



Northwest Community EMS System

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Date: September 8, 2014

To: All System members

From: John M. Ortinau, M.D., FACEP
EMS Medical Director

RE: **SOP Clarification: Selective Spine Motion Restriction**

System Memo: # 349

Please POST

The transition from full spine immobilization to *selective spine precautions*/immobilization is well supported in the literature and is rapidly being adopted across the country. Region IX based the new Spine Trauma SOP on the National Association of EMS Physicians/American College of Surgeon (NAEMSP/ACS) position paper and the subsequent resource document from NAEMSP that was attached to the SOP Roll-out in-station handout. It is posted to the System website under the Education materials for May. Please read that document to gain familiarity with the full rationale and recommendations. It provides great context for these changes.

"Utilization of backboards for spinal immobilization during transport should be judicious, so that potential benefits outweigh risks." (NAEMSP)

We realize that despite evidence-based guidelines, navigating through significant practice changes can generate lots of questions that need one source of truth to serve as the "official" answer for the System.

This memo is intended to provide clarity to the System's position on the use of selective spine precautions/immobilization vs. the traditional full spine motion restriction. We are also conducting an in-station class on the subject in October to give everyone time to work through hypothetical situations in learning how to apply these concepts.

WHAT HAS NOT CHANGED:

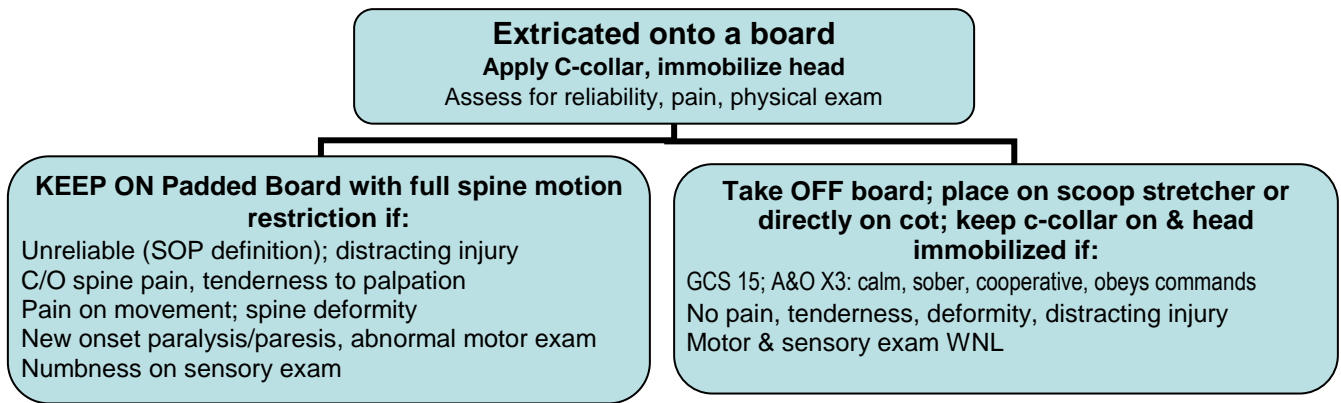
- *Who, when, where and why* we provide spine precautions HAS NOT CHANGED. The decision tree on the bottom of page 45 of the SOPs remains exactly the same.
- The Spine SOP must be implemented by integrating both pages. The positive, uncertain, and negative mechanisms of injury that become one basis for determining if spine precautions are needed have been defined for almost two decades in the national literature, spearheaded by Hauswald (1998) and Domeier (1997). They have been in our SOPs for years and HAVE NOT CHANGED.
- Other decision points, e.g. assessing for reliability (mental status, possible intoxication), distracting injury, and inability to communicate - HAVE NOT CHANGED.
- Positive physical exam findings that suggest high risk for spine injury signaling the need for selective immobilization HAVE NOT CHANGED.
- If **manual stabilization** of the head/neck was indicated in the past as the 1st step in providing spine precautions – IT STILL IS.
- If an appropriately sized **C-collar** was indicated in the past – IT STILL IS.
- If a **supine position** was indicated in the past after spine precautions were applied – IT STILL IS.
- If **securing the head, neck, and torso** to a stable reference point with blocks, blanket roll, or head immobilizer so flexion, extension, and/or rotation is minimized was indicated in the past – IT STILL IS.

WHAT HAS CHANGED?

- **HOW** spine precautions are to be applied. Spine precautions, now defined as selective spine immobilization, have been re-defined at the top of p.45 in the SOP. The biggest change is distilled to this: **For most patients, the cot or a scoop stretcher is now your board for transport purposes.**

Rationale: Keeping a patient on a board is NOT helpful, does not provide the immobilization we once thought, and is often harmful. Our goal is to keep most patients OFF of a board, most of the time.

ONE EXCEPTION: If extricated onto a board:

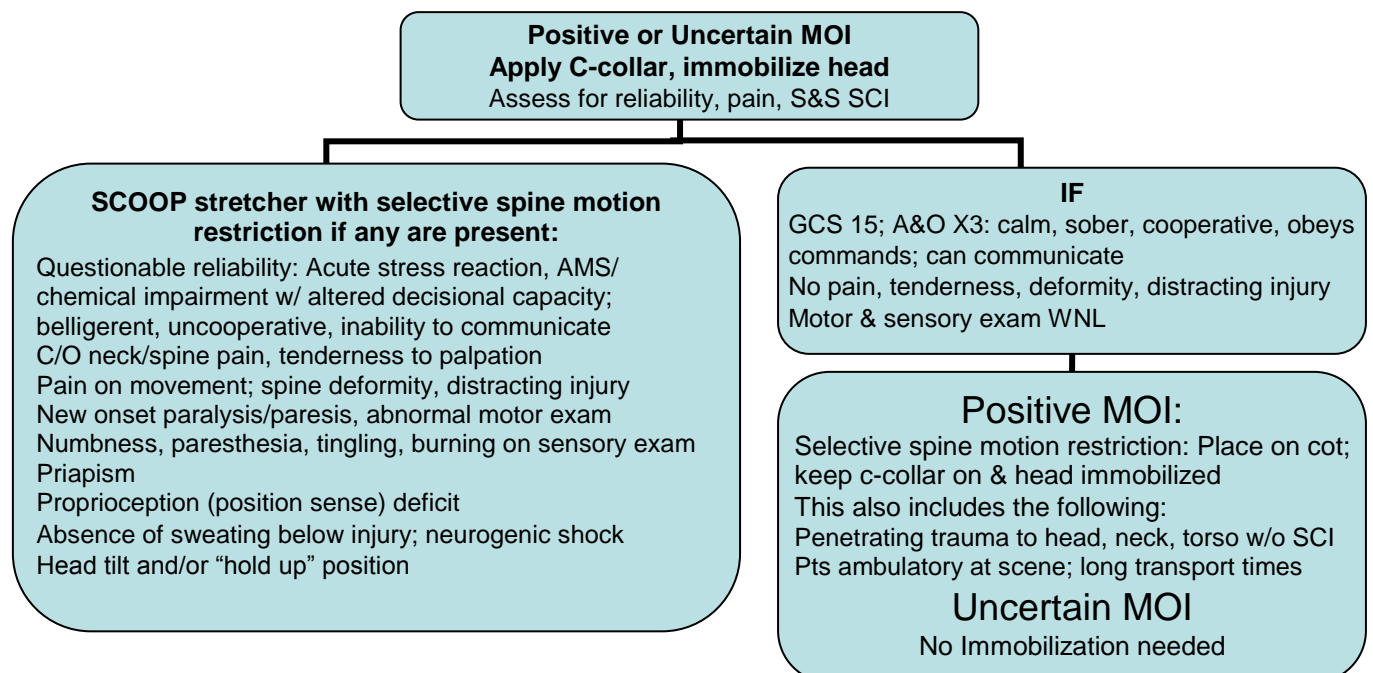


Explanation: Backboards are useful as a sturdy **conveyance device** to remove a patient from entrapment and move them to a cot. **If extrication onto a board was indicated in the past – IT STILL IS.** Keep patient **ON THE PADDED BOARD** until a physical exam is completed.

- Unconscious/unreliable patients should be treated as if they have a spine injury
Conscious/ reliable patients should be assessed first to determine type of spine precautions to use.
- Unless necessary to change a patient's position to maintain an open airway, or there is some other compelling reason, it is best to keep the neck or back in the original position (of a deformity) until an exam can be done (Bledsoe, 2013).
- The sole purpose of keeping unreliable patients and/or those with a strong suspicion of injury on the board is to facilitate rapid and safe transfer of a patient to the ED cart with as little movement of the spine as possible. Since our transport times are usually relatively short, and this group of patients will need urgent spine imaging at the hospital, this is a reasonable approach for these high risk patients, even though the use of boards at all is now controversial. See below.

"The ambulance stretcher is in effect a padded backboard and, in combination with a cervical collar and straps to secure the patient in a supine position, provides appropriate spinal protection for patients with spinal injury. Once the patient is secured to the ambulance cot, the backboard becomes redundant, as the standard transport cot provides a flat surface to which the patient can be secured."

ALL OTHERS



Handover to the hospitals:

- Hospital ED physicians and trauma surgeons are still gaining familiarity with these new guidelines and we wish to work with them as effectively as possible so our System members are meeting EMS best evidence-based practices while we acknowledge the physician's prerogative and responsibility to care for their patients according to their best judgment. It is important that the OLMC report clearly specify the type and nature of spine precautions that have been implemented by EMS.
- **We ask the receiving hospitals to determine in advance if they wish to provide alternative immobilization strategies to the patient upon ED arrival.**
 - If transported on a board, the patient will be transferred to the ED stretcher as in the past.
 - If transported on a scoop stretcher and the ED wishes the patient to be placed on a backboard, we ask the EDs to please have their board waiting on the ED stretcher to receive the patient. EMS will transfer the patient to the hospital stretcher using the EMS scoop stretcher.
 - If the patient is on the EMS stretcher alone, the hospital can use their sliders or a scoop stretcher to help move the patient onto their stretcher (with or without a board in place).

We anticipate that questions will continue to arise as situations present themselves that do not easily fit into one of the guidelines above. Please do not hesitate to reach out to me or Connie Mattera and we will get back to you with an answer as quickly as possible.

"Dr. Hauswald suggests that providers keep in mind that the goal for care of the unstable cervical injury is not necessarily to avoid visible motion of the injured area of the spine, but rather to avoid the application of force to that area. Forcible application of spinal immobilization is perhaps the best example of dogmatic application of treatment "rules" that cause increased harm, rather than benefit to the patient. Avoid log rolling as it causes significant unwanted motion in all directions during transfer to and from a spine board. With this in mind, "split" and "scoop" style stretchers designed to avoid the "Log Roll" and similar techniques begin to gain appeal" (Duckworth, 2013).

References:

- Bledsoe, B. (2013). The evidence against backboards. *EMS World*. Created August 1, 2013.
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- Duckworth, R.L. (2013). *Board to death: The state of prehospital spinal injury care in 2013*. New England Center for Rescue and Emergency Medicine, llc. (Best reference list)
- Hauswald, M., Ong, G., Tandberg, D., Omar, Z. (1998). Out-of-hospital spinal immobilization: its effect on neurologic injury. *Acad Emerg Med*, 5(3), 214-218.
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- Theodore, N., Hadley, M.N., Aarabi, B., Gelb, D.E., Hurlbert, R.J., Rozzelle, C.J., Ryken, T.C., & Walters, B.C. (2013). Prehospital cervical spinal immobilization after trauma. *Neurosurgery*, 72(3), 22-34.
- White, C.C., Domeier, R.M., Millin, M.G., Standards and Clinical Practice Committee NAEMSP (2014). EMS spinal precautions and the use of the long backboard – resource document to the position statement to the position statement of the National Association of EMS Physicians and the American College of Surgeons Committee on Trauma. *Prehosp Emerg Care* Downloaded from informahealthcare.com by 12.131.115.81 on 04/24/14.