

The Big Picture Traffic Crashes



Revised June 7, 2011

The driver, the roadway, and the motor vehicle contribute in some measure to every crash. A preponderance of evidence, however, points to driver error as a chief cause in the majority of crashes.

- There were 290,978 reported crashes, of which 806 were fatal, 52,283 were personal injury, and 237,889 were property damage only. Compared to 2008 this is a 7.9 percent decrease in total reported crashes, a 11.9 percent decrease in fatal crashes, a 5.9 percent decrease in personal injury crashes, and a 8.4 percent decrease in property damage crashes.
- 871 persons were killed as a result of the 806 fatal crashes for an average of 1.1 deaths per fatal crash.
- One out of every 11,446 persons in Michigan was killed in a traffic crash; one out of every 141 persons was injured.
- A traffic crash was reported every 1 minute and 48 seconds.
- One person was killed every 10 hours and 3 minutes as a result of a traffic crash.
- One person was injured every 7 minutes and 25 seconds in a traffic crash.
- For each person killed, 81.4 persons were injured in crashes.
- 6,511 persons received A-injuries. An A-injury is incapacitating. It prevents normal activities and requires hospitalization.

The estimated economic loss due to traffic crashes was \$7.9 billion. If costs were spread across the state's population this would translate into a loss of \$791 per state resident.

General Facts



According to the Michigan Department of Community Health, motor vehicle crashes are the leading cause of accidental death among persons aged 1 to 24 years old living in Michigan.

- 476,801 motor vehicles were involved in 290,978 reported crashes. 806 of these were fatal crashes. These fatal crashes resulted in 871 deaths, compared to the 980 deaths that were the result of 915 fatal crashes in 2008.
- Of the 871 motor vehicle deaths in 2009, 425 (48.8%) were drivers of vehicles, 173 (19.9%) were passengers in motor vehicles, 121 (13.9%) were pedestrians, 103 (11.3%) were motorcyclists, 19 (2.2%) were bicyclists, 9 (1.0%) were ORV/ATV operators, 14 (1.6%) were snowmobile operators, 5 (0.6%) were moped operators, and 1 (0.1%) was an operator of farm equipment.
- Of the 598 drivers and passengers killed, 210 (35.1%) were not wearing seatbelts and 304 (50.8%) were wearing seatbelts. It is unknown whether 84 (14.0%) of the fatalities were belted.
- 427 deaths resulted from 409 single vehicle fatal crashes.
- More male drivers are involved in crashes than female drivers. Of the 242,490 male drivers involved in crashes, 840 (0.3%) were involved in fatal crashes. Of the 199,166 female drivers involved in crashes, 375 (0.2%) were involved in fatal crashes.
- Excessive speed was reported by police as the hazardous action of 13.2 percent of the drivers in fatal crashes.
- Of all fatal crashes, 27.9 percent occurred at intersections.
- Most fatal crashes occurred on dry roadways (73.2%) in clear weather conditions (53.1%).
- The majority of all crashes occurred during daylight hours (59.0%). Dark conditions created the greatest hazard, as they were overrepresented in fatal crashes.
- In 2009:
 - More fatal crashes occurred between 6:00 and 8:59 PM than any other time period.
 - More fatal crashes occurred on both Saturday and Sunday than any other day.
 - More fatal crashes occurred in September than any other month.

Children Age 0-15



The number one cause of accidental death for children ages 0-15 in Michigan is motor vehicle crashes.

According to figures provided by the Michigan Department of Community Health, accidental death for children in motor vehicle crashes routinely outpaces the next two most frequent causes: fire and drowning.

- 35 children (0-15 years old) were killed in motor vehicle crashes, including three drivers age 15. The 0-15 age group accounted for 4.0 percent of all traffic deaths.
- There were 46,785 licensed drivers below the age of 16 in 2009. 910 (0.2%) of these drivers were involved in crashes (five in fatal crashes).
- In addition 5,200 children were injured in motor vehicle crashes.
- Older children age 11 to 15 had the lowest restraint usage (80.5%), as reported to police at the scene of a traffic crash.
- Children accounted for 4.1 percent of the pedestrians killed in Michigan in 2009, and 22.4 percent of all pedestrian injuries.
- Children under 16 years of age accounted for three (15.8%) of the bicyclist deaths in 2009.
- Of the 46,785 licensed drivers in the 0-15 age group, special licenses were issued to 140 moped operators.

Teens/Young Adults Age 16-24

Inexperience, risk-taking behavior, immaturity, and greater risk exposure (teens often drive at night with other teens in the vehicle) are all factors that increase crash risk for young drivers.

Teenagers and young adults ages 16-24 are disproportionately involved in motor vehicle crashes.

According to the Michigan Department of Community Health, three out of five accidental deaths for this age group are due to motor vehicle crashes.

- 169 persons (16-24 years old) were killed in motor vehicle crashes, including 97 (17.7%) drivers. The 16-24 age group accounted for 19.4 percent of all traffic deaths.
- In addition, 17,967 teenagers and young adults were injured in motor vehicle crashes.
- There were 996,196 licensed drivers in the 16-24 age group in 2009. 105,919 (22.2%) of these drivers were involved in crashes (238 in fatal crashes).
- The 16-24 age group represented 14.1 percent of Michigan's active driving population, yet the drivers in this age group represented 22.2 percent of drivers in all crashes and 18.7 percent of drivers in fatal crashes.
- Generally, younger drivers were involved in more shoulder/outside curb crashes and had a higher incidence of speeding, overturn, inability to stop in assured clear distance, collision with a ditch, and hitting a tree. They were less likely to be alone in their car at the time of the crash.
- Teenagers and young adults had the highest incidence of fatal crashes when their speed was too fast.
- The weekend had a higher involvement of teen and young adult drivers in all crashes when compared to older drivers.
- Teenagers and young adults accounted for 13.2 percent of the pedestrians killed in Michigan in 2009, and 24.0 percent of all pedestrian injuries.
- Three (15.8%) of the 19 bicyclist deaths in 2009 were in the 16-24 age group.

2009 Michigan Traffic Crash FACT SHEET



Findings show that older drivers rank lower in aggressive actions, rank higher in comprehension errors, tend to make necessary adjustments in their driving behavior (based on their own experience), and strongly desire to keep their cars to assure independence.

Safety problems for the older driver are directly tied to the aging process. Changes in vision, the ability to concentrate, and reaction time all contribute to driving errors.

- Drivers age 65 and older made up 16.5 percent of Michigan's active driving population. They represented 8.3 percent of all drivers in crashes and 14.3 percent of drivers in fatal crashes.
- There were 1,169,999 licensed drivers age 65 and older in 2009. 39,357 (8.3%) of these drivers were involved in crashes (182 in fatal crashes).
- Drivers and injured passengers age 65 to 110 had the highest restraint usage (95.5%), as reported to police at the scene of a crash.
- Older drivers were more involved in angle type crashes than younger drivers. Older drivers also had the highest incidence of failed to yield, disregard of traffic control, improper lane use, improper turn, and improper backing as a hazardous action in all crashes.
- 168 persons (65 and older) were killed in traffic crashes; 111 (66.1%) of them were drivers.
- In addition, 6,440 persons age 65 and older were injured in traffic crashes.
- 9:00 AM to 2:59 PM shows the highest involvement for elderly drivers in all crashes when compared to the other two age groups.
- 11.6 percent of the pedestrians killed in Michigan in 2009 were age 65 and older; 5.9 percent of the pedestrians injured were age 65 and older.
- Six (31.6%) bicyclists killed in 2009 were over the age of 65.

2009 Michigan Traffic Crash FACT SHEET

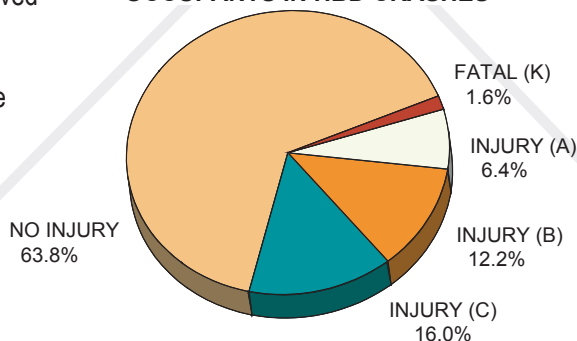
Alcohol

Information regarding alcohol involvement was collected from all investigated fatal motor vehicle traffic crashes in Michigan during 2009. A fatal crash is alcohol-related if any driver, pedestrian, or bicyclist involved was reported by the police officer on the Traffic Crash Report as "had been drinking."

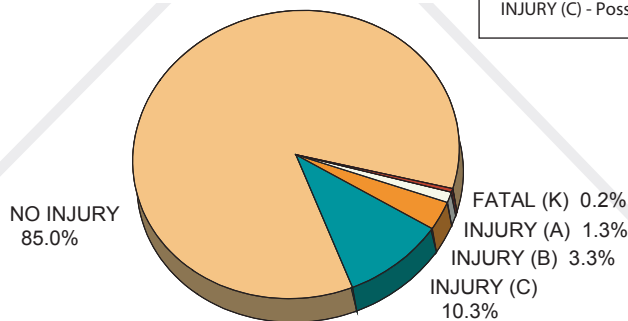
Alcohol impairment has major effects on traffic safety.

- A total of 806 fatal crashes occurred in Michigan in 2009. 277 (34.4%) of those fatal crashes were alcohol-related.
- The fatality count of persons involved in alcohol-related fatal crashes was 299 in 2009. This accounts for 34.3 percent of the total number of persons killed (871).
- Crashes involving drinking tend to be more serious than nondrinking crashes. The percentage of fatalities is eight times higher than in all crashes and the most serious injury level (incapacitating) is 4.9 times higher.
- 66.4 percent of all alcohol-related fatal crashes involved one vehicle.
- Of the pedestrians killed in 2009, 39 deaths were the result of a had-been-drinking crash and 30 (76.9%) of these pedestrians had been drinking.
- Of the motorcyclists killed in 2009, 29 deaths were the result of a had-been-drinking crash and 27 (93.1%) of these motorcyclists had been drinking.
- Of the bicyclists killed in 2009, three deaths were the result of a had-been-drinking crash and two (66.7%) of these bicyclists had been drinking.
- Of the snowmobilers killed on Michigan roadways in 2009, six deaths were the result of a had-been-drinking crash and six (100.0%) of these snowmobilers had been drinking.

OCCUPANTS IN HBD CRASHES



OCCUPANTS IN CRASHES

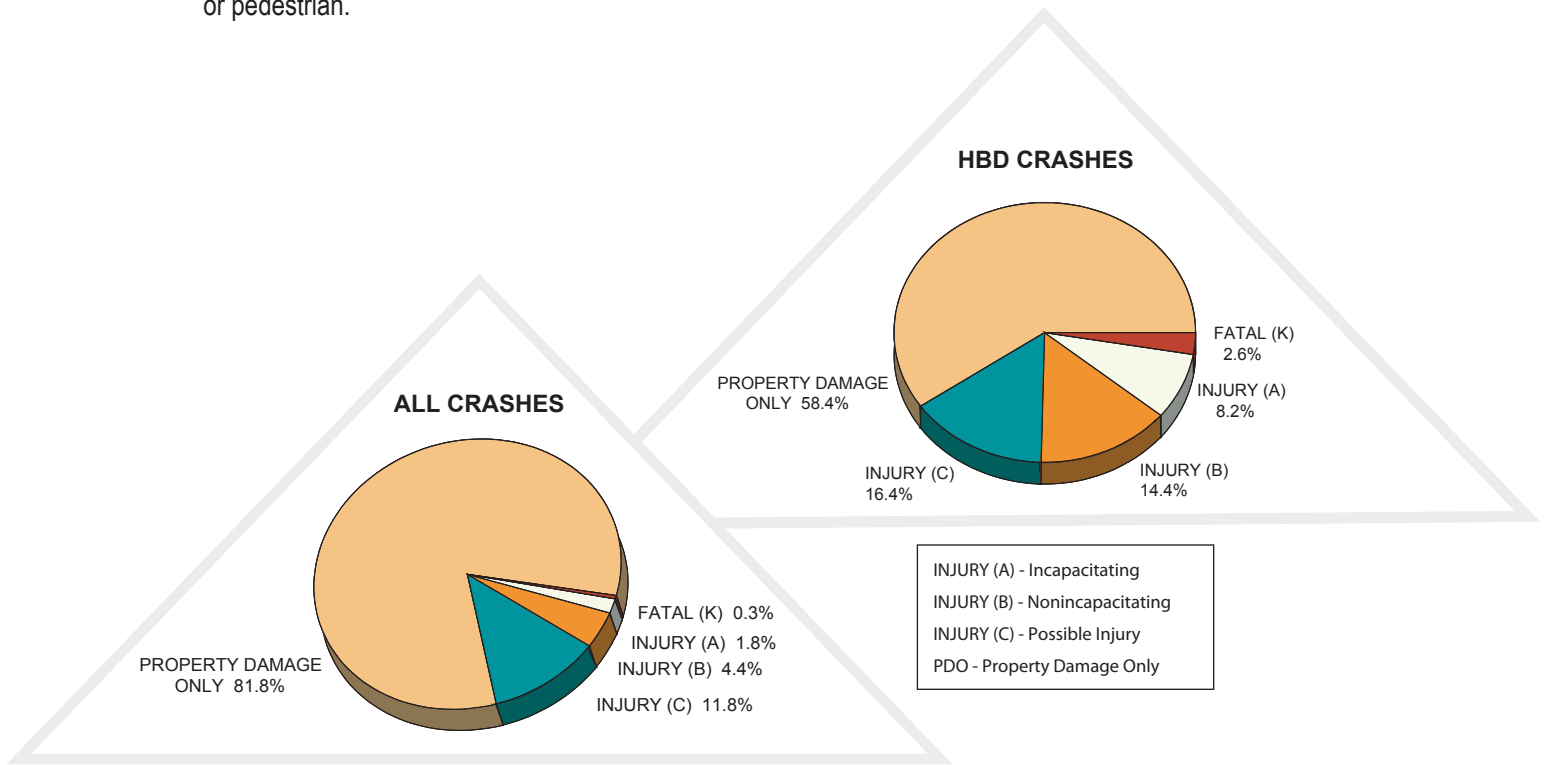


INJURY (A) - Incapacitating
 INJURY (B) - Nonincapacitating
 INJURY (C) - Possible Injury



Alcohol

- Had-been-drinking **injury** crashes peak on Saturday and Sunday, and in the hours between midnight and 2:59AM (a particularly hazardous travel period).
- In 2009, had-been-drinking **injury** crashes were highest in June (414) and July (389).
- The highest number of HBD **fatal** crashes, 31, occurred in July.
- The midnight to 2:59 AM time period had the highest rate of had-been-drinking **fatal** crashes (75.5%), while 9:00 to 11:59 AM had the lowest rate (4.0%).
- The weekend had the highest proportions of alcohol-related **fatal** crashes.
- The severity of injuries is much worse for drivers and passengers who had been drinking.
- Of the 10,494 (gender reported) drinking drivers involved in crashes, 7,881 (75.1%) were male and 2,613 (24.9%) were female.
- 2,941 (28.0%) of the (gender reported) drinking drivers in crashes were age 24 and younger.
- 34.4 percent of all fatal crashes involved at least one drinking operator or pedestrian.



2009 Michigan Traffic Crash FACT SHEET

Bicycles

2,035 bicyclists were involved in motor vehicle crashes in Michigan in 2009.

19 bicyclists were killed on Michigan roadways in 2009, six less than reported in 2008.

1,648 bicyclist injuries were reported to police agencies.

At all ages, males (1,553) were involved in more bicycle crashes than females (430). The male to female ratio of bicycle deaths was 8.5:1, with 17 male bicyclists killed and two female bicyclists killed.

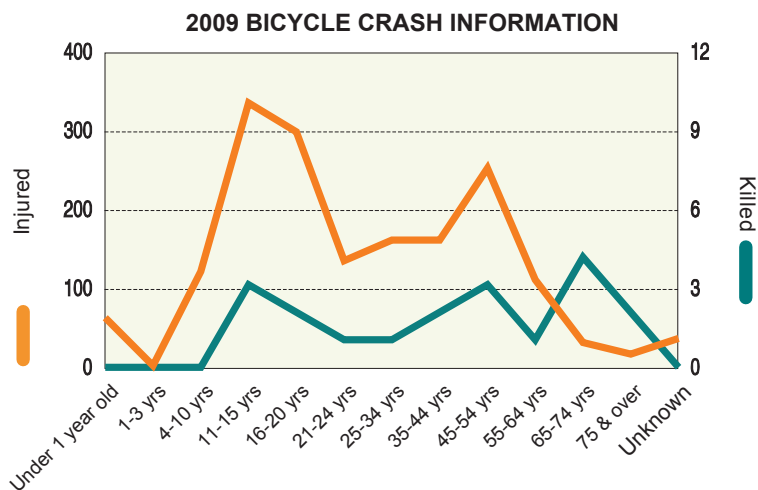
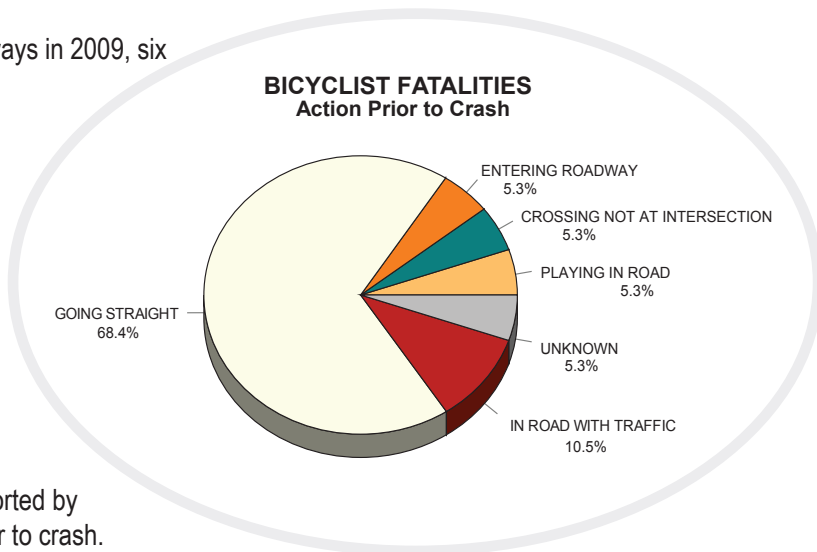
13 of the bicyclists killed (68.4%) were reported by police to be "going straight ahead" just prior to crash.

79.0 percent of all bicyclists in motor vehicle crashes and 12 of the 19 bicyclists killed were riding during daylight hours.

3:00 PM - 5:59 PM were the peak hours for bicyclist involvement in all crashes and injuries to bicyclists. 6:00 PM - 8:59 PM were the peak hours for bicyclist fatalities.

Of the bicyclists killed in 2009, three deaths were the result of a had-been-drinking crash and two (66.7%) of these bicyclists had been drinking.

15.8 percent of all bicyclist deaths occurred to children under 16 years of age. Children aged 11 to 15 years represented 15.8 percent of the total number of bicyclist fatalities. Adults aged 65-74 years represented 21.1 percent of the total number of bicyclist fatalities.



2009 Michigan Traffic Crash FACT SHEET

Deer



Motor vehicle-deer crashes occurred most often in Michigan's southern, heavily populated counties.

- Michigan had 61,486 reported motor vehicle-deer crashes during 2009. This is a 5.4 percent decrease over ten years.

- 70.2 percent of the vehicles involved in vehicle-deer crashes in 2009 were passenger cars.

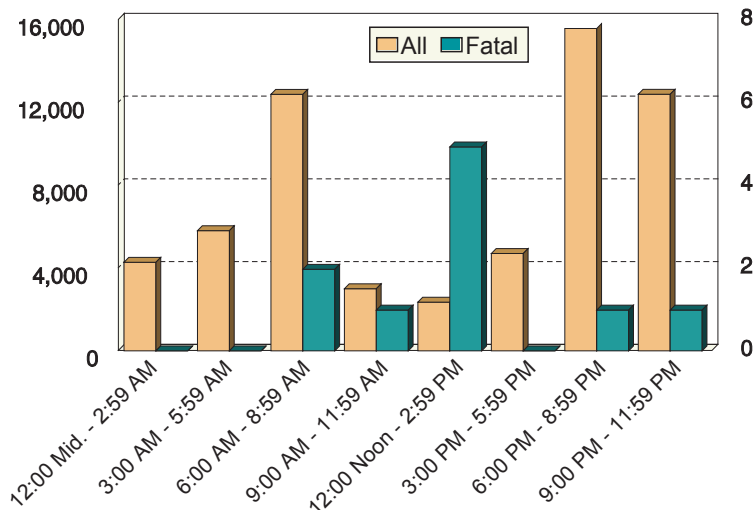
- 1,571 people were injured and 10 people were killed as a result of those collisions.

- All motor vehicle-deer involved crashes peaked during the 6:00 PM - 8:59 PM time period. Fatal deer crashes peaked during the Noon - 2:59 PM time period.

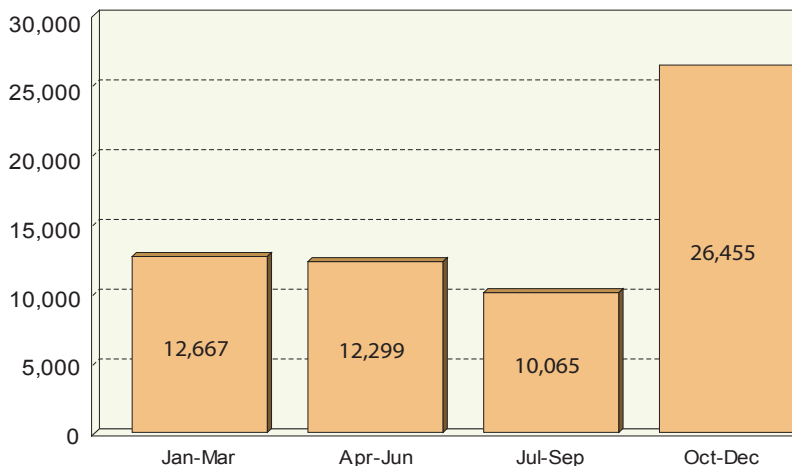
- The top ten counties, each experiencing over 1,299 vehicle-deer crashes in 2009, were:
 Kent 2,164, Oakland 1,947, Jackson 1,877, Calhoun 1,659, Montcalm 1,641, Lapeer 1,455, Clinton 1,428, Genesee 1,420, Eaton 1,384, and Ottawa 1,300.

- 26,455 (43.0%) of all reported motor vehicle-deer collisions occurred during the fourth quarter of the year.

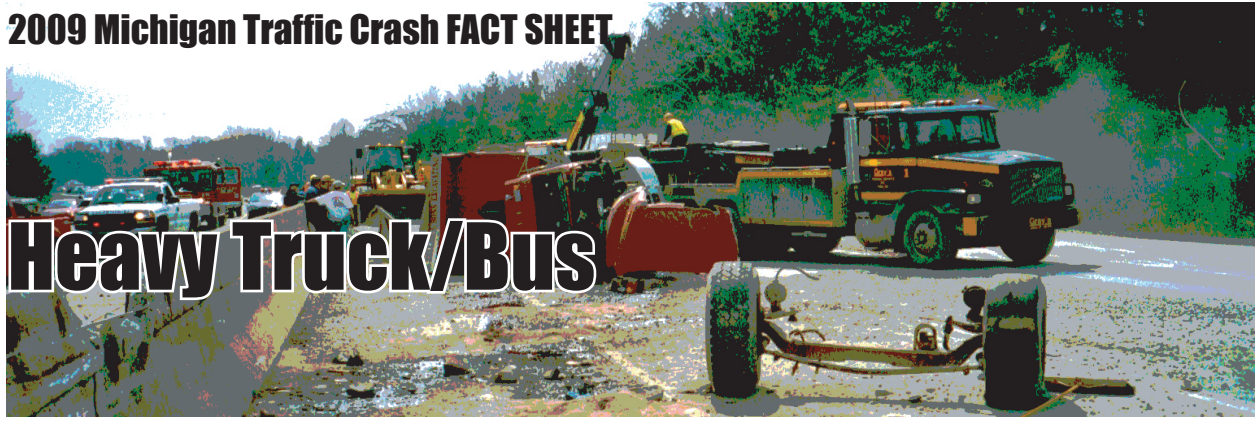
TIME AND SEVERITY OF ALL MOTOR VEHICLE-DEER CRASHES



All Motor Vehicle-Deer Crashes



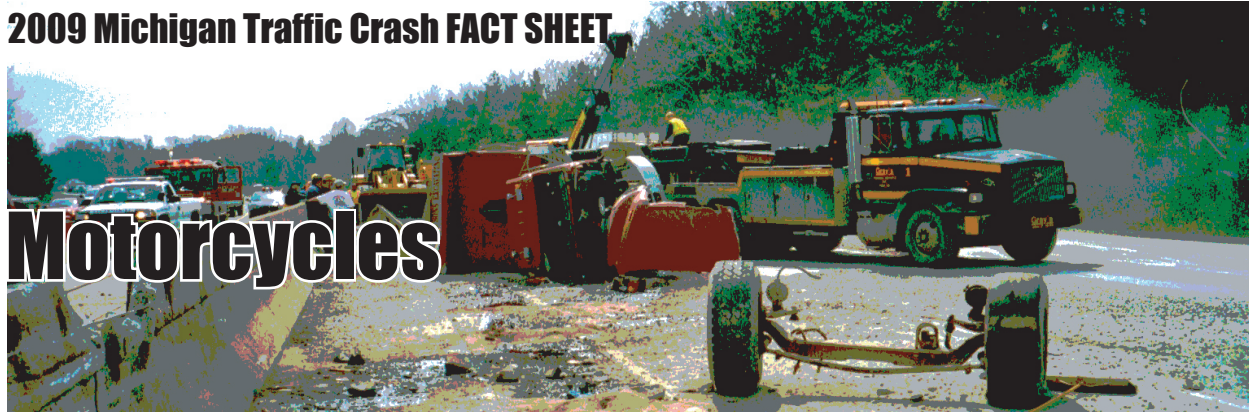
Heavy Truck/Bus



Heavy truck/bus crashes differ from other vehicle crashes in a number of ways. When compared to the overall crash picture, heavy truck/bus crashes involve:

- More turning, backing, and changing lanes
 - More collisions with non-vehicles including: bridge/pier abutments, parked motor vehicles, jackknife, cargo loss/shift
 - Fewer single vehicle crashes but more sideswipes
 - Fewer drivers indicated to be speeding, failing to yield, reckless driving, disregarding traffic control, and unable to stop in assured clear distance, but more drivers indicated to be making backing, lane use, and turning errors
 - More on-road crashes
 - More daytime crashes, but fewer late afternoon, evening, and night time crashes
 - More weekday crashes
-
- Heavy truck/buses were involved in 3.6 percent of all traffic crashes in Michigan in 2009.
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- There were 10,442 heavy truck/bus-involved crashes in which 76 people were killed and 2,377 injured.

Motorcycles



In a crash, motorcyclists lack the protection of an enclosed vehicle.

The 2009 death rate for motorcyclists was 12.87 per 100 million vehicle miles traveled compared to the overall mileage death rate of 0.91 per 100 million vehicle miles traveled.

Injuries to motorcyclists were proportionately more severe than injuries to persons in other motor vehicles.

There were 3,451 motorcycle-involved crashes in which 103 motorcyclists were killed and 2,725 injured.

Motorcycles were involved in 1.2 percent of all traffic crashes in Michigan in 2009.

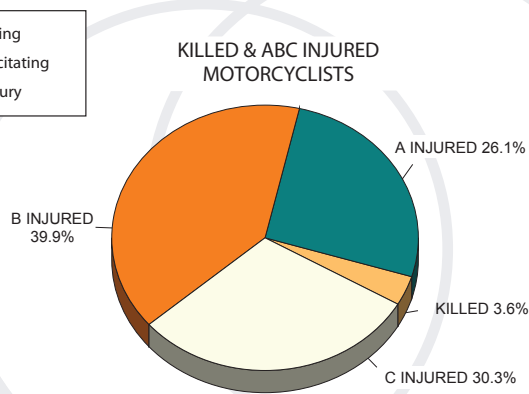
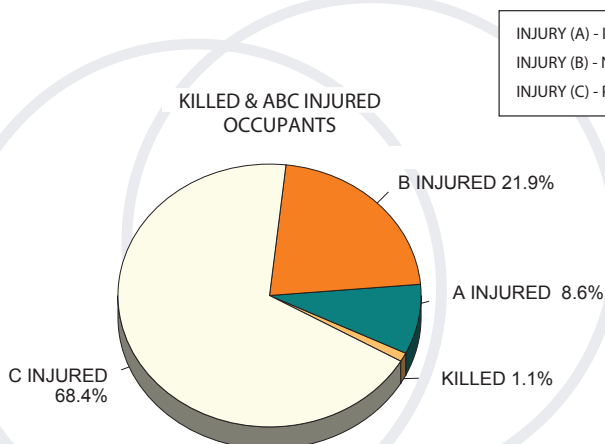
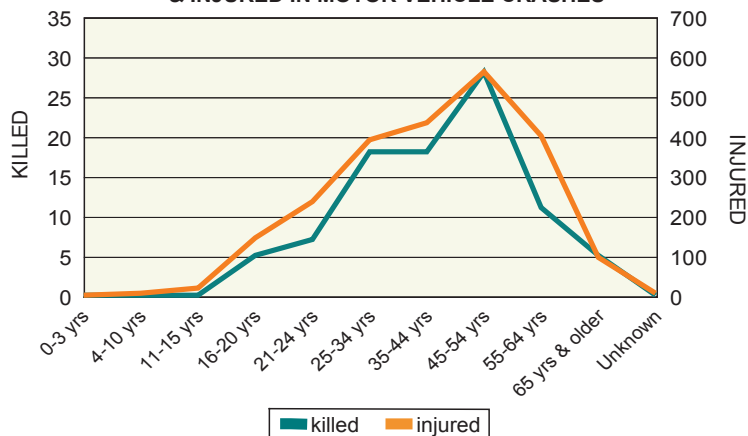
Because motorcycles have a low profile, they tend to be less visible than other motor vehicles. 87 (84.5%) of the 103 motorcyclists killed were reported by police as "going straight ahead" just prior to crash.

Of the motorcyclists killed in traffic crashes in 2009, 89.3 percent were male.

Of the motorcyclists killed in 2009, 29 deaths were the result of a had-been-drinking crash and 27 (93.1%) of these motorcyclists had been drinking.

Of the male motorcyclists injured, 561 (24.5%) were 45 - 54 years old.

AGE OF MALE MOTORCYCLISTS KILLED & INJURED IN MOTOR VEHICLE CRASHES



INJURY (A) - Incapacitating
 INJURY (B) - Nonincapacitating
 INJURY (C) - Possible Injury

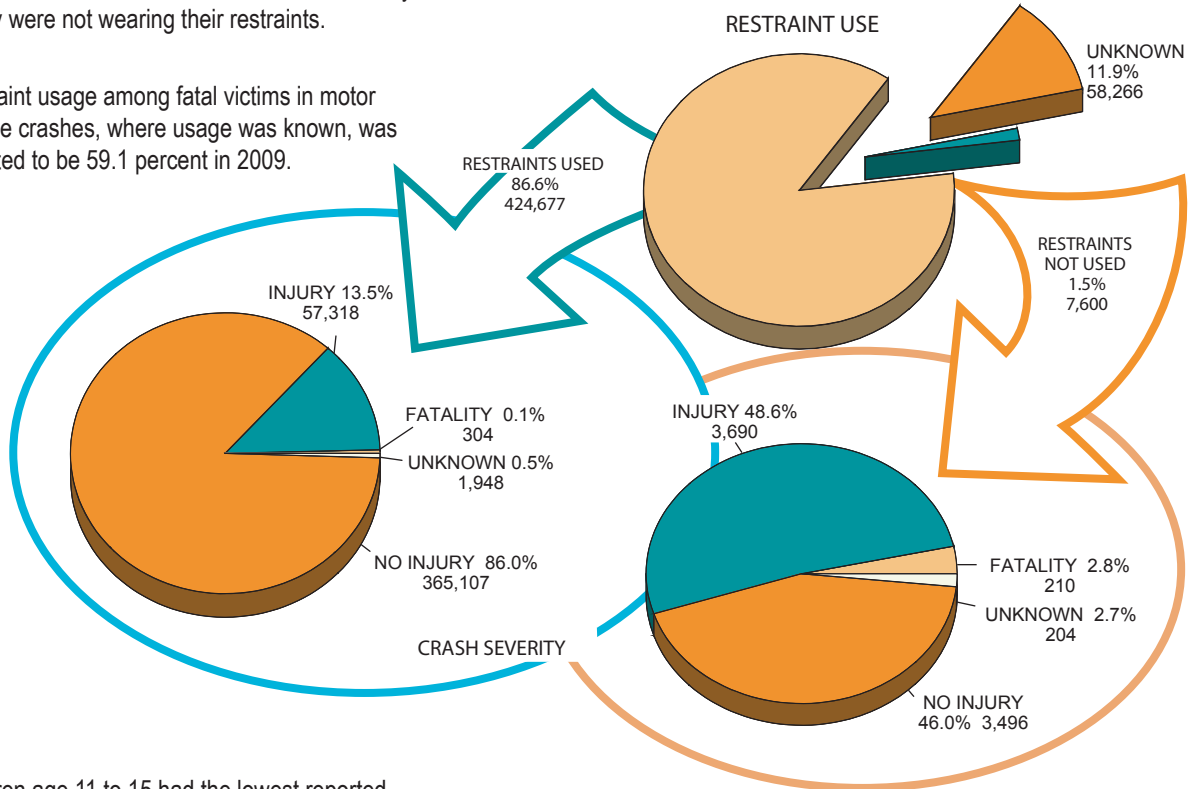


Occupant Protection



Restraint use by motorists is measured two ways: by what motorists REPORT to police at the scene of a traffic crash (reported usage), and by observation surveys where motorists are totally unaware of the presence of researchers (observed usage).

- Of the 490,543 drivers and injured passengers involved in crashes, 424,677 (86.6%) were REPORTED to have been using occupant restraints. However, an observational survey by the Wayne State University Transportation Research Group estimated statewide belt use increased to 97.9 percent in 2009.
- Occupants in crashes were **28 times** more likely to be killed if they were not wearing their restraints.
- Restraint usage among fatal victims in motor vehicle crashes, where usage was known, was reported to be 59.1 percent in 2009.



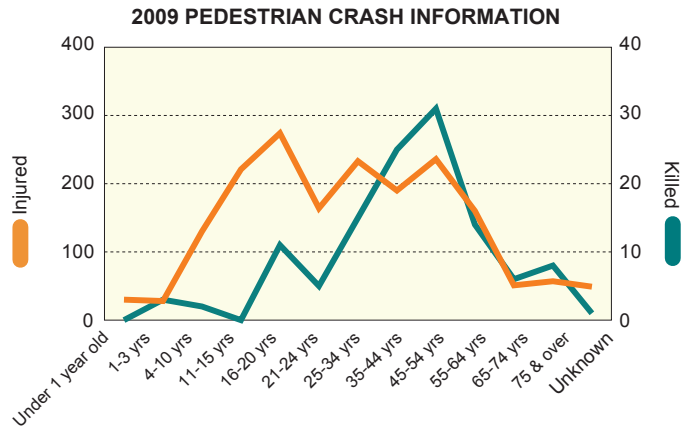
- Children age 11 to 15 had the lowest reported restraint usage (80.5%).
- Motor vehicle occupants aged 65 to 110 had the highest reported restraint usage (95.5%) of any age group.
- Restraint use can prevent ejection from a motor vehicle. Ejection is associated with higher levels of injury severity and greater numbers of fatalities.

2009 Michigan Traffic Crash FACT SHEET



Pedestrians

- Since 2000, a total of 1,454 pedestrians have been killed, accounting for 12.6 percent of all traffic crash deaths during that period.
- In 2009 there were 2,215 pedestrians involved in motor vehicle crashes, with 121 pedestrians killed and 1,823 pedestrians injured.
- The male to female ratio of pedestrian deaths was 3:1.



- The 121 pedestrian fatality count is an increase of seven deaths (6.1%) from the 2008 figure. For each pedestrian killed, there were 15.1 pedestrians injured.
- Most pedestrians were in crashes occurring during the early evening hours (6:00 PM - 8:59 PM). However, most pedestrian fatalities occurred during hours of darkness. Sunday was the deadliest day for pedestrians in 2009 with 25 fatalities.
- Of the pedestrians killed in 2009, 39 deaths were the result of a had-been-drinking crash and 30 (76.9%) of these pedestrians had been drinking.
- Of all pedestrian actions prior to a crash, "crossing not at an intersection" is the most deadly, accounting for 30.6 percent of the pedestrian fatalities.
- Of all pedestrians killed, 4.1 percent were children 0-15, 13.2 percent were age 16-24, 33.1 percent were age 25-44, 37.2 percent were age 45-64, and 11.6 percent were 65 and older.

