask removed from the helmet, rather than being retracted.

B. The helmet should not be removed during the prehospital care of the football athlete with a potential spinal injury, unless:

1. After a reasonable period of time, the face mask cannot be removed to gain access to the airway,
2. The design of the helmet and chin strap is such that even after removal of the face mask, the airway cannot be controlled, or ventilation provided.
3. The helmet and chin straps do not hold the head securely such that immobilization of the helmet does not also immobilize the head, or
4. The helmet prevents immobilization for transport in an appropriate position.

C. If the helmet must be removed, a neutral head position must be maintained during removal.
   1. In most circumstances, it may be helpful to remove cheek padding and/or deflate the air padding prior to helmet removal.
   2. If the helmet is removed, the shoulder pads must be removed at the same time or the head padded to maintain neutral position.

D. If needed, the front of the shoulder pads can be opened to allow access for CPR and defibrillation. They should only be removed if the helmet is removed at the same time.

VII. Pediatric patients

A. The approach to pediatric patients is similar to that for adults. There is no need to employ spinal motion restriction based on age criteria alone.

B. The index of suspicion for spine injury should be higher given the increased difficulty communication with younger patients. Indications for spinal motion restriction include:

   1. Complaint of neck pain
   2. Torticollis
   3. Neurologic deficit
   4. Altered mental status including GCS <15, intoxication, and other signs (agitation, apnea, hypopnea, somnolence, etc.)
   5. Involvement in a high-risk motor vehicle, high impact diving injury, or has substantial torso injury

C. Appropriate patients can be secured to gurney in their car seat. An appropriately sized c-collar should be applied if indicated.

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[1] Spinal Motion Restriction in the Trauma Patient – A Joint Position Statement
Fischer PE, Perina DG, Delbridge TR, Fallat ME, Salomone JP, Dodd J, Bulger EM, Gestring ML.
Prehosp Emerg Care. 2018 Nov-Dec;22(6):659-661. doi: 10.1080/10903127.2018.1481476. Epub 2018 Aug 9.

[2] Dixon M, O'Halloran J, Cummins NM
Biomechanical analysis of spinal immobilisation during prehospital extrication: a proof of concept study
Emerg Med J 2014;31:745-749.