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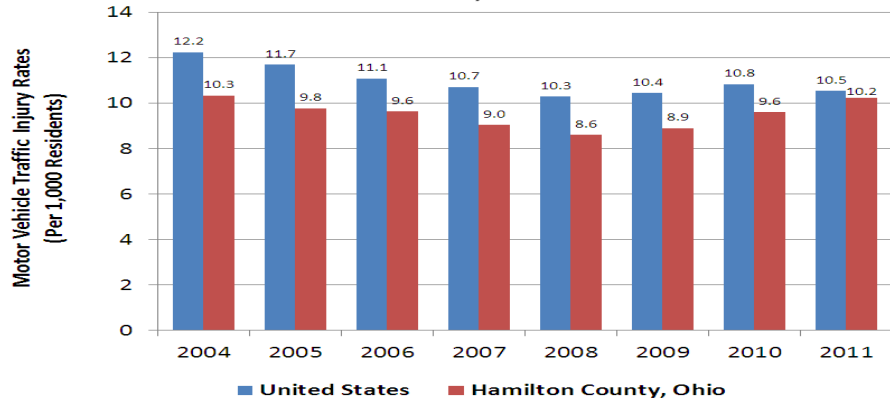
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Motor Vehicle Traffic Issue Brief

Motor Vehicle Traffic Injuries, 2004-2011

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Figure 1. Motor Vehicle Traffic Injury Rates, By Jurisdiction, 2004-2011

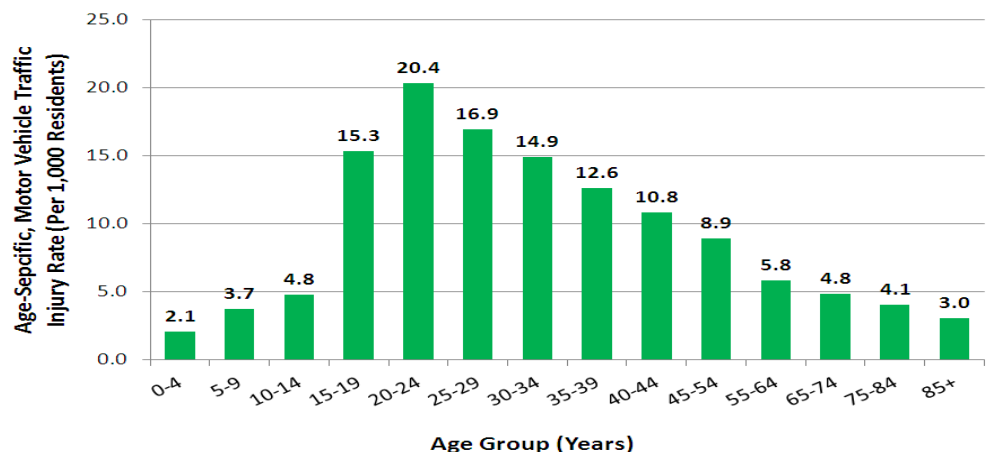


Source: United States data were collected from the Centers for Disease Control and Prevention: Web-based Injury Statistics Query and Reporting System (WISQARS). Hamilton County data were collected from the Hamilton County Injury Surveillance System.

According to the Centers for Disease Control and Prevention (CDC), “In the United States, motor vehicle-related injuries are the leading cause of death for people age 5-34.”¹ Figure 1 shows the motor vehicle traffic (MVT) injury rates for the United States and Hamilton County, Ohio. Injuries can be classified as MVT when they involved any vehicle that was moving on a public highway, street, or road. From 2004 to 2008 both the U.S. and Hamilton County, Ohio experienced a drop in MVT injury rates. However, in subsequent years, the MVT injury rates increased in Hamilton County. As Figure 1 shows, the Hamilton County rate for 2011 has nearly returned to the level the rate was at in 2004 (10.2 per 1,000 versus 10.3 per 1,000 respectively).

Motor Vehicle Traffic Injuries by Age

Figure 2. Annual, Age-Specific, Motor Vehicle Traffic Injury Rates, Hamilton County, 2004-2011



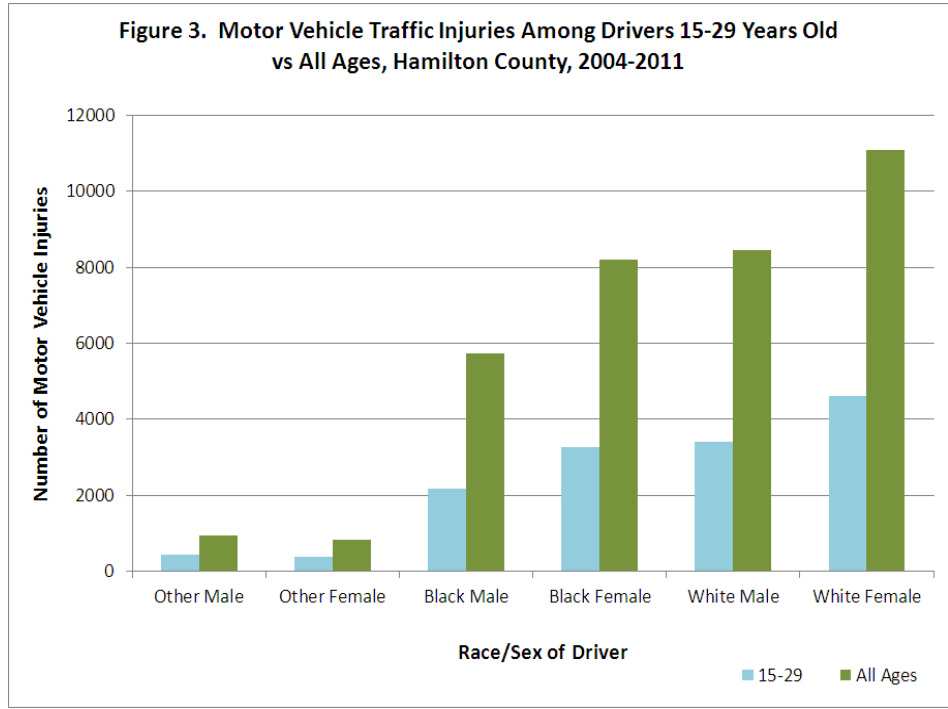
Age is an important factor to examine when discussing risk for motor vehicle traffic injuries. Figure 2 shows the annual, age-specific rates for motor vehicle traffic injuries among Hamilton County residents during 2004-2011. As the figure shows, youth (15-19) and young adults (20-29) had the highest rates of MVT injuries. Many factors are believed to play a role in why motor vehicle traffic injuries occurred more frequently among these young adults. The next section of the issue brief will discuss in more detail MVT injuries among young adults.

Young Adults and Motor Vehicle-Related Injuries

As seen previously in this brief, individuals between the ages of 15-29 are more likely to suffer a MVT injury than older adults. One factor to consider is experience behind the wheel. Generally, younger adults (15-29 years old) have less driving experience than older adults. Assuming that most adults learn to drive by the age of 18; an adult 25 years of age would have 7 years worth of driving experience compared to a 50 year-old with 32 years worth of experience behind the wheel. This difference in experience may play a role in how the driver handles various roadway hazards, ultimately impacting the likelihood of an injury.

75 percent of U.S. drivers 18-29 years of age reported talking on their cell phone while driving at least once in the past 30 days.²

Additionally, older adults are less likely to be using a cell phone or texting device while driving compared to younger drivers. According to the CDC nearly 40 percent of 18-29 year old drivers reported talking on their cell phones ‘regularly’ or ‘fairly often’ while driving; in comparison to only 8 percent of drivers 60 and older.² A similar trend exists with the use of texting/emailing devices among drivers. Over 25 percent of drivers between the age of 18-29 reported



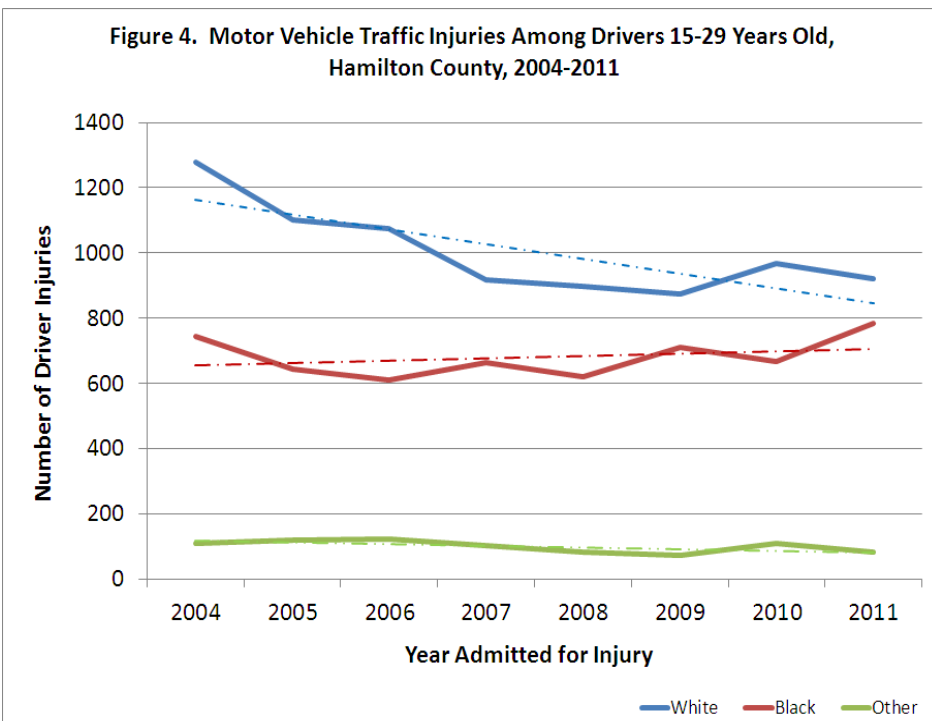
texting or emailing ‘regularly’ or ‘fairly often’ while driving; compared to 3 percent of drivers 60 and older.² Distractions such as talking on the phone or texting while driving are dangerous for drivers as they cause the drivers to take their eyes off the road, hands off the wheel, and mind off driving.

Between 38 and 45 percent of MVT

injuries occurred among drivers between the ages of 15-29. Figure 3 shows the number of MVT injuries that occur among drivers age 15-29 for specific race/sex groups. As Figure 3 shows, approximately 40 percent of injuries to driver of any age occurred to those 15-29 years old regardless of race/sex grouping. The group with the largest number of reported injuries was the white female group.

Figure 4 shows the number of MVT injuries among drivers 15-29 years old from 2004-2011. The solid lines represent the number of injuries among individuals between the ages of 15-29, while the dotted lines represent the linear trend of the data from 2004-2011. Overall, injuries among 15-29 year old white drivers decreased from 2004-2011. This is to be expected as the number of 15-29 year olds in the population also decreased during that time period. However, 15-29 year old black drivers experienced an increase in injuries from 2004-2011. Both white and black 15-29 year old drivers experienced a decrease in injuries from 2004-2006. After 2006, black 15-29 year old driver injuries increased while white 15-29 year old driver injuries decreased. The number of injuries among 15-29 year old drivers of other races remained relatively constant from 2004-2011.

Another way to monitor the effects of motor vehicle traffic injuries is to look at



Motor Vehicle Traffic Deaths

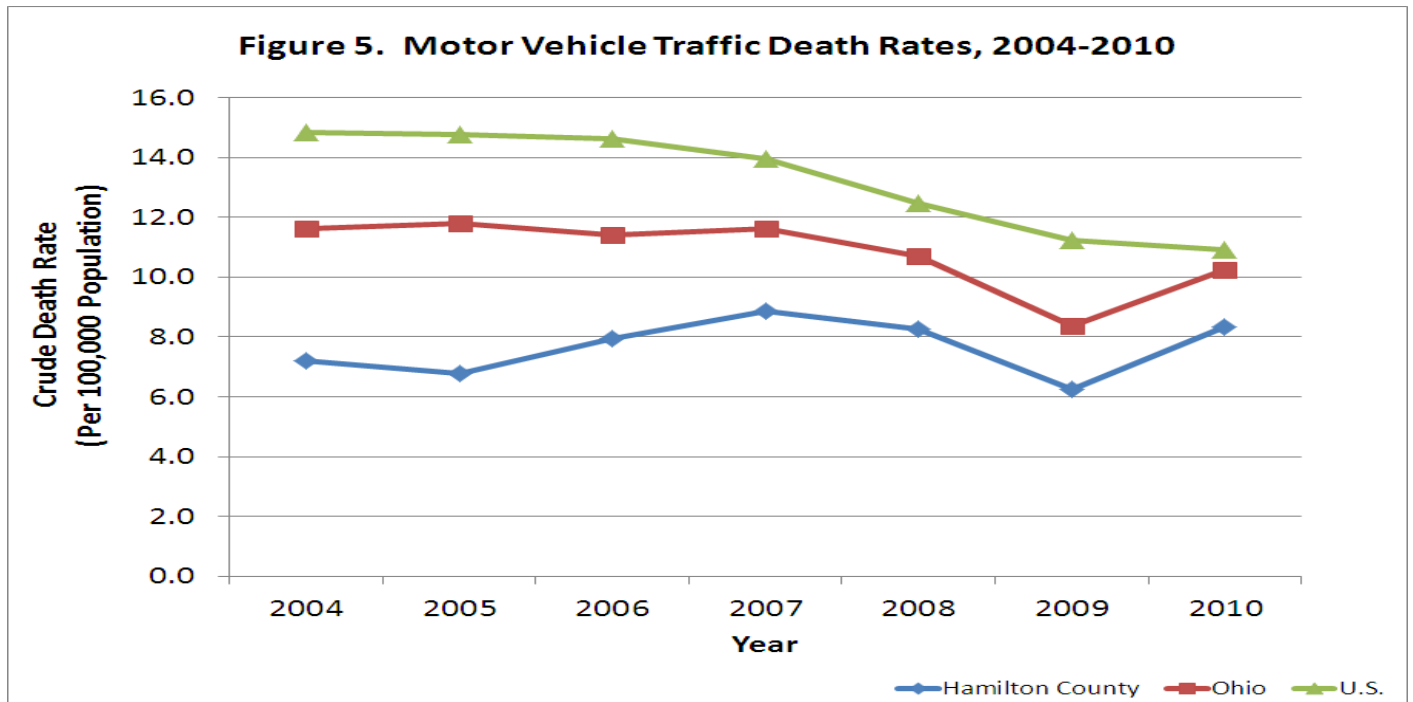
the associated death rates. Figure 5 gives the death rate for motor vehicle traffic injuries from 2004-2010 for Hamilton County, Ohio and the United States. As can be seen in the figure below, the death rate associated with traffic accidents has decreased in the United States since 2004. Ohio has also seen a decrease in death rates from 2004-2010.

The figure below shows the relationship of death rates between the county,

state, and country. The green line represents the motor vehicle death rates for the U.S., the red line represents Ohio motor vehicle death rates and the blue line represents Hamilton County death rates. As shown in Figure 5, Hamilton County death rates due to motor vehicle traffic injuries are less than the state and national rates for every year from 2004-2010. This trend is consistent with data provided by the National Highway Traffic Safety Administration as detailed in their report *Traffic Safe-*

ty Facts: 2009 Data. In this report, the NHTSA mentioned that 57 percent of all motor vehicle traffic fatalities occurred within rural areas.³ Thus urban counties such as Hamilton County are more likely to have lower motor vehicle death rates.

Although our death rates are still below the state and national levels, residents of Hamilton County are needlessly being injured and die from a highly preventable cause.



Source: United States and Ohio data were collected from the Centers for Disease Control and Prevention: Web-based Injury Statistics Query and Reporting System (WISQARS). Hamilton County data were collected from the Hamilton County Injury Surveillance System.

Where Does Public Health Get The Data?

The county data used in this report were gathered from the Hamilton County Injury Surveillance System (HCISS). The HCISS is a collaborative surveillance effort led by Hamilton County Public Health and supported by our local hospitals, the Hamilton County Coroner's Office, and the Greater Cincinnati Health Council.

Data on non-fatal injuries were obtained from local hospitals/trauma registries and represent emergency department visits and hospitalizations (inpatients); data on fatal injuries were obtained from the Hamilton County Coroner's Office. Figure 6 shows the breakdown of motor

vehicle traffic accident injuries as reported through the HCISS. The bottom layer, emergency department visits, represents the least severe injuries, yet the largest number of patients; the next two layers, hospitalizations and deaths, represent the most severe and costly injuries to residents of Hamilton County.

An unknown number of unreported motor vehicle traffic injuries were not identified in the HCISS because these individuals did not seek medical care.

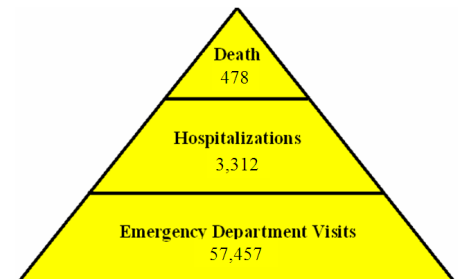


Figure 6. Motor Vehicle Traffic Injury Pyramid, Hamilton County, 2004-2011

Motor Vehicle Traffic Injury Prevention

Following are areas of prevention that can be used to reduce motor vehicle traffic injuries and deaths.

1. **Wear a seat belt every time you are in a motor vehicle.** According to the NHTSA seat belts reduce the risk of injury by 50 percent and death by 45 percent for drivers and front-seat passengers.⁴
2. **Do not drink and drive.** In 2010 close to one-third of all U.S. motor vehicle traffic deaths involved drivers who were impaired.⁵
3. **Avoid distractions while driving.** Cell phones and mobile devices should not be used while driving. In 2009, 448,000 injuries that occurred

in the U.S. were due to a driver being distracted.⁶

4. **Use a helmet when riding motorcycles.** In 2010, helmets were responsible for saving the lives of 1,500 riders in the U.S. 700 additional lives could have been saved had all motorcycle riders used a helmet.⁷
5. **Support laws that encourage safe motor vehicle operation practices.** The CDC recommends several different strategies to help reduce injuries and deaths due to motor vehicle accidents. Some strategies include:
 - Ignition interlocks for all convicted DWI offenders.

- Expanded use of sobriety checkpoints.
- Primary enforcement seat belt laws.
- Increased fines for seat belt violations.

For more information regarding motor vehicle accident prevention, please visit the CDC and NHTSA websites:

- <http://www.cdc.gov/motorvehicle/safety/index.html>
- <http://www.nhtsa.gov/>

Healthy People 2020 Goals

The Healthy People 2020 (HP 2020) goals were released in December 2010. Healthy People is a government organization that sets forth 10-year national objectives for improving the health of all Americans. Many of these objectives are created by taking rates from a previously measured national rate gathered during Healthy People 2010 or from a 10 percent decrease there-in. Specific objectives for MVT injuries are given by the Injury and Violence Prevention (IVP) goals 13.1 and 14. Table 1 describes what these goals are and shows where Hamilton County stands in terms of reaching those goals as of 2011 data.

In 2011, Hamilton County was meeting one of the HP 2020 goals for MVT injury deaths. The MVT death rate for Hamilton County was 5.75 per 100,000 residents, 6.65 per 100,000 below the national goal.

Table 1. Healthy People 2020 Goals	
Goal	Hamilton County 2011
IVP 13.1: Reduce motor vehicle crash-related deaths (12.4 deaths per 100,000).	5.75 per 100,000
IVP 14: Reduce nonfatal motor vehicle crash-related injuries (694.4 per 100,000).	1,016.5 per 100,000

Regarding nonfatal MVT injury rates, however, Hamilton County was not meeting the HP 2020 goal. In 2011 Hamilton County experienced 1,016.5 per 100,000 MVT injuries; nearly 50 percent higher than the HP 2020 goal. As more

data are collected through HCISS, changes throughout the years will be detected allowing for improved surveillance of motor vehicle traffic injuries.

For additional reports on injuries in Hamilton County, please visit:
http://www.hamiltoncountyhealth.org/en/resource_library/reports.html

References

- ¹ Centers for Disease Control and Prevention. WISQARS (Web-based Injury Statistics Query and Reporting System). Atlanta, GA: US Department of Health and Human Services, CDC; 2010. Available at URL: <http://www.cdc.gov/injury/wisqars>.
- ² Centers for Disease Control and Prevention. Distracted Driving in the United States and Europe. US Department of Health and Human Services; 2012. Available at URL: <http://www.cdc.gov/features/dsdistracteddriving/>.
- ³ Dept of Transportation (US), National Highway Traffic Safety Administration (NHTSA). Traffic Safety Facts: 2009 Data. Washington (DC): NHTSA. Available at URL: <http://www-nrd.nhtsa.dot.gov/Pubs/811395.pdf>.
- ⁴ Dept of Transportation (US), National Highway Traffic Safety Administration (NHTSA). Traffic Safety Facts: Children. Washington (DC): NHTSA; 2010. Available at URL: <http://www-nrd.nhtsa.dot.gov/Pubs/811387.pdf>.
- ⁵ Dept of Transportation (US), National Highway Traffic Safety Administration (NHTSA). Traffic Safety Facts 2010: Alcohol-Impaired Driving. Washington (DC): NHTSA; 2012. Available at URL: <http://www-nrd.nhtsa.dot.gov/Pubs/811606.pdf>.
- ⁶ National Highway Traffic Safety Administration. Traffic Safety Facts: Distracted Driving 2009. Washington, DC: US Department of Transportation, NHTSA; September 2010. Available from <http://www.distracted.gov/>.
- ⁷ Centers for Disease Control and Prevention. Motorcycle Safety Guide: Helmet Laws Save Lives and Money. US Department of Health and Human Services; 2012. Available at URL: <http://www.cdc.gov/motorvehiclesafety/mc/guide/save.html>.