Socio-economic status and ED visits for pediatric concussion

Background: Concussion has been a topic of interest recently, and new research and guidelines are emerging around the world. In Ontario, the number of Emergency Department (ED) visits for concussion is rising, but little is known about the association between concussion and socio-economic status.

Objective: The objective of this study was to examine the association between socio-economic status and ED visits for concussions in Ontario, Canada.

Design/Methods: This is a longitudinal population-based study using routinely-collected administrative data from the Institute for Clinical Evaluative Sciences. Data from all Emergency Department visits and hospitalizations are included. For the purposes of this study, all injuries coded using the ICD-10 CA code associated with concussion (S060) were included. The denominator used for this study was the number of children residing in Ontario in each age group. The rate per 100000 children was calculated from 2008 to 2015.

Results: There were 5,889 concussions reported at an emergency department in 2008, and 14,906 in 2015. The rate among the lowest socioeconomic class quintile was 5.23 per 100000 person years in 2008, and 7.12 for the highest socioeconomic class quintile. By comparison, the lowest and highest quintiles recorded 8.64 and 11.07 respectively in 2015. The rates of concussions among all socioeconomic quintiles were either stable or increasing.

Conclusion(s): The results of this study suggest that rates of concussions are increasing among children. However, children in a higher income quintile consistently visited EDs for concussion more than children from lower income quintiles. This may be due to the increased opportunity wealthier children have to engage in organized sports such as hockey. An additional possibility is that children in lower income quintiles are not recognizing or seeking care for concussions. These results suggest that further policies related to awareness and identification of concussion need to be considered for all children.