

What's New in Pennsylvania EMS Spinal Care?

Fast Facts for Athletic Trainers

July 2015

Prehospital spinal immobilization has long been held as the standard of care for victims of blunt or penetrating trauma who have experienced a mechanism of injury (MOI) forceful enough to possibly damage the spinal column/cord. The majority of textbooks stress that any significant MOI, regardless of signs and symptoms of spine injury, requires full-body immobilization, which is typically defined as a cervical collar being applied and the patient being secured to a backboard with head stabilizers in place. This approach to patient immobilization has been accepted and implemented as the standard of care for decades with little scientific evidence justifying the practice.

In 2012 the National Association of EMS Physicians and American College of Surgeons Committee on Trauma published a joint position statement that, *"...the benefit of long backboards is largely unproven; ...utilization of backboards should be judicious so that the potential benefits outweigh the risks."* In response to this evidence-based recommendation, Statewide Basic Life Support Protocol #261 on spinal care has been revised. Pennsylvania certified EMS providers may begin to use this protocol following an educational update that must be completed on or before July 1, 2015.

Q: How has the spinal care protocol changed in 2015?

A: Prehospital spinal care will continue to be assessment-based and will focus, when indicated, on "restricting spinal motion" instead of the prior philosophy of "spinal immobilization."

Q: How will spinal motion be restricted?

A: A rigid cervical collar will be applied and patient will be instructed to maintain their neck in a neutral position during transport. A cervical immobilization device (CID) may also be used to restrict lateral neck rotation.

Q: What role of the long backboard under the new protocol?

A: In certain situations the long backboard will still be used as an extrication device, but plays no significant role in restricting spinal motion. If a backboard is utilized during extrication, the EMS crew may, at its discretion, remove the board prior to initiating transport.

Q: Why has the role of the long backboard diminished?

A: Research suggests that unnecessary, prolonged immobilization on a long backboard may cause pain, agitation, respiratory compromise and place some patients at increased risk for pressure-related skin breakdown. Use of a long backboard is contraindicated for penetrating trauma to the head, neck, chest, abdomen or back, as well as any patient suffering from non-traumatic back/neck pain.

Q: What should I expect during patient transfer of care to the EMS crew?

A: In most cases, the EMS crew will not place the patient onto a long backboard and probably will opt to use a cervical collar only. As this varies from the most recent recommendation from the National Athletic Trainers Association, we recommend meeting with the EMS agency that will be attending to your sporting events to establish a plan and ensure open communications prior to sporting events.
Note: For patients who are combative and/or uncooperative, spinal motion restriction should be withheld regardless of exam or mechanism of injury to prevent injury to the patient or to the medical team.

Q: How does this protocol affect pads and other personal protective equipment?

A: The 2015 NATA update states that it is "essential and now recommended [that] protective equipment be removed prior to transport to the hospital." Therefore, we recommend the removal of equipment by trained personnel. In most circumstances, the Athletic Trainer should provide direction for, and assist with, the removal of protective equipment.

Q: What is the best way to prepare for sporting events to avoid conflicts in patient care?

A: We recommend meeting with the EMS agency that will be attending to events/emergencies prior to the start of the pre-season practices starting in August. We also recommend reviewing the established Emergency Action Plan (or developing one if there is not one in place). Additionally, agreeing on actions that should be taken for the spine-injured athlete (i.e. if a backboard will or will not be utilized) should be determined prior to the start of the season. Training on how to remove protective equipment properly should also be considered.

Q: Where can I receive additional information regarding the new spinal care protocol?

A: A summary of the revised spinal care protocol has been included in this publication. The statewide basic life support treatment protocols are available through the Pennsylvania Department of Health website at www.health.pa.gov, the Pennsylvania Emergency Health Services Council website at www.pehsc.org or your regional EMS council. We also recommend reviewing the 2015 updates to the 1998 NATA document entitled "Appropriate Care of the Spine Injured Athlete", as well as the Official Statement regarding EMS changes to pre-hospital care of the spine-injured athlete.

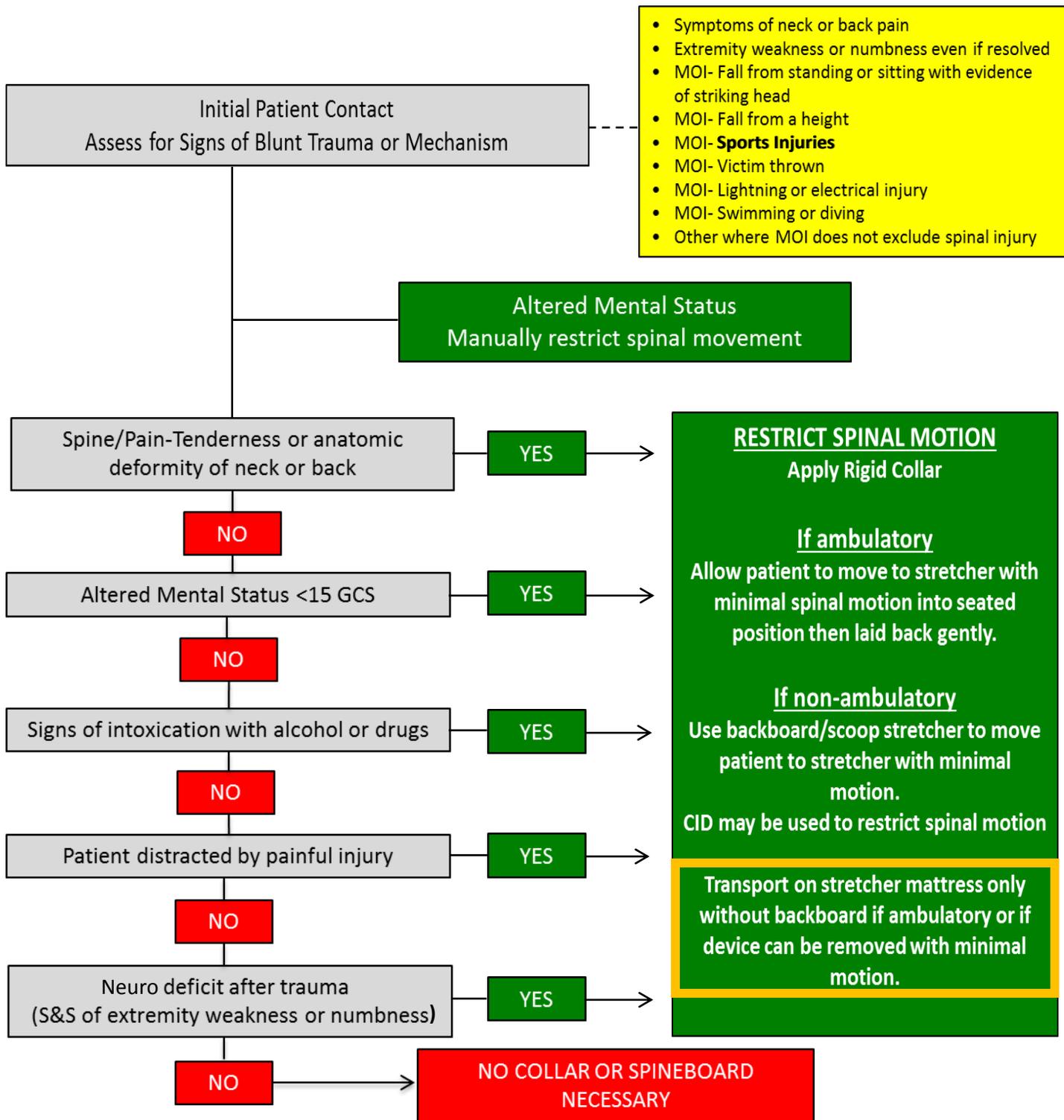
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Pennsylvania Statewide BLS Protocol #261: Spinal Care



References:

- Hoffman JR, Wolfson AB, Todd K, Mower WR. (1998). "Selective cervical spine radiography in blunt trauma: methodology of the National Emergency X-Radiography Utilization Study (NEXUS)." *Ann Emerg Med.* 32 (4): 461–9. doi:10.1016/s0196-0644(98)70176-3. PMID 9774931
- "EMS Spinal Precautions and the Use of the Long Backboard" <http://www.naemsp.org/pages/position-statements.aspx>
- "EMS Spinal Precautions and the Use of the Long Backboard—Resource Document to the Position Statement of the National Association of EMS Physicians and the American College of Surgeons Committee on Trauma." <http://www.naemsp.org/pages/position-statements.aspx>
- NATA Document citation