

## The Impact of Motorized Recreational Vehicle-Related Injuries in Ohio, 2002-2003

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### ABSTRACT

**Objective:** The objective of this study was to describe the epidemiology and clinical and economic impact of motorized recreational vehicle (MRV)-related injuries in Ohio during 2002-2003.

**Methods:** We analyzed probabilistically-linked statewide Emergency Medical Services (EMS) and hospital inpatient data for 2002-2003. Record pairs with a MRV-related E-code (E820-E825) in either the EMS or hospital database, or both, were included in this study.

**Results:** There were 538 patients hospitalized for MRV-related injuries, who had linked EMS and hospital inpatient records. Median patient age was 32 years (range 3 to 93 years), and nearly 79% of cases were male. The majority of linked cases occurred in an urban area (66%) and was covered by commercial insurance (61%). Twenty-five percent of cases occurred on a street or highway, and among those, 40% sustained a traumatic brain injury (TBI) compared with 22% for those that occurred at another location. A helmet was worn in 36% of cases, and there was a trend of decreasing helmet use with increasing patient age. Alcohol was involved in 23% of cases, and 21% of cases involving alcohol wore a helmet. The mean ISS was 9.0, and severe injury (ISS $\geq$ 16) was sustained by 17% of cases. There were seven fatalities during the two-year study period. The median hospital charge was \$12 243 per patient, with two-year cumulative hospital charges of \$11.6 million. Median length of hospital stay was 3.0 days, with a range of 1 to 52 days. Mean length of stay among patients covered by federal insurance (6.0 days) was significantly longer than among patients covered by other types of insurance (3.9 days), after adjusting for ISS (p=0.02).

**Conclusion:** MRV-related injuries are an important public health problem in Ohio. State safety legislation, vehicle design changes, and training of MRV users offer important opportunities to prevent these costly injuries.