Special Emphasis Report:

Unintentional Motor Vehicle Traffic Injuries

2023

Maryland

UNDERSTANDING MVT INJURIES

Every day, thousands of Americans are involved in motor vehicle crashes on public roadways that result in injury or death. Unintentional Motor Vehicle Traffic (MVT) injuries include those to motor vehicle occupants (drivers and passengers), motorcyclists, pedestrians, pedal cyclists, and other persons in crashes that occur on roads and streets.

Burden and Overview

MVT injuries are a leading cause of hospitalization and death in the United States and Maryland. For every MVT injury death in Maryland there were 4 non-fatal hospitalizations and 79 emergency department visits. Figure 1 reflects total counts for 2021. During a ten-year period, the rate of MVT injury deaths fluctuated (see Figure 2), with the lowest rate of 7.0 per 100,000 residents in 2018 and increasing to 9.2 per 100,000 residents in 2021.

Figure 1: Motor Vehicle Traffic Injury Pyramid in 2021

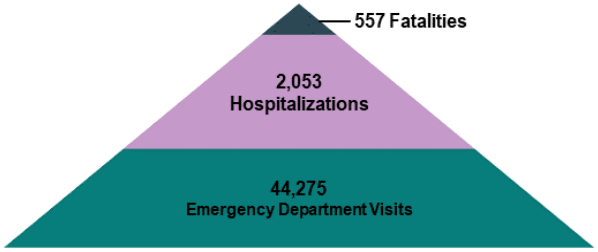
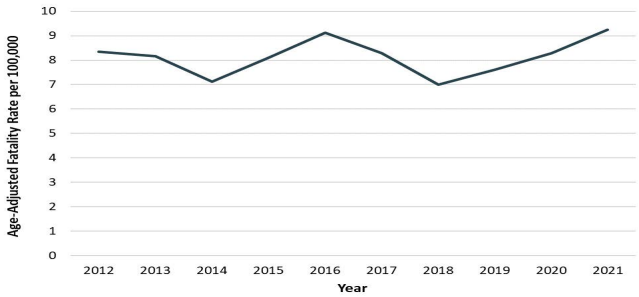


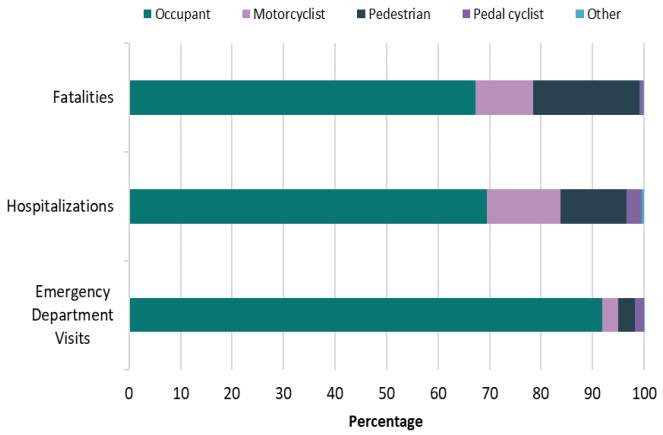
Figure 2: Rate of Motor Vehicle Traffic Deaths Among Maryland Residents



Injuries by Type of Person

Figure 3 illustrates that most persons injured or killed by MVT injuries are occupants (drivers and passengers). In 2021, occupants accounted for 67.3% of MVT deaths, 69.5% of hospitalizations, and 91.9% of ED visits. Figures 4 through Figure 6 will focus on occupant-related injuries.

Figure 3: Percent of Unintentional MVT Injuries by Severity of Injury and Type of Person in 2021



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Maryland
DEPARTMENT OF HEALTH

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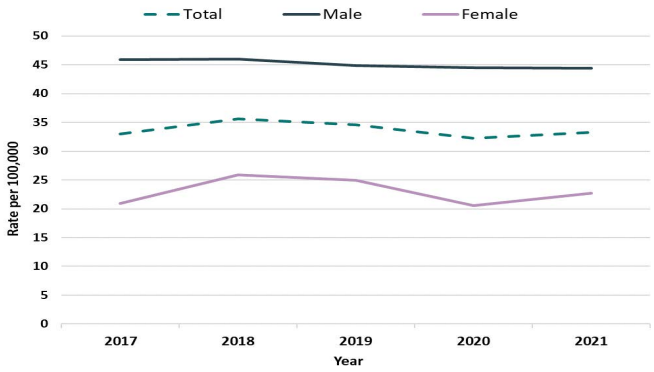
MVT Injuries by Geography

In 2021 the largest percentage of motor vehicle traffic occupant injuries in Maryland occurred in Baltimore City (18.8%) and the highest percentage of motor vehicle traffic occupant fatalities were in Prince George's County (22.9%). Data for additional jurisdictions can be found at www.zerodeathsmd.gov.

MVT Injuries by Sex and Age Group

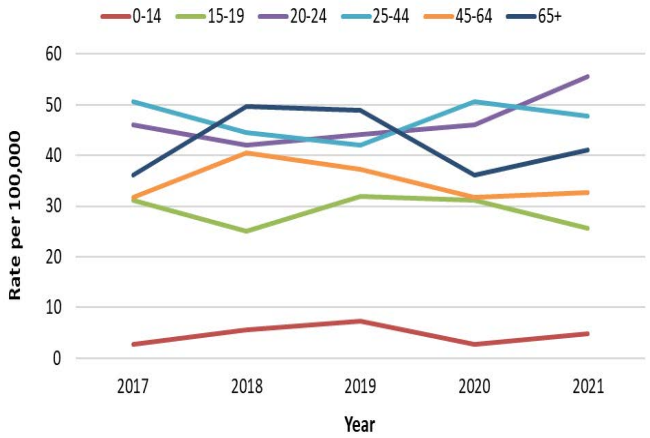
Males had higher non-fatal MVT-occupant hospitalization injury rates than did females in 2020 (44.4 per 100,000 and 33.3 per 100,000 respectively). Rates for males remained relatively stable over the 2017-2021 period and rates for females fluctuated between 20.6 and 25.9 per 100,000 (see Figure 4).

Figure 4: MVT Occupant-related Hospitalization Rates by Sex, 2017-2021



The age groups with the highest non-fatal MVT-occupant hospitalization injury rate in Maryland in 2021 were 20-24 years followed by 25 to 44 years. Among 20-24 years, there was an increase from 2018 to 2021 (42.1 and 55.7 per 100,000 residents respectively). Residents 65 years and older had the highest rates in 2018 at 49.6 which decreased to 41.1 per 100,000 in 2021 (See Figure 5).

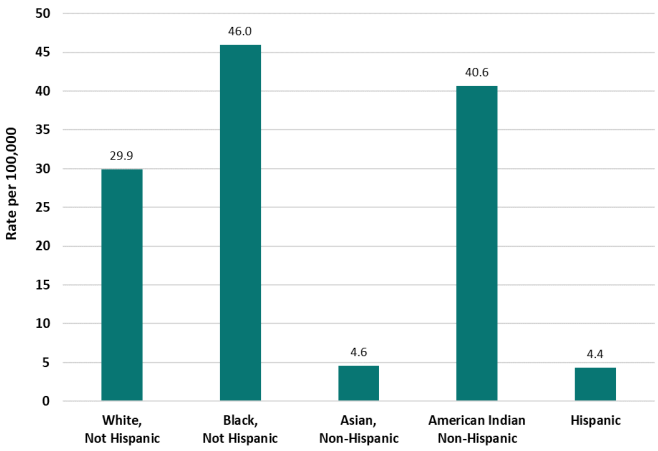
Figure 5: MVT Occupant-related Hospitalization Injury Rates by Age Group, 2017-2021



MVT Injuries by Race and Ethnicity

Figure 6 presents non-fatal MVT-occupant hospitalization injury rates by race and ethnicity for Maryland residents. The rate was highest for Black, non-Hispanic residents (46.0 per 100,000) followed by American Indian non-Hispanic residents at 40.6 per 100,000).

Figure 6: Hospitalization Rates by Race and Ethnicity, 2021



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Quick Facts

Seat Belt Use:
According to the National Occupant Protection Use Survey, seat belt use in Maryland was 92.7% in 2021.[1]

An average of 2,234 motor vehicle occupant injuries per year result from not wearing a seat belt.[1]

1 in 3 (35%) of those killed in a motor vehicle crash in Maryland were not wearing a seat belt.[1]

In Maryland, children must be kept rear-facing until at least two years of age, unless the child meets or exceeds the height and weight on the seat's guidelines.[2]

Helmets:
Maryland law requires all bicyclists under the age of 16 to wear a helmet.[3] Motorcycle helmets are required for all riders.[4]

Cost Data:
The total medical cost of unintentional MVT deaths in Maryland in 2021 was $8.68 million. The value of statistical life cost was $6.86 billion.[5]

Alcohol Level:
In 2021, 35% of drivers with fatal MVT injuries in Maryland had a blood alcohol concentration of more than the legal limit (.08).[1]

[1]National Center for Statistics and Analysis. (2023, September) Traffic safety facts 2021 Data (Report No. DOT HS 813 509). National Highway Traffic Safety Administration.
[2]Md. Code, Transportation § 22–412.2 (2022).
[3]Md. Code, Transportation § 21-1207.1 (2010).
[4]Md. Code, Transportation § 21-1306 (2016).
[5]Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS).

MVT Injury Prevention Activities

The Maryland Department of Health (MDH) supports transportation safety through its partnership with the Maryland Highway Safety Office, promotion of state and local Vision Zero initiatives, collection of distracted driving surveillance questions in Maryland's Behavioral Risk Factor Surveillance Survey, and implementation of transportation safety programs.

MDH is funded by the CDC's Core State Injury Prevention Program (SIPP), which includes transportation safety as a priority injury area. Core SIPP supports transportation safety in Prince George's County by funding the local health department to engage youth in distracted driving prevention activities and to reach the Spanish speaking community through the dissemination of marketing messages about drinking and driving.

Kids In Safety Seats (KISS) is a legislatively mandated, state-wide MDH program funded through the Maryland Highway Safety Office to reduce injuries and deaths among Maryland's children. This is accomplished through educational and promotional efforts aimed at helping people to obtain and use car seats and booster seats correctly every time a child rides in a motor vehicle.

Mortality data was provided by the MDH Vital Statistics Administration. Hospitalizations and ED visits are based on discharge diagnosis data provided by the Maryland Health Services Cost Review Commission. Analysis was conducted by MDH and include Maryland residents. ED visits exclude fatal cases. Hospitalization exclude ED visits and fatal cases.