NB Trauma Program
Programme de traumatologie du NB

Horizon Health Network | Réseau de santé Horizon | Vitalité Health Network | Réseau de santé Vitalité | Ambulance NB | New Brunswick Department of Health | Ministère de la santé du Nouveau-Brunswick

Consensus Statement:
Pre-hospital and Inter-hospital Use of long Spine Boards
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Evidence considered in reaching the consensus statements:

1. Canadian Agency for Drugs and Technologies in Health. Rapid Response Report: The Use of Spine Boards in the Pre-Hospital Setting for the Stabilization of Patients Following Trauma: A Review of the Clinical Evidence and Guidelines. 31 May 2013 http://www.cadth.ca/en/publication/3769

2. White CC 4th, Domeier RM, Millin MG; Standards and Clinical Practice Committee, National Association of EMS Physicians. 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. Prehosp Emerg Care. 2014 Apr-Jun;18(2):306-14. doi: 10.3109/10903127.2014.884197. Epub 2014 Feb 21.

3. Fehlings MG, Cadotte DW, Fehlings LN. A series of systematic reviews on the treatment of acute spinal cord injury: a foundation for best medical practice. J Neurotrauma. 2011 Aug;28(8):1329-33. doi: 10.1089/neu.2011.1955. Epub 2011 Jul 13.

4. Ahn H, Singh J, Nathens A, MacDonald RD, Travers A, Tallon J, Fehlings MG, Yee A. Pre-hospital care management of a potential spinal cord injured patient: a systematic review of the literature and evidence-based guidelines. J Neurotrauma. 2011 Aug;28(8):1341-61. doi: 10.1089/neu.2009.1168. Epub 2010 Jun 16. Review.

5. Morrissey J. Research Suggests Time for Change in Pre-hospital Spinal Immobilization. Journal of Emergency Medical Services. 2013 March 19. http://jems.com

6. Connor D, Greaves I, Porter K, *et al.* Pre-hospital spinal immobilization: an initial consensus statement. *Emerg Med J* 2013;**30**:1067-1069. doi:10.1136/emermed-2013-203207

For pre-hospital patients (that is, those being transported from scene to first hospital):

- ANB should continue to encourage application of the current pre-hospital C-spine clearance rule for all qualifying patients
- ANB should eliminate the practice of the "standing take-down" method of immobilizing trauma patients who are ambulatory at the scene
- Patients who are ambulatory at the scene upon EMS arrival, but who fail the current C-spine clearance rule require only immobilization with a rigid cervical collar and supine positioning on the ambulance stretcher. These patients may walk to the ambulance stretcher.
- Patients who are not ambulatory at the scene, with blunt trauma and for whom current protocols recommend spinal immobilization, use of the long spine board may continue, including during transport to first hospital
- Any patient with an actual or suspected spinal injury will be placed supine and managed with minimal movement of the spine. When c-spine injury is suspected, a rigid cervical collar will also be applied.
- Patients with only penetrating trauma and no evidence of neurological deficit should not be immobilized
- Upon arrival at hospital, ANB paramedics should advise receiving facility staff of the total spine board interval, and should expect to be engaged in early removal of the long spine board, unless the need for immediate clinical interventions takes priority. This recommendation holds even in the presence of suspected spinal cord injury.
- Receiving trauma centres are responsible for the early removal of the long spine board, preferably within 15 minutes of arrival in the Emergency Department, irrespective of injury or trauma centre designation, unless the need for immediate clinical interventions takes priority
- Use of scoop stretcher during pre-hospital phase of care is an area for future development

For inter-hospital trauma transfers:

- No patient should be transferred between hospitals on a long spine board.
- A scoop stretcher or equivalent should be used to transfer the patient from hospital stretcher to the ambulance stretcher at the sending facility
- Similarly, scoop stretcher or equivalent should be used to transfer the patient from ambulance stretcher to hospital stretcher at the receiving facility. The scoop stretcher or equivalent should not be left in place during transfer – even in cases of actual or suspected spinal cord injury
- In addition to use of a rigid cervical collar, ANB should explore methods of limiting lateral movement of the head during the transfer of trauma patients in whom:
    - The c-spine has not been cleared OR
    - Are intubated OR
    - Have suspected or actual brain injury
- Upon arrival at hospital for a transfer, if the patient is on a long spine board, ANB should discuss the need for ongoing use of the long spine board for transfer. Requests to have the patient remain on the long spine board during transfer should be escalated to the On Line Medical Control (OLMC) Physician. The OLMC can, in turn, consult with the Trauma Control Physician if guidance to the sending site is indicated.
- The NB Trauma Program should consider the deployment of a scoop stretcher to the Emergency Department of every NB Trauma Centre, coupled with the required orientation to the use of the device – if this is confirmed to be the recommended device after exploration of options and evidence
- In the longer term, ANB should consider the deployment of a scoop stretcher to replace one of the two long spine boards currently carried in every NB ambulance. If/when implemented, consideration should be given to maximizing use of the scoop stretcher as a preferred alternative to the long spine board, even for the pre-hospital phase of care

Special patient populations:

- Bariatrics: No change from the guidance offered above is recommended
- Geriatrics: No change from the guidance offered above is recommended
- Pediatrics: No change from current ANB practice is recommended (use of infant car seats or PediPacs, both of which can remain in place during inter-facility transfer if required)

Next Steps:

- Verification that the statements noted above hold true for AirCare patients (Completed July 17, 2014)
- Consultation with SJRH and TMH orthopedic surgery, emergency medicine and neurosurgical groups (Completed July 2014)
- Approval by Provincial EMS Medical Advisory Committee (Completed September 2014)
- Approval by NB Trauma Program Advisory Committee (Completed September 2014)
- Implementation Planning (October-November 2014)