



Sharing ideas and expertise to improve practice together

EMERGENCY CARE COMMUNITY OF PRACTICE

Cervical Spine X-rays in Trauma

This set of resources and links outlines available information to support the NICS Emergency Care Evidence in Practice Series.

What is the evidence?

Cochrane Systematic Reviews

There are no Cochrane Reviews regarding C-spine imaging.

Best bets

- **Cervical spine radiography in alert asymptomatic blunt trauma patients** This Best Bet examines the question: In alert asymptomatic blunt trauma patients is cervical spine radiography necessary to exclude bony injury to the cervical spine?
<http://www.bestbets.org/cgi-bin/bets.pl?record=00126>

Related issues:

- **Computer tomography and the exclusion of upper cervical spine injury in trauma patients with altered mental state**
<http://www.bestbets.org/cgi-bin/bets.pl?record=00492>
- **Need for cervical spine imaging for alert children after trauma**
<http://www.bestbets.org/cgi-bin/bets.pl?record=00553>
- **Cervical spine imaging in children under nine after trauma**
<http://www.bestbets.org/cgi-bin/bets.pl?record=00559>

Evidence based guidelines

Guidelines included in this list were produced in 2000 or later and are freely available from appropriate agencies. For more information and other guideline titles see the Emergency Care Community of Practice: Evidence-Based Guideline Resource available from NICS website – www.nicsl.com.au

- **Head injury: Triage, assessment, investigation and early management of head injury in infants, children and adults (2003)** National Collaborating Centre for Acute Care, Guideline commissioned by the National Institute for Clinical Excellence, UK
<http://www.nice.org.uk/page.aspx?o=CG004#documents>
- **ACR Appropriateness Criteria (2005)** American College of Radiology, USA (source National Guideline Clearinghouse)
http://www.acr.org/s_acr/bin.asp?CID=1206&DID=11775&DOC=FILE.PDF

- **Early Management of Patients with a Head Injury (2000)** Section 5: Imaging Scottish Intercollegiate Guidelines Network, UK
<http://www.sign.ac.uk/guidelines/fulltext/46/section5.html>
- **Cervical spine acute care guideline (2006)** 1 page guideline. Victorian State Trauma System, Australia
http://www.health.vic.gov.au/trauma/guidelines/cervical_spine_guidelines.pdf

Closing the gap - Stories of Improvement and Evidence Implementation

Reducing the inappropriate use of cervical spine x-rays in alert and stable blunt trauma patients.

Chu K, Evans R, Brown A, Pillay R. Department of Emergency Medicine, Royal Brisbane Hospital, Queensland, Australia.

This project aimed to improve practical patient care by implementing the NEXUS decision rule for use of C-spine x-rays in alert and stable blunt trauma patients. The project team applied two strategies to improve use of the rule- additional tutorials for ED doctors on the indication for x-ray studies, and printing rule criteria on the back of x-ray request forms. These simple strategies were successful in achieving modest reduction in inappropriate decisions for performing c-spine x-rays.

www.nicsl.com.au (Go to 'Projects' page | 'Targeted Grants' page | link to abstract booklet)

Implementation of the Canadian C-spine rule reduces cervical spine x-ray rate for alert patients with potential neck injury.

Kerr D, Bradshaw L, Kelly AM. *J Emerg Med.* (2005) Feb;28(2):127-31.

Another study, at the Western Hospital, Melbourne, employed education sessions and reminder cards containing the Canadian C-Spine Rule attached to their identification badge. The study demonstrated high acceptance and application of the rule, and a reduction in x-ray ordering rates

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=15707805&query_hl=12&itool=pubmed_DocSum