

# Canadian C-spine rule could help trauma patients, ease overcrowding in emergency departments

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Widespread use of the Canadian C-spine rule by triage nurses in emergency departments would ease discomfort of trauma patients and improve patient flow in overcrowded emergency departments in Canada and abroad, according to a study in *CMAJ (Canadian Medical Association Journal)*.

A clinical decision rule called the Canadian C-spine rule, which helps clinicians with diagnostic or therapeutic decisions, was previously developed for c-spine evaluation. It was designed to help physicians "clear" the c-spine without radiography and to decrease immobilization time. If nurses were also able to follow this clinical decision rule, it could improve [trauma care](#) efficiency in Canadian hospitals.

Canadian emergency departments annually treat 1.3 million patients with blunt force trauma from falls or vehicle accidents and who are at risk of injury to the cervical spine. Most of these patients are alert and their conditions stable. Less than 1% have C-spine fractures.

Nurses in the emergency department are responsible for these patients during initial triage, after which patients are immobilized for hours while waiting for physician assessment and radiography. Immobilization is often unnecessary and causes the patient considerable discomfort. This delay also crowds emergency departments and takes up valuable time of physicians, nurses and technicians.

The study was conducted to evaluate the accuracy, reliability and acceptability of the Canadian c-spine rule when used by nurses for the purpose of assessing the need for immobilization. It was conducted in six Canadian emergency departments and involved [trauma patients](#) who were alert and had stable conditions.

"Nurses usually do not evaluate the c-spine of trauma patients and normally triage all immobilized patients to the ED resuscitation room," write Dr. Ian Stiell, Department of Emergency Medicine, University of Ottawa, Ottawa Hospital Research Institute, and coauthors. "We believe that nurses should be able to safely evaluate alert and stable ambulance patients and "clear" the c-spine of low-risk cases on arrival at the triage station."

The authors found that the use of the c-spine rule by nurses in the emergency departments was accurate, reliable and clinically acceptable. Widespread implementation of the rule for use by nurses throughout Canada and elsewhere would diminish patient discomfort and improve patient flow in overcrowded emergency departments.

**More information:** [www.cmaj.ca/cgi/doi/10.1503/cmaj.091430](http://www.cmaj.ca/cgi/doi/10.1503/cmaj.091430)

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