

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.

Burden and Overview

MVT injuries are a leading cause of hospitalization and death in the United States and Tennessee. In 2020, for every unintentional MVT death in Tennessee there were 4 non-fatal hospitalizations and 50 emergency department visits. Figure 1 reflects total counts for 2020. During a twelve-year period, the rate of unintentional MVT deaths fluctuated (see Figure 2), hitting a low of 13.7 deaths per 100,000 residents in 2015 and reaching a high of 17.6 deaths per 100,000 residents in 2020.

FIGURE 1: Unintentional Motor Vehicle Traffic Injury Pyramid for 2020

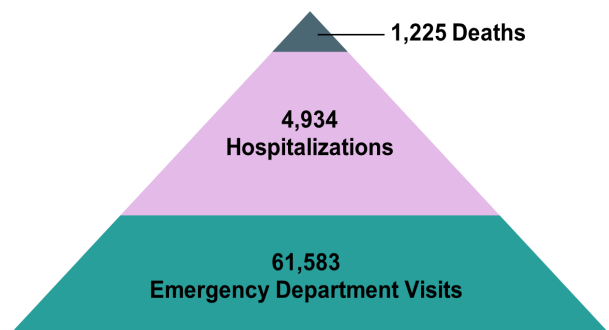
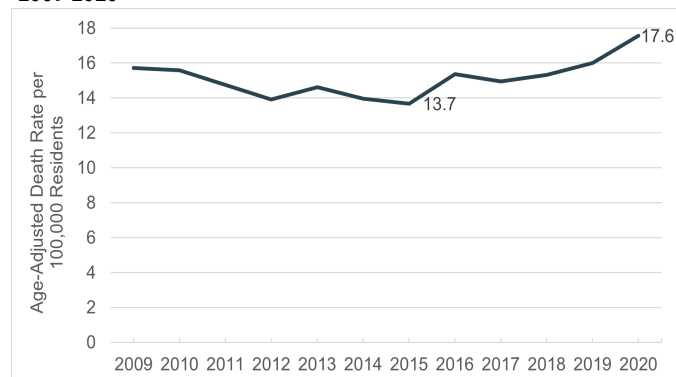


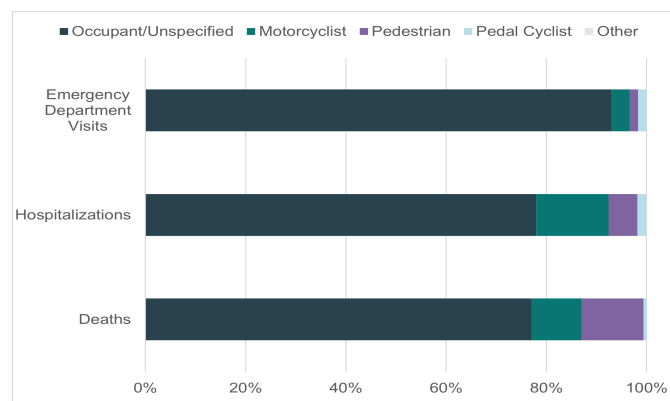
FIGURE 2: Rate of Unintentional MVT Deaths Among TN Residents, 2009-2020



Injuries by Type of Person

Figure 3 illustrates that most persons injured or killed by unintentional MVT injuries are occupants (drivers and passengers). From 2016 through 2020, occupants accounted for 93% of unintentional MVT injury ED visits, 78% of unintentional MVT injury hospitalizations and 77% of unintentional MVT deaths. Table 1 & Figures 4 through 6 will focus on occupant-related injuries.

FIGURE 3: Percent of Unintentional MVT Injuries by Severity and Type of Person, 2016-2020



MVT Injuries by Geography

In 2020, there were 56,780 emergency department visits in Tennessee for residents' unintentional motor vehicle traffic occupant injuries. Table 1 presents the five regions of Tennessee's thirteen regions and metro areas with the highest rates (per 100,000) of residents visiting an emergency department for an unintentional MVT occupant injury.

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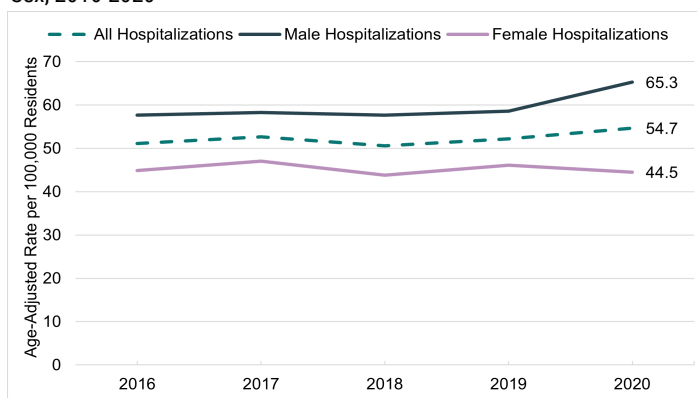
TABLE 1: Unintentional MVT Occupant Injury ED Visits by Region, 2020

Region	Rate per 100k Residents
Shelby County	1,482
Davidson County	1,073
Hamilton County	922
East Tennessee	823
Southeast Tennessee	813

MVT Injuries by Sex and Age Group

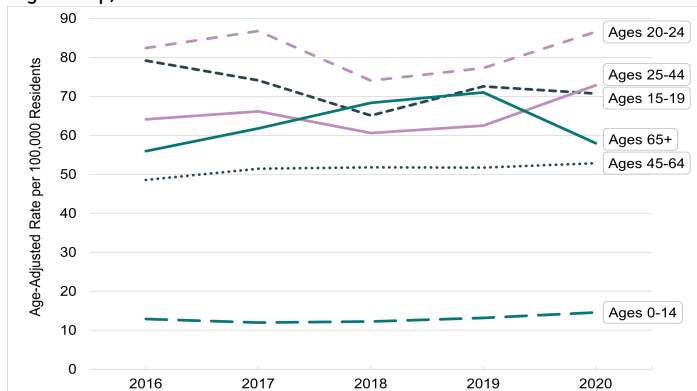
Males had higher unintentional MVT occupant injury hospitalization rates than females (65.3 per 100,000 and 44.5 per 100,000 respectively in 2020). Rates for both sexes generally remained stable, but in 2020 the male rate increased.

FIGURE 4: Unintentional MVT Occupant Injury Hospitalization Rates by Sex, 2016-2020



The age group with the highest unintentional MVT occupant injury hospitalization rate in Tennessee was the 20-24 year age group. Rates remained stable, with some fluctuation, over the 5-year period for all age groups.

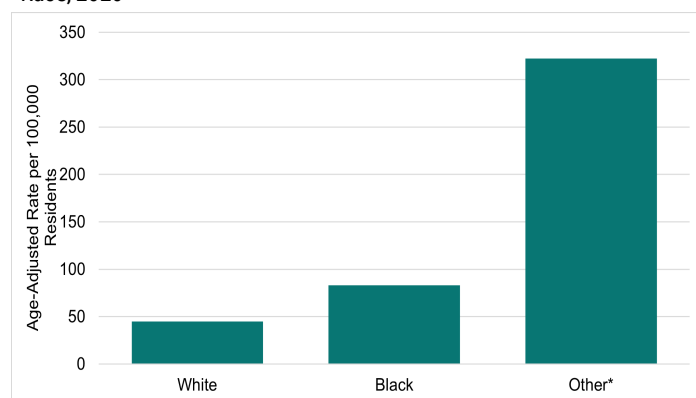
FIGURE 5: Unintentional MVT Occupant Injury Hospitalization Rates by Age Group, 2016-2020



MVT Injuries by Race

Figure 6 presents unintentional MVT occupant injury hospitalization rates by race for Tennessee residents. *The Other category includes Native Americans, Alaskan Natives, Asians, Pacific Islanders, and those with a known race other than White or Black.

FIGURE 6: Unintentional MVT Occupant Injury Hospitalization Rates by Race, 2020



Quick Facts

Helmets:

Bicycle helmets are required for all riders under the age of 16. Motorcycle helmets are required for all riders.

Seat Belt Use:

According to the National Occupant Protection Use Survey, seat belt use in Tennessee was 91.8% in 2020.

The number of lives saved in Tennessee by using a seat belt in 2017 was 463. A potential additional 91 lives could have been saved if seat belt use was 100%.

Tennessee has a primary seat belt law meaning law enforcement officers can ticket a driver or passenger for not wearing a seatbelt even if there is no other traffic offense taking place.

Cost Data:

The total medical cost of unintentional MVT deaths in Tennessee in 2020 was \$16.31 million.

Alcohol Level:

In 2020, 27% of MVT deaths in Tennessee were involved in a crash with a driver who had a blood alcohol concentration (BAC) greater than the legal limit (0.08 g/dL).

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MVT Injury Prevention Activities

National Activities

PREVENTION	TDH is funded by CDC's Core State Injury Prevention Program , also receiving the Enhanced Component award.
SURVEILLANCE	TDH's ISP is funded by NHTSA's Highway Safety Grant via a subgrant from the TN Highway Safety Office.
PARTNERSHIPS	TDH works with jurisdictions from across the country on CSTE's Injury Surveillance Workgroup to build consensus on ICD-10-CM-based injury surveillance methods and develop standards for practice.
ACCOMPLISHMENTS/SUCCESSES	Tennessee completed NHTSA's Pedestrian Safety Assessment in 2022 and formed the TN Pedestrian Safety Task Force. Experts from the transportation, education, health, and safety fields at the state and local levels, academic researchers, and community group members meet quarterly to find ways to improve pedestrian safety.

State Activities

PREVENTION	TDH helps implement Checkpoints , a parent and teen driving agreement program, at schools.
SURVEILLANCE	TDH links crash, emergency department, hospital discharge, and death data for passive surveillance efforts.
PARTNERSHIPS	TDH partners with other state agencies like TDOSHS to conduct analytic projects that support public safety initiatives. TDH also works with schools to implement the Checkpoints Program. TDH staff serve on TN's Occupant Protection Task Force and the Traffic Records Coordinating Committee.
ACCOMPLISHMENTS/SUCCESSES	To see some of TDH's accomplishments, visit the following links: Violence and Injury Prevention Program Injury Surveillance Program

Footnotes

Acronyms:

CDC= Centers for Disease Control and Prevention

CSTE= Council of State and Territorial Epidemiologists

ISP= Injury Surveillance Program

NHTSA= National Highway Traffic Safety Administration

TDH= Tennessee Department of Health

TDOSHS= Tennessee Department of Safety and Homeland Security