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EMERGENCY MEDICAL SERVICES POLICIES and PROCEDURES

SPINAL MOTION RESTRICTION (SMR)

I. Purpose: To define the use of spinal motion restriction by EMS Personnel in Santa Barbara 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. Definitions:

A. *Spinal Motion Restriction (SMR)*: The use of cervical collars, gurneys, and other commercial devices to limit the movement of patients with potential spine injuries. The goal of spinal motion restriction is to maintain spinal alignment and limit unwanted movement.

IV. Policy:

- A. Backboards are a tool that may be utilized for patient movement and CPR. They should not be used for transport unless necessary to continue patient care (e.g. unconscious patient).
- B. Patients should be secured to the gurney with gurney straps whenever possible. A slide board should be used to transfer the patient to the hospital gurney.
- C. Cervical collars must be used in the appropriate patients as defined in this policy.
 - 1. Patients with or without a cervical collar should be secured to the gurney with gurney straps.
 - 2. Patient should then be instructed to remain as still as possible.
 - 3. Awake and alert, potentially ambulatory patients, not intoxicated, without neurologic symptoms and/or deficits, can self-extricate (after application of cervical collar, if indicated).
- D. In the event of simultaneous transport of more than one patient requiring SMR, the second patient should be secured supine to the bench seat. A backboard can be used if necessary.

V. Procedure:

- A. Patients with known or suspected traumatic injuries who meet any of the following criteria require spinal motion restriction (SMR):
 - 1. Presence of neck and/or back pain with associated spinal tenderness;
 - 2. The patient has an altered level of consciousness to the extent that their appreciation of pain or ability to communicate is impaired;
 - 3. Presence of a neurological deficit (e.g. numbness, weakness, paralysis);
 - 4. Any patient under the influence of drugs or alcohol to the extent that appreciation of pain or ability to communicate is impaired;
 - 5. Patients suffering from distracting injuries for whom the mechanism of injury is unknown or suspicious for spinal injury.
- B. Patients do not meet criteria for spinal motion restriction (SMR) if:
 - 1. The patient is awake, alert, and not under the influence of alcohol or drugs to the extent that appreciation of pain is altered; and
 - 2. With whom you can communicate effectively; and
 - 3. The patient denies spine pain or tenderness and is neurologically intact; and
 - 4. Does not have a distracting injury.
- C. Cervical immobilization is not necessary for patient's complaining of isolated lumbar pain and/or tenderness and do not have a neurological deficit or a distracting injury present.

APPROVAL:

SIGNATURE ON FILE
Nicholas Clay, EMS Agency Director

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Daniel Shepherd, MD, EMS Agency Medical Director

SANTA BARBARA COUNTY EMERGENCY MEDICAL SERVICES AGENCY**SPINAL MOTION RESTRICTION (SMR)**

- D. Spinal motion restriction is contraindicated in patients with isolated penetrating torso or neck injury. DO NOT place these patients in SMR. Transportation must be expedited.
1. A backboard may be utilized for patient movement and/or CPR. A cervical collar is not necessary.

VI. Special Procedure for Potentially Spine-Injured Patient**A. Football Athlete**

1. The facemask should always be removed prior to transportation, regardless of current respiratory status.
 - a. Tools for facemask removal include screwdriver, FM Extractor, Anvil Pruners, or ratcheting PVC pipe cutter should be readily accessible.
 - b. All loop straps of the facemask should be cut and the facemask removed from the helmet, rather than being retracted.
2. The helmet should not be removed during the prehospital care of the football athlete with a potential spinal injury, unless:
 - a. After a reasonable period of time, the face mask cannot be removed to gain access to the airway;
 - b. 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;
 - c. The helmet and chin straps do not hold the head securely such that immobilization of the helmet does not also immobilize the head; or
 - d. The helmet prevents immobilization for transport in an appropriate position.
3. If the helmet must be removed, a neutral head position must be maintained during removal.
 - a. In most circumstances, it may be helpful to remove cheek padding and/or deflate the air padding prior to helmet removal.
 - b. If the helmet is removed, the shoulder pads must be removed at the same time or the head padded to maintain neutral position.
4. 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 SMR based on age criteria alone.
- B. The index of suspicion for spine injury should be higher given the increased difficulty of communication with younger patients.
- C. 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.
- D. Appropriate patients can be secured to gurney in their car seat. An appropriately sized c-collar should be applied if indicated.

VIII. References

- A. None

IX. Attachments

- A. None

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