

**Background** Paediatric concussions are an important reason for children to seek care from their physician or in the Emergency Department. Although there are strategies that can help prevent concussions, including environmental changes such as improved playground surfacing, and behavioural changes, such as increased use of bicycle helmets, there is a paucity of information related to the direct costs of concussions. The objective of this study was to provide estimates of the direct costs of paediatric concussions.

**Methods** Using linked administrative health data, children were identified with an index healthcare visit between 2008 and 2010 for a concussion using The National Ambulatory Care Reporting System for children attending an Emergency Department, and the Ontario Health Insurance Programme, for those in a physician's office. Total healthcare costs were calculated subsequent to the index visit, and included physician follow up visits, hospital admissions, and diagnostic imaging. Costs were standardised to 2010 dollars, and did not include any out-of-pocket costs to the family.

**Results** There were 19 799 children with index visits for concussions in Ontario during the two study years. The average cost per patient for an index ED visit was \$219.64 and \$46.13 for an office visit, amounting to a total estimated cost of \$2 944 956.46. The total cost of follow up ED visits was \$129 819.36, and \$246 437.63 for follow-up office visits. The total cost of hospitalisation was \$106 037.54, while the cost of imaging was \$129 741.24.

**Conclusions** Concussions represent a significant financial burden on the health care system. Strategies to prevent concussions can include reference to the substantial cost of treating these children within the health care system. Ongoing research can include indirect costs, as well as other costs incurred by families that have not been included in this analysis.