

Attention
Hospitals and EMS Medical Directors
Spine Precaution Guidelines for Pre-Hospital Providers

Introduction

It is the belief of the National Association of EMS Physicians and the American College of Surgeons Committee on Trauma regarding emergency medical services spine precautions and the use of the long spine boards that:

- Long boards are commonly used to attempt to provide rigid spinal immobilization among emergency medical services (EMS) trauma patients. However, the benefit of long boards is largely unproven.
- The long backboard can induce pain, patient agitation and respiratory compromise. Further, the backboard can decrease tissue perfusion at pressure points, leading to the development of pressure ulcers.
- Utilization of backboards for spinal immobilization during transport should be judicious, so that the potential benefits outweigh the risks.
- Whether or not a long spine board is used, attention to spine precautions among at risk patients is paramount. These include application of a cervical collar, adequate security to a stretcher, minimal movement/transfers and maintenance of inline stabilization during a necessary movement or transfers.
- **Long spine boards should be used judiciously and are recommended only for extrication purposes**

Purpose

To provide guidelines that may serve to identify patients who may be safely transported to a hospital with application of a cervical collar and spine precautions without use of long backboard. The use of the long spine board is not required to provide adequate spine precautions and restriction.

Recommendation

It is the recommendation of the Northeastern Regional Trauma Network (NORTN) that the guidelines regarding spinal precautions and the use of the long backboard put forth by the National Association of EMS Physicians and American College of Surgeons Committee on Trauma be adopted in the NORTN region. Appropriate patients to be immobilized with a backboard **may** include those with:

- Blunt trauma and altered level of consciousness
- Spinal pain or tenderness
- Neurologic complaint (e.g., numbness or motor weakness)
- Anatomic deformity of the spine
- High-energy mechanism of injury and any of the following:
 - o Drug or alcohol intoxication
 - o Inability to communicate
 - o Distracting injury

Steps for initiating Spine Precaution/Restriction: (The long spine board is not required to provide adequate spine precautions and restriction)

- Application of a properly fitted cervical collar
- Supine positioning
- Minimal movements/transfers
- Maintaining inline stabilization during necessary movements or transfers
- Pediatric considerations: padding under shoulders to maintain airway and spine alignment in order to accommodate for the child's larger occiput

Patients for whom immobilization on a backboard is not necessary include those with all of the following:

- Normal level of consciousness (Glasgow Coma Score 15)
- No spine tenderness or anatomic abnormality
- No neurologic findings or complaints
- No distracting injury
- No intoxication

Patients with penetrating trauma to the head, neck or torso and no evidence of spinal injury should not be immobilized on a backboard

Spinal precautions can be maintained by application of a rigid cervical collar and securing the patient firmly to the EMS stretcher, and may be most appropriate for:

- Patients found ambulatory at the scene
- Patients who must be transported for a protracted time, particularly prior to interfacility transfer
- Patients for whom a backboard is not otherwise indicated

Whether or not a backboard is used, attention to spinal precautions among at-risk patients is paramount. These include application of a cervical collar, adequate security to a stretcher, minimal movement/transfers, and maintenance of in-line stabilization during any necessary movement/transfers.

Education of field emergency medical services personnel should include evaluation of risk of spinal injury in the context of options to provide spinal precautions.

Protocols or plans to promote judicious use of long backboards during prehospital care should engage as many stakeholders in the trauma/EMS system as possible.

Patients should be removed from backboards as soon as practical in an emergency department.

NAEMSP Board

Signatures of NORTN Executive Committee March 31, 2015



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References

1. Practice Management Guidelines for the Screening of Thoracolumbar Spine Fracture. Eastern Association for the Surgery of Trauma: Practice Management Guideline Committee
Revised 07-17-2006
2. Position Statement EMS Spinal Precautions and the Use
3. ACS-Committee on Trauma Approved: October 30, 2012