

# Significant increase in concussions among Ontario children and youth: York U study

December 5 2014

---

The number of children and youth treated for concussions in both emergency departments and physician's offices in Ontario increased significantly between 2003 and 2010, with falls, hockey and skating injuries identified as the leading causes of pediatric concussion, according to a new joint study out of York University and the Institute for Clinical Evaluative Sciences (ICES).

The study, "A population-based study of [pediatric emergency department](#) and office visits for concussions from 2003 to 2010", published today in the journal *Pediatrics & Child Health*, analyzed all visits related to a concussion by school-aged youth (three to 18 years) in Ontario from 2003 to 2010.

"This study is the first to examine pediatric concussions evaluated in both emergency departments and physicians' offices," says York University Professor Alison Macpherson, the study's lead author. "By examining all of the pediatric concussions evaluated in multiple facilities, we were able to minimize the issue of under-reporting and obtain a more accurate number of concussions treated in Ontario."

Between 2003 and 2010, researchers found a total of 88,688 pediatric concussions were treated in either an [emergency department](#) or a physician's office, and there was a significant trend in both locations. The total rate of concussions per 100,000 increased from 466.7 to 754.3 (for boys), and from 208.6 to 440.7 (for girls) during the study period. The numbers also showed that over time more children were being

evaluated in physician's offices than emergency departments.

When the sources of concussion were broadly examined, falls were found to be the most common cause of concussion in an emergency department, representing 34 per cent of all emergency department visits, followed closely by exposure to force (25.5 per cent) and motor vehicle collisions (12.3 per cent). When specific causes were examined in more detail, hockey and skating - common sports in North America - were the most common causes of concussions that were treated in an emergency department.

"Our findings reinforced that falls in general are the most common cause of pediatric concussions, and that evidence-based prevention initiatives to help reduce the incidence of concussion are warranted - particularly in sports and recreation programs," says senior scientist and chief science officer at ICES, Dr. Astrid Guttmann, the study's senior author. "Sports-related concussions can be minimized by taking preventive action, such as reducing body checking in hockey or wearing a helmet while cycling."

Macpherson says that future studies can attempt to differentiate between the true incidence of concussions and an increase in those seeking a health evaluation due to increased awareness of [concussion](#) and subsequent health consequences.

**More information:** *Pediatrics & Child Health* December 2014, Volume 19 Issue 10: 543-546. [www.pulsus.com/journals/abstracts/issue/10/543-546](http://www.pulsus.com/journals/abstracts/issue/10/543-546)

Provided by York University

Citation: Significant increase in concussions among Ontario children and youth: York U study

(2014, December 5) retrieved 7 May 2024 from  
<https://medicalxpress.com/news/2014-12-significant-concussions-ontario-children-youth.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.