



STATE OF MAINE

DEPARTMENT OF PUBLIC SAFETY

MAINE EMERGENCY MEDICAL SERVICES



152 STATE HOUSE STATION

AUGUSTA, MAINE 04333

PAUL R. LE PAGE

GOVERNOR

JOHN E. MORRIS

COMMISSIONER

SHAUN A. ST. GERMAIN

DIRECTOR

MEDICAL DIRECTION AND PRACTICES BOARD

WHITE PAPER

Spine Management

1. Who can self-extricate?

- a. We have based this protocol on two studies in which the authors filmed volunteers who were sitting in the driver’s seat of vehicles. They found that patients who “self-extricated” had the same or less movement of their spines compared to those volunteers who were extricated by EMS providers. Based on these studies, we have authorized Maine EMS providers to allow self-extrication of sitting patients only. Patients in other positions (laying on the seat or floor of the vehicle) are not to be allowed to self-extricate. We only have this data on patients who start in a sitting position. Please use caution when considering self-extrication and recognize that some vehicles are difficult to self-extricate from. Use your judgment when considering self-extrication, recalling the goal of minimizing spine movement. If, in your judgement, self-extrication would lead to more spine motion than an alternate method of extrication, proceed with the other method.

2. Why does the patient’s position matter for self-extrication?

- a. See above. We do not know if it matters. The only evidence we have is these two studies and they did not look at other positions. Hopefully more studies will be published that will allow us to expand this protocol to other positions.

3. When is it appropriate to raise the head of an immobilized patient?

- a. Patients should remain flat except for *very specific* situations:
 - i. They are having difficulty breathing and sitting them up slightly (30 degrees) helps relieve their shortness of breath

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PHONE: (207) 626-3860

TTY: (207) 287-3659

FAX: (207) 287-6251

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- ii. They have severe head injury, in which case the head of bed should be elevated to 30 degrees
- 4. **What is the best way to move a patient from the EMS cot to the ED bed?**
 - a. Utilizing the ED's slide board is the smoothest and easiest way to transfer a patient.
- 5. **Why do we not place a collar and immobilize patients with penetrating (stab/gunshot wound) trauma?**
 - a. We have reviewed studies that show a higher mortality when we take the extra time to immobilize patients with penetrating trauma. We think this is because the time it takes to carefully immobilize the patient leads to delays in definitive operative bleeding control. There is concern that if you cover a penetrating wound especially in the neck it may delay you noting an expanding hematoma that could lead to further complications.
- 6. **Do we need to place head blocks after we remove the backboard and strap the patient to the EMS cot?**
 - a. If the patient cannot keep their head still without the help of head blocks then yes. You may use your own judgment on what is needed to fully immobilize the head of each patient. Some patients will not need blocks, others will.
- 7. **Should we remove athletic pads, helmet and equipment before we transport spine injured athletes?**
 - a. This is also a judgment decision. It may make sense to remove the pads especially if you have an athletic trainer on scene as they are specifically trained in rapid removal of athletic equipment. It is best to have your EMS agency leadership reach out to local athletic trainers to make a plan for interacting with each other before the acute need arises.
 - b. Increasingly, Athletic Trainers are moving toward removal of all athletes' helmets and pads prior to EMS transport. Should a patient still have pads and helmet on, discuss removal with on scene Athletic Trainers. Remember, these on scene providers may be of significant help in removing these pieces of an athlete's protective gear.
 - c. Finally, recall that helmets must be removed if concern for significant hemorrhage and/or if the patient requires airway management.