

New CATCH rule to determine need for CT scans in children with minor head injury

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A new tool may help standardize the use of computed tomography (CT scans) in children with minor head injury and help reduce the number of scans, according to a new study in *CMAJ* (*Canadian Medical Association Journal*).

More than 650,000 [children](#) with minor [head injuries](#) resulting in loss of consciousness, amnesia, disorientation and/or vomiting are seen each year in emergency departments at North American hospitals. CT scans are important for diagnosing serious brain injuries but they expose children to the potentially harmful effects of ionizing radiation and significantly add to health care costs. Use of CT for minor head injury in Canadian pediatric emergency departments has increased to 53% in 2005 from 15% in 1995.

There are currently no widely-accepted, evidence-based guidelines on the use of CT scans in children with minor head injuries.

A team of researchers from pediatric institutions across Canada have developed the CATCH rule (Canadian Assessment of Tomography for Childhood Injury) to guide physicians in determining whether a child with minor head trauma should receive a [CT scan](#). The study involved 3866 children aged 0 to 16 years of age from 10 Canadian pediatric teaching institutions.

"We believe an accurate clinical decision rule, like the CATCH Rule, can stabilize or reduce the number of children receiving a CT scan, thereby minimizing both health care costs and exposure to the potentially harmful effects of ionizing radiation," write Dr. Osmond, Department of Pediatrics, Children's Hospital of Eastern Ontario and coauthors. "There is growing concern that early exposure to [ionizing radiation](#) may result in a significant rise in lifetime fatal cancer risk."

The study was conducted by researchers from the University of Ottawa, University of Alberta,

Children's Hospital of Eastern Ontario Research Institute, University of Toronto, University of Western Ontario, CHU Sainte-Justine, McGill University, Columbia University Medical Centre, University of Calgary, Dalhousie University and University of Manitoba.

There is considerable debate when it comes to the use of CT scans. Some support routine CT scanning of all minor head injury patients, while others are more selective.

"Without the support of widely accepted, evidence-based guidelines, physicians are likely to follow the conservative approach of ordering CT scans for most children seen in emergency departments with minor head injury," write the authors.

The authors conclude that the CATCH Rule, made up of 7 simple findings from the child's history and physical exam, has the potential to both standardize the need for CT and reduce the number of CT scans performed in children with minor head injury. They note that further studies are required to validate this rule in other pediatric age groups.

Provided by Canadian Medical Association Journal

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