

Injury Data Highlight

Pedal Cycle and Other Wheeled Recreation Related Traumatic Brain Injury Among Ohio Youth

Get the Facts...

A total of 9,383 Ohio youth were treated in emergency departments (EDs) for pedal cycle and other wheeled recreation related TBIs from 2002-2009 (Figure 1).

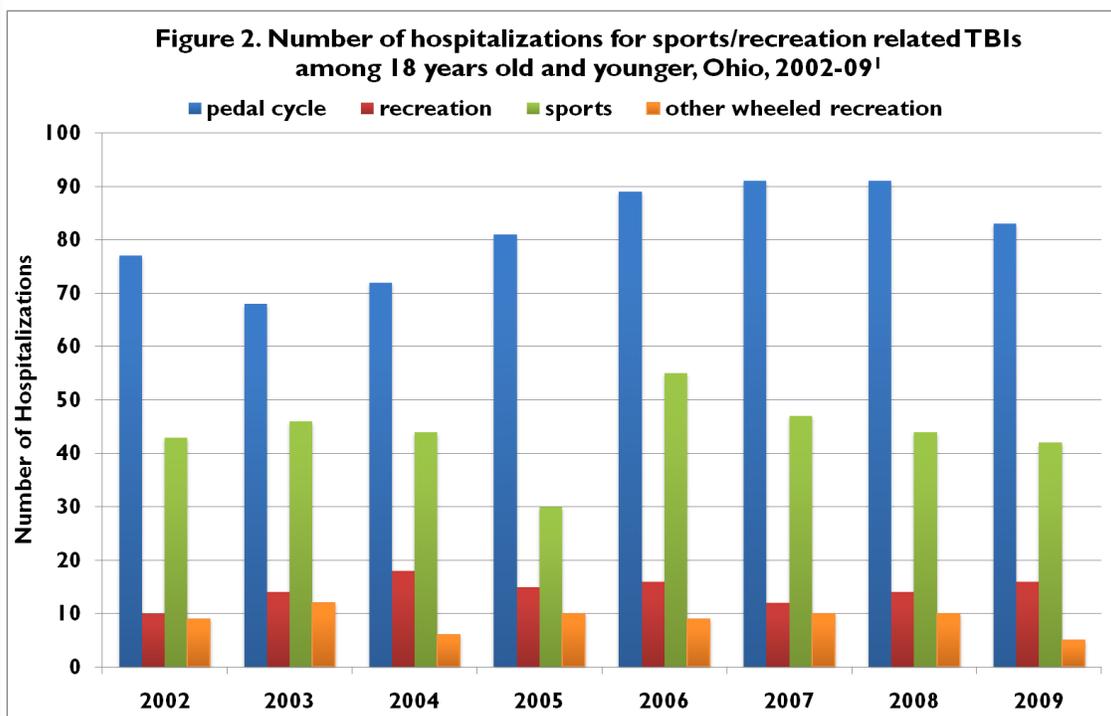
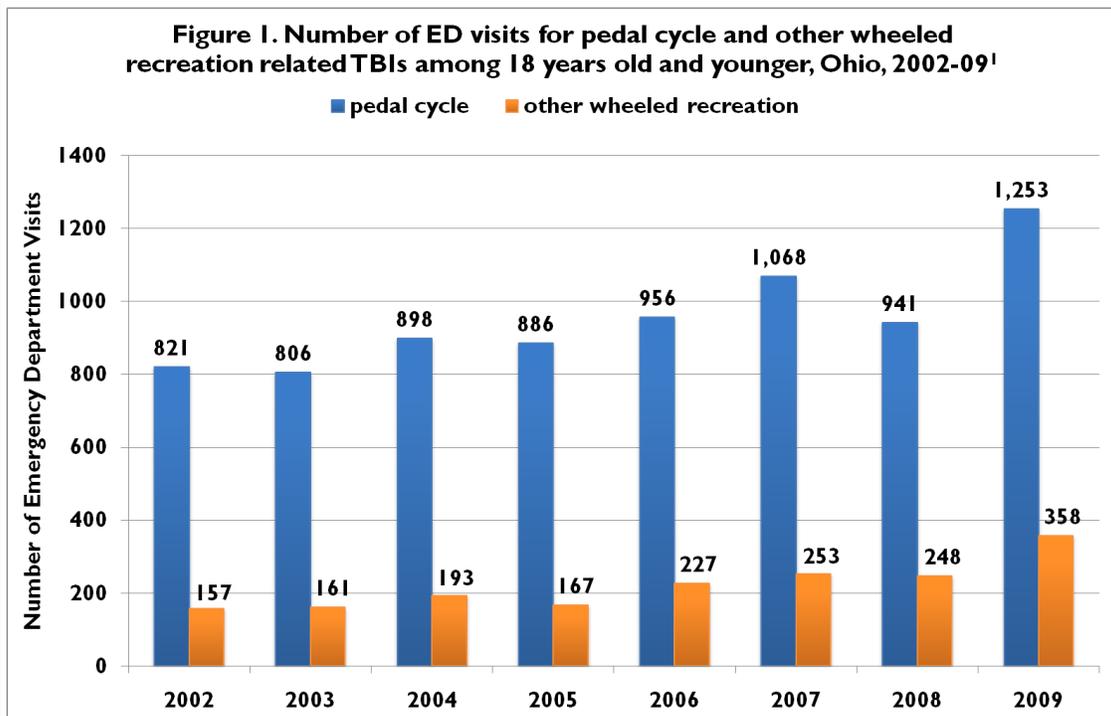
From 2002-2009, ED visits for pedal cycle and wheeled recreation related TBIs increased 53% and 128% respectively (Figure 1).

Pedal cycle TBIs were associated with the greatest number of sports/recreation hospitalizations (Figure 2).

Over the course of the study period, a total of 723 young Ohioans were hospitalized for pedal cycle and other wheeled recreation related TBIs (Figure 2).

From 2002-2009, eleven young Ohioans died from TBIs associated with sports/recreation activities. All of the fatalities were caused by traffic related pedal cycle TBIs.

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 and hospitalizations for pedal cycle (traffic and non-traffic) and other wheeled recreation (non-motorized scooters, skateboards, roller skates, and inline skates) related traumatic brain injuries (TBIs) among Ohio youth 18 years and younger.



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ED visits for pedal cycle and other wheeled recreation related TBIs from 2002-2009 were associated with more than \$14.7 million in treatment charges (Figure 3).

Hospitalizations for pedal cycle and other wheeled recreation related TBIs during the study period were associated with more than \$17.5 million in treatment charges (Figure 3).

From 2002-2009, ten to fourteen year olds were the age group most commonly treated at EDs or hospitalized for pedal cycle and other wheeled recreation related TBIs (Figure 4).

Prevention is key. Helmets are 85 to 88 percent effective in mitigating head and brain injuries, making the use of helmets the single most effective way to reduce pedal cycle and other wheeled sports related TBIs.²

Figure 3. Total treatment charges for pedal cycle and other wheeled recreation related TBIs among children 18 years or less, Ohio, 2002-09¹

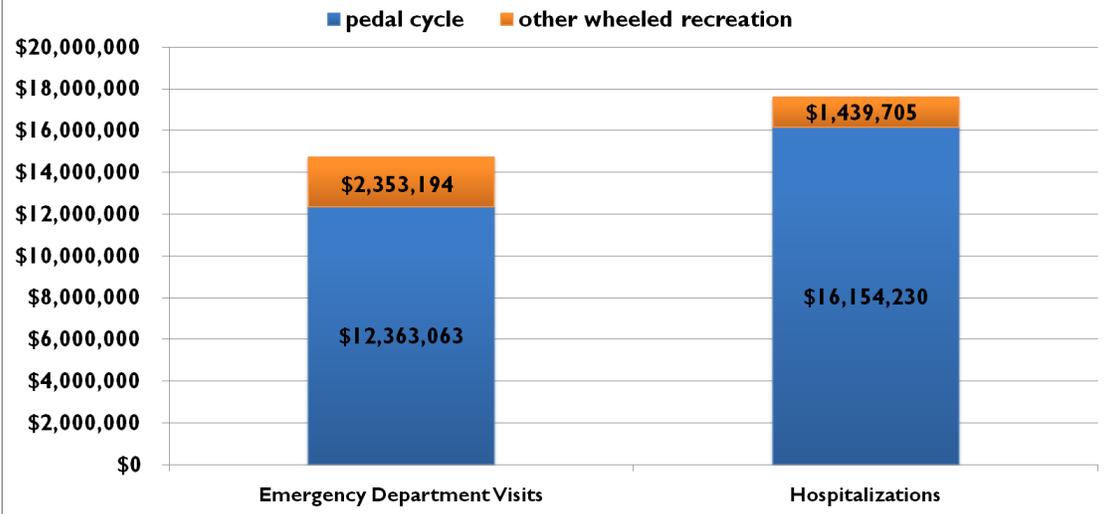
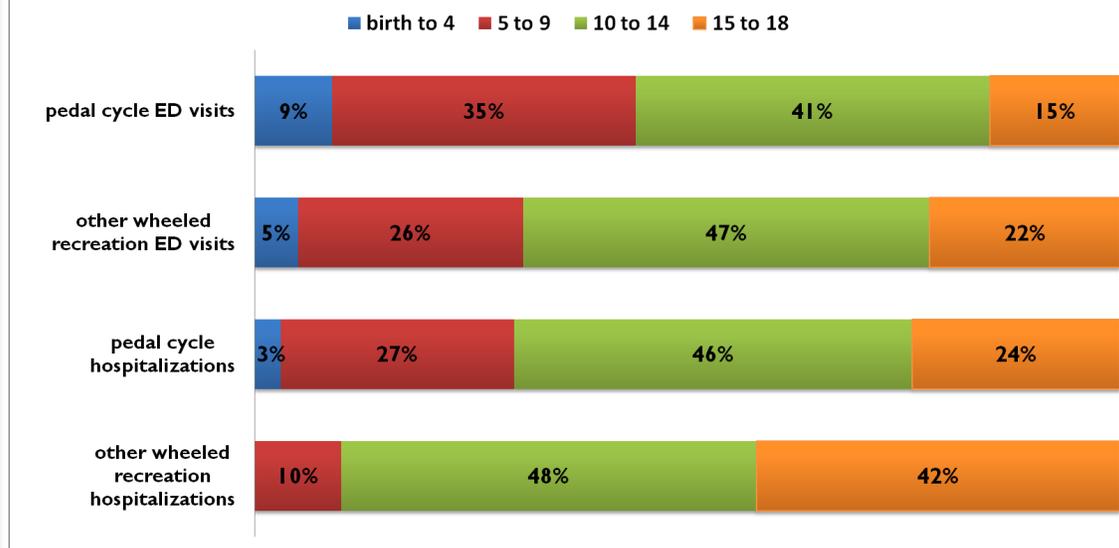


Figure 4. Percentage of ED visits and hospitalizations for pedal cycle and other wheeled recreation related TBIs among 18 years old and younger, by age, Ohio, 2002-09¹



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

References:

- 1. Source: Ohio Hospital Association
- 2. Source: National Highway Traffic Safety Administration

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.
- Other wheeled recreation includes falls from non-motorized scooters, skateboards, roller skates, and inline skates.
- 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.

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.