

Injury Data Highlight

Sports/Recreation Related Traumatic Brain Injury Among Ohio Youth

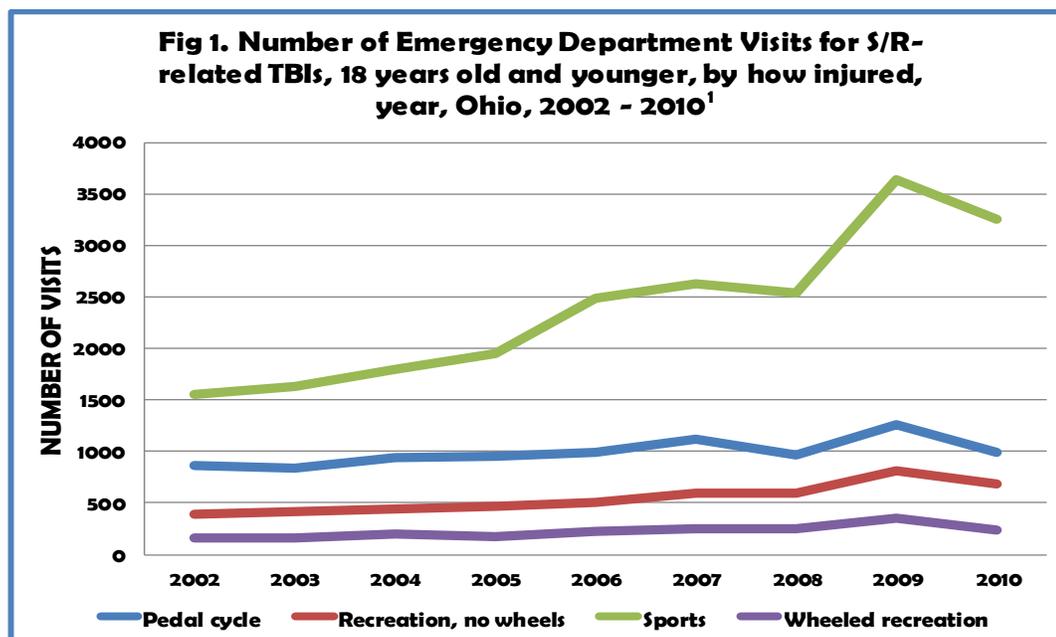


September 2012

This injury data highlight has been prepared by the Ohio Department of Health, Violence and Injury Prevention Program to present data on emergency department (ED) visits for sports/recreation (S/R)-related traumatic brain injuries (TBIs) among Ohio youth 18 years and younger. For this analysis, sports and recreation activities include the following categories: pedal cycle (traffic and non-traffic), recreation, sports, and wheeled recreation.

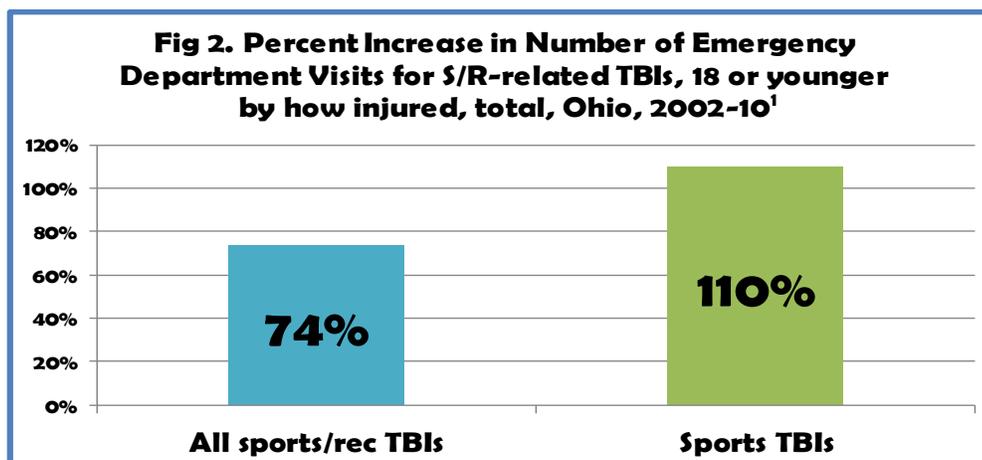
EMERGENCY DEPARTMENT VISITS ARE ON THE RISE

On average, more than 4,000 Ohio youth were treated in emergency departments for sports/recreation (S/R) related traumatic brain injuries (TBIs) each year, with a dramatic rise from 2,970 in 2002 to 5,167 in 2010, a total increase of 74 percent, (Figures 1-2).



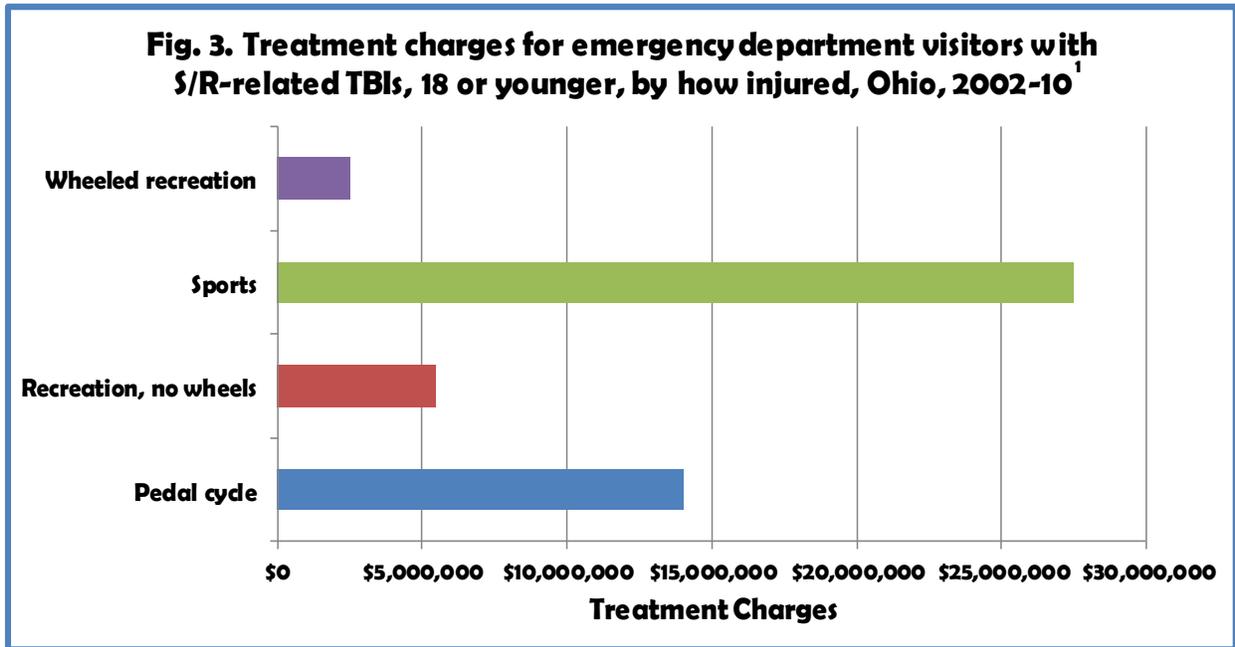
SPORTS RELATED TBIs ARE MOST PREVALENT

Emergency department visits for sports-related TBIs increased 110 percent from 2002-10. Sports-related TBIs were associated with both the greatest number of emergency department visits as well as the greatest increase from 2002-10, (Figures 1- 2).



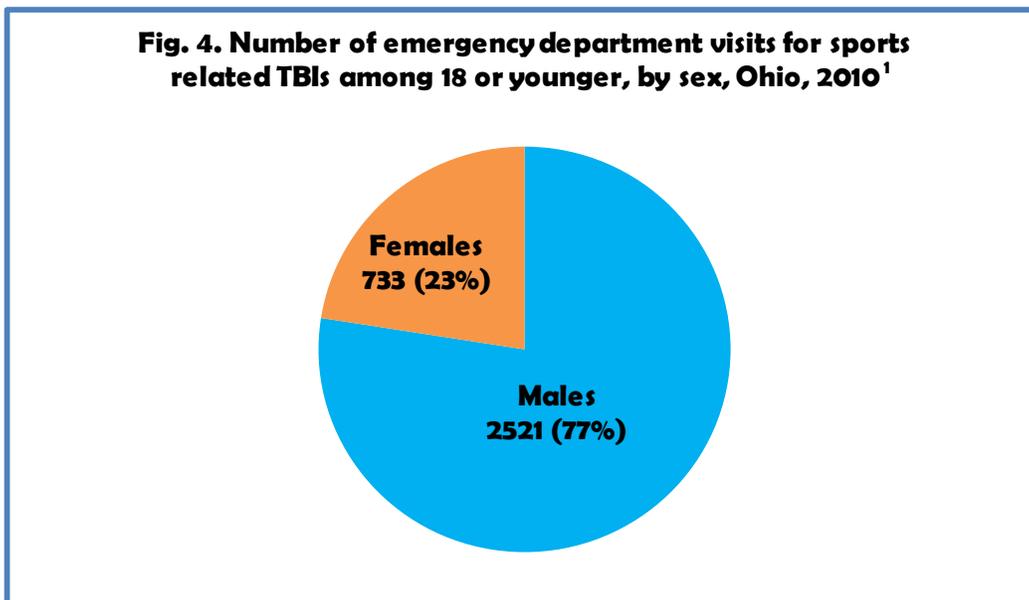
SPORTS RELATED TBIs ARE COSTLY

Emergency department visits for the 21,848 sports-related TBIs from 2002-10 were associated with more than \$27.4 million in treatment charges, and were the most costly category of S/R-related TBIs, (Figure 3).



MALES EXPERIENCED A GREATER NUMBER OF SPORTS RELATED TBIs

Males experienced a greater number of sports related TBIs than females in 2010, (Figure 4). From 2002-10, fifteen to eighteen year-old males had the highest treatment rate, 350 per 100,000, for sports related TBIs. Ten to fourteen year-old males had the second highest treatment rate, 280 per 100,000.



Acknowledgement: A special thanks to the Ohio Hospital Association for their data and assistance.

1. Source: Ohio Hospital Association

Notes: International Classification of Disease Revision 9 Clinical Modifications (ICD-9-CM) codes were used to define sports/recreation-related injuries, as best they could, taking into account the inherent limitations of utilizing administrative data for injury surveillance efforts (see limitations below). For the purposes of this analysis, five 'how injured' categories (traffic-related pedal cycle; non traffic pedal cycle; recreation, no mention of wheels; sports, no mention of wheels; and wheeled recreation) were developed to capture all sports/recreation injuries. (List of ICD-9-CM codes used to define categories is available upon request). These findings represent only ED visits for sport/recreation-related TBIs. They do not reflect inpatient hospitalizations or fatalities, nor should the patterns reflected here be considered representative of those of more severe injuries. Persons who are treated at an ED and later admitted to a hospital are removed from the ED dataset and added to the inpatient dataset, and therefore are not available for this analysis.

Limitations: Only those who sought medical care were captured for this analysis. ED visits, not individuals, were the unit of measurement, thereby resulting in duplication if readmissions for the same initial event occurred. Ohio residents treated in out-of-state hospitals were not consistently included. Medical charges were based on billing data and not actual costs.