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 312,172 crashes, of which 980 (0.3%) were fatal, 57,964 (18.6%) were personal injury, and 253,228 (81.1%) were property damage only. Compared to 2015 this is a 5.1 percent increase in total crashes, an increase of 9.7 percent in fatal crashes, a 7.3 percent increase in personal injury crashes, and a 4.6 percent increase in property damage crashes.

A total of 1,064 people were killed as a result of the 980 fatal crashes for an average of 1.1 deaths per fatal crash.

One out of every 9,331 people in Michigan was killed in a traffic crash; one out of every 125 people was injured.

For each person killed, 74.9 people were injured in crashes.

There were 5,634 people who received suspected serious injuries, which prevent normal activities and require hospitalization.

A total of 538,412 motor vehicles were involved in 312,172 reported crashes.

Of the 1,064 traffic crash deaths, 658 (61.8%) were drivers of vehicles, 203 (19.1%) were passengers in motor vehicles, 165 (15.5%) were pedestrians, and 38 (3.6%) were bicyclists.

Of the 683 drivers and passengers killed where seat belt data was collected, 206 (30.2%) were not wearing seat belts and 364 (53.3%) were wearing seat belts. It is unknown whether 113 (16.5%) of the fatalities were belted.

There were 522 deaths that resulted from 494 single-vehicle fatal crashes.

More male drivers were involved in crashes than female drivers. Of the 275,382 male drivers involved in crashes, 1,059 (0.4%) were involved in fatal crashes. Of the 221,200 female drivers involved in crashes, 445 (0.2%) were involved in fatal crashes.

Of the 882 motor vehicle drivers involved in fatal crashes where a hazardous action occurred, excessive speed was reported by police as the hazardous action for 194 (22.0%) of the drivers.

Of the 980 fatal crashes, 300 (30.6%) occurred at intersections.

Most fatal crashes occurred on dry roadways (75.6%) and in clear weather conditions (62.1%).

The majority of all crashes occurred during daylight (63.0%).

There were 59 (6.0%) fatal crashes during both the 3:00-3:59 PM and the 6:00-6:59 PM time periods, more than any other time period.

The most fatal crashes, 174 (17.8%), occurred on Saturday.

A traffic crash was reported every 1 minute and 41 seconds.

One person was killed every 8 hours and 15 minutes as a result of a traffic crash.

One person was injured every 6 minutes and 37 seconds in a traffic crash.
According to 2015 data provided by the Michigan Department of Health and Human Services, the number one cause of unintentional fatal injuries for children ages 1-24 in Michigan is motor vehicle crashes.

There were 49,678 licensed drivers below the age of 16 who represented 0.7 percent of Michigan’s driving population. Drivers in this age group represented 0.2 percent (837) of drivers in all crashes and 0.1 percent (2) of drivers in fatal crashes.

A total of 38 children (0-15 years old) were killed in motor vehicle crashes, including two drivers age 14. The 0-15 age group accounted for 3.6 percent of all traffic deaths.

In addition, 5,800 children were injured in motor vehicle crashes.

Restraint usage among drivers and injured passengers age 0-15, as reported to police at the scene of a traffic crash, was 92.1%. The age group with the lowest restraint usage was children under one (86.2%).

Children accounted for 7.3 percent (12) of the pedestrians killed in Michigan, and 20.8 percent (386) of all pedestrian injuries.

There were no bicyclist fatalities among children under 16 years of age. This age group accounted for 377 (24.7%) of all injured bicyclists.

<table>
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<tr>
<th>CRASH INJURY SEVERITY IN CHILDREN AGES 0-15</th>
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<tr>
<td><strong>KILLED:</strong> 38 (0.7%)</td>
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<tr>
<td><strong>SUSPECTED SERIOUS INJURIES:</strong> 353 (6.0%)</td>
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<tr>
<td><strong>SUSPECTED MINOR INJURIES:</strong> 1,367 (23.4%)</td>
</tr>
<tr>
<td><strong>POSSIBLE INJURIES:</strong> 4,080 (69.9%)</td>
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Inexperience, risk-taking behavior, immaturity, and greater risk exposure are all factors that increase crash risk for young drivers. According to the Insurance Institute for Highway Safety, crashes are the leading cause of death and account for almost one third of all deaths among people age 16-19.

There were 471,135 licensed drivers ages 16-20 who represented 6.6 percent of Michigan’s driving population. The drivers in this age group represented 11.1 percent (59,865) of drivers in all crashes and 8.9 percent (139) of drivers in fatal crashes.

The 16-20 age group accounted for 9.7 percent (103) of all traffic deaths, and 56.3 percent (58) of those deaths were drivers.

In addition, 10,119 teenagers and young adults were injured in motor vehicle crashes, representing 13.7 percent of all people injured in 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.

The most common hazardous action coded for the 139 drivers age 16-20 who were involved in fatal crashes was speed too fast, with 23.0% (32) of the total.

Weekends accounted for 22.3 percent of crash involvements for drivers age 16-20, compared with only 20.5 percent of crash involvements for drivers 21 and older.

Teenagers and young adults accounted for 5.5 percent (9) of the pedestrians killed in Michigan, and 11.0 percent (203) of all pedestrian injuries.

Four (10.5%) of the 38 bicyclist deaths were in the 16-20 age group.
In Michigan, 15.8 percent of residents are age 65 or older according to 2015 estimates from the Population Division of the U.S. Census Bureau. Safety problems for the older driver are directly tied to the aging process, including changes in vision, hearing, medication, cognition, and physical condition, which all contribute to driving errors.

There were 1,437,067 licensed drivers age 65 and over who represented 20.0 percent of Michigan’s active driving population. The drivers in this age group represented 9.7 percent (52,362) of drivers in all crashes and 14.2 percent (223) of drivers in fatal crashes.

A total of 227 people age 65 and over were killed in traffic crashes, and 136 (59.9%) of them were drivers.

In addition, 8,668 people age 65 and over were injured in traffic crashes, representing 10.9 percent of all people injured in crashes.

Drivers and injured passengers, age 65 to 110, had a seatbelt usage of 99.1%, 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 failure to yield, disregard of traffic control, improper lane use, improper turn, and improper backing as a hazardous action in all crashes.

Of the pedestrians killed in Michigan, 21.8 percent (36) were age 65 and over; 7.7 percent (143) of the pedestrians injured were age 65 and over.

Eight (21.1%) bicyclists out of the 38 total killed were age 65 and over.
A total of 1,912 crashes occurred in Michigan where a motor vehicle driver, pedestrian, or bicyclist was using a cell phone. Nine of those crashes involved a fatality.

A total of 1,893 motor vehicle drivers, 18 pedestrians, and seven bicyclists were reported to be using cell phones in the 1,912 crashes.

Of the 18 pedestrians using a cell phone, one pedestrian was killed, five suffered a suspected serious injury, seven suffered a suspected minor injury, and three suffered a possible injury.

Of the 1,893 motor vehicle drivers using cell phones, 347 (18.3%) were 20 years of age or younger.

There were 873 (45.7%) rear-end crashes where a driver was using a cell phone.

Of the total 1,912 crashes involving cell phone use, 360 (18.8%) also involved a lane departure.

Of the total 1,912 crashes involving cell phone use, 821 (42.9%) were intersection related.

There were 1,893 motor vehicle drivers using a cell phone in crashes: 1,619 passenger cars, 211 pickup trucks, 20 trucks or buses over 10,000 lbs., 14 small trucks under 10,000 lbs., six vans or motorhomes, three motorcycles, four vehicle types coded as “other,” and 16 uncoded and errors.

*In 2016, the data field measuring cell phone use was changed to include multiple distraction elements. Increases in the number of cell phone crashes in 2016 may be the result of the police report change.
A crash is alcohol-related if any driver, pedestrian, or cyclist involved was reported as had-been-drinking (HBD) by the police officer on the Traffic Crash Report.

Of the 980 fatal crashes that occurred in Michigan, 254 (25.9%) were alcohol-related, involving at least one drinking operator, bicyclist, or pedestrian.

There were 274 alcohol-related fatalities, which accounts for 25.8 percent of the total number of people killed (1,064).

The percentage of alcohol-related fatalities was about 8.8 times higher than fatalities in all crashes and the most serious injury level (suspected serious) was about 5.7 times higher.

Of the 165 pedestrian deaths, 54 (32.7%) were the result of an HBD crash and 44 (81.5%) of those pedestrians had been drinking.

There were 141 motorcyclist deaths, and 35 (24.8%) of those deaths were the result of an HBD crash. Of the 35 motorcyclist alcohol-involved crash deaths, 29 (82.9%) motorcycle drivers were coded as drinking and three (8.6%) were motorcycle passengers of drinking drivers.
Out of 38 bicyclist deaths, five (13.2%) were the result of an HBD crash and three (60.0%) of those bicyclists had been drinking.

Nine snowmobiler deaths occurred on Michigan roadways. There were two deaths that (22.2%) were the result of an HBD crash and both snowmobilers had been drinking.

HBD injury crashes were highest in July (413) and August (397), and the highest number of HBD fatal crashes, 28, occurred in both October and April.

Saturday had the highest number of HBD fatal crashes at 61, followed by Sunday at 56.

Sunday had the highest proportion (37.2%) of alcohol-related fatalities when compared to all fatalities occurring on Sunday.

The 1:00-1:59 AM time period had the highest number of HBD fatal crashes with 24, while the time period from 12:00-12:59 PM had the lowest with 0.

Of the 9,623 drinking drivers involved in crashes, 7,014 (72.9%) were male and 2,597 (27.0%) were female. There were 12 drinking drivers for whom gender was unknown.

There were 2,279 (23.7%) drinking drivers in crashes who were age 24 or younger.

Out of the total 9,623 drinking drivers in crashes, 1,159 (12.0%) of the drivers were also suspected of using drugs.
There were 1,988 bicyclists involved in motor vehicle crashes in Michigan in 2016.

There were 33 fatal crashes involving bicyclists and 38 bicyclists were killed on Michigan roadways. A total of 1,526 bicyclist injuries in 1,509 crashes were reported by police on traffic crash records.

Male bicyclists (1,544) were involved in more bicycle crashes than female bicyclists (399), with 27 male bicyclists killed and 11 female bicyclists killed. Gender was not reported for 45 bicyclists in crashes.

Police reported that 24 of the bicyclists killed (63.2%) were “going straight ahead” just prior to crash.

In motor vehicle crashes, 1,530 bicyclists were riding in daylight conditions, 34 were riding during dawn, 73 were riding during dusk, 254 were riding in dark lighted conditions, 84 were riding in dark unlighted conditions, and 13 bicyclists were riding in unknown lighting conditions.

The peak hour for bicyclist involvement in crashes was from 4:00-4:59 PM, with 204 bicyclists involved. The peak hour for bicyclist fatalities was from 6:00-6:59 PM, with five bicyclist fatalities.

Of the 38 bicyclists killed, five (13.2%) were the result of a had-been-drinking crash and three (60.0%) of those bicyclists had been drinking.

No bicyclist fatalities occurred among youth age 15 and under. Teen/young adults (ages 16-20) accounted for four (10.5%) of the bicyclist fatalities. Adults ages 21-64 accounted for 26 (68.4%) of the bicyclist fatalities. Eight (21.1%) fatalities were in the 65 and over age group.

According to the Centers for Disease Control and Prevention, bicycle helmets are the single most effective countermeasure available to bicyclists to reduce head injuries and fatalities resulting from bicycle crashes.
Pedestrians are defined as a person on foot, skis, skates, rollerblades, or a non-motorized wheelchair, or the rider of a horse or a horse and buggy. Each pedestrian is listed as a separate unit on the Traffic Crash Report.

There were 2,349 pedestrians involved in 2,232 motor vehicle crashes. Of the 2,349 pedestrians involved in crashes, 165 (7.0%) were killed and 1,852 (78.8%) were injured.

There were 115 (69.7%) male pedestrians killed and 50 (30.3%) female pedestrians killed.

Of all pedestrian actions prior to a crash, "crossing not at an intersection" was the most deadly, accounting for 67 (40.6%) of the pedestrian fatalities.

For each pedestrian killed, there were about 11 pedestrians injured.

The highest number of pedestrian-involved crashes occurred during October, with 239 (10.7%).

The time period with the most pedestrian-involved crashes occurred from 5:00-5:59 PM, with 179 (8.0%).

Friday was the deadliest day for pedestrians with 29 (17.7%) pedestrian-involved fatal crashes and 30 (18.2%) pedestrian fatalities.

Of the 165 pedestrians killed, 54 (32.7%) of the deaths were the result of an alcohol-involved crash and 44 (81.5%) of those pedestrians had been drinking.

A total of 12 (7.3%) pedestrian fatalities occurred among youth age 15 and under. Teen/young adults (ages 16-20) accounted for nine (5.5%) of the pedestrian fatalities. Adults ages 21-64 accounted for 108 (65.5%) of the pedestrian fatalities. There were 36 (21.8%) fatalities in the 65 and over age group.
The visibility of motorcycles is a major concern with regard to motorcycle crashes. A light-colored helmet and eye protection; brightly colored high visibility clothing; leather or thick protective clothing; and long sleeves, pants, over-the-ankle boots, and gloves are all recommended for motorcycle safety by the Motorcycle Safety Foundation.

The death rate for motorcyclists was 18.2 per 100 million vehicle miles traveled compared to the overall mileage death rate of 1.1 per 100 million vehicle miles traveled.

There were 3,274 motorcycle-involved crashes in which 141 motorcyclists were killed and 2,622 were injured.

Motorcycles were involved in 1.0 percent of all traffic crashes in Michigan.

Out of the 141 motorcyclists killed, 118 (83.7%) motorcycle riders were reported by police as “going straight ahead” just prior to the crash.

There were 125 (88.7%) male motorcyclists and 16 (11.3%) female motorcyclists killed in traffic crashes.

Of the motorcyclists killed, 35 (24.8%) deaths were the result of a had-been-drinking crash and 32 (91.4%) of those motorcyclists had drivers coded as drinking.

Among the 141 motorcycle fatalities, 63 (44.7%) motorcyclists were wearing helmets and 70 (49.6%) motorcyclists were not wearing helmets. Helmet use was unknown for 8 (5.7%) motorcyclists.

A 2013 observational survey by Wayne State University estimated statewide helmet use at 73.0 percent and high-visibility gear at 5.6 percent.
Compared to the overall crash picture, heavy truck/bus crashes have more drivers indicated to be making backing, lane use, and turning errors; fewer single vehicle crashes; more sideswipes; more daytime crashes; and more weekday crashes.

Heavy trucks/buses were involved in 3.8 percent (11,981) of the 312,172 traffic crashes in Michigan.

The 11,981 heavy truck/bus-involved crash count is a 0.8 percent increase from the 2015 total of 11,890 crashes.

There were 120 people killed and 3,012 people injured in heavy truck/bus crashes.

A total of 12,479 heavy truck/bus drivers were involved in crashes, with 12 of those drivers killed.

The number of had-been-drinking heavy truck/bus drivers was 21.

There were 61 pedestrians and 24 bicyclists involved in heavy truck/bus involved crashes. Eleven pedestrians (18.0%) and three bicyclists (12.5%) were killed.

### INJURY SEVERITY IN CRASHES WHERE HEAVY TRUCKS/BUSES WERE INVOLVED

- **Possible Injuries**: 63.1% (1,975)
- **Suspected Minor Injuries**: 23.6% (740)
- **Suspected Serious Injuries**: 9.5% (297)
- **Killed**: 3.8% (120)
School bus-related crashes include situations where the school bus was involved or other units crashed due to the presence and influence of a school bus.

There were 958 school bus-related crashes, none of which resulted in fatalities.

Of the 957 school bus-related crashes with known time of occurrence, 336 (35.1%) took place between 6:00-8:59 AM and 371 (38.8%) occurred between 3:00-5:59 PM. The remaining 250 (26.1%) crashes occurred during other times of the day.

Of the 958 school bus-related crashes, 435 (45.4%) occurred at an intersection.

There were 1,555 people involved and no people killed on school buses.

No people on school buses received suspected serious injuries, 12 people received suspected minor injuries, and 122 people received possible injuries.

There were five pedestrians and four bicyclists involved in school bus-related crashes.

INJURY SEVERITY IN CRASHES WHERE SCHOOL BUSES WERE INVOLVED

- **Possible Injuries:** (79.6%)
- **Suspected Minor Injuries:** (17.1%)
- **Suspected Serious Injuries:** (3.3%)
- **Killed:** (0.0%)
Deer crashes include situations where a deer is a contributing factor, but does not necessarily come in contact with a traffic unit.

Michigan had 46,870 (15.0% of the total crashes) motor vehicle-deer crashes.

Passenger cars and station wagons represented 78.1 percent (36,749) of the vehicles involved.

As a result of vehicle-deer crashes, 1,240 people were injured and 14 people were killed. Five (35.7%) of those killed were occupants in passenger vehicles and nine (64.3%) killed were motorcyclists.

Motor vehicle-deer involved crashes were highest during the 7:00-7:59 AM time period (4,732).

The top 10 counties experiencing vehicle-deer crashes were: Oakland 1,847; Kent 1,481; Lapeer 1,308; Jackson 1,254; Sanilac 1,119; Ottawa 1,116; Ingham 1,096; Calhoun 1,056; Genesee 1,000; and Eaton 998.

The highest number of vehicle-deer crashes occurred during November (8,943).

Of the motor vehicle-deer crashes, 19,950 (42.6%) occurred during the fourth quarter of the year.
Seat belt 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 unaware of the presence of researchers (observed usage).

Of the 544,484 reported drivers and passengers involved in crashes for which seat belt use was known, 536,172 (98.5%) were reported to have been using seat belts and 8,312 (1.5%) were reported to have not been using seat belts.

The reported percentage of male drivers and passengers (4,936) involved in crashes who did not wear seat belts out of all males in crashes for which seat belt use was known was 1.7 percent. The reported percentage of female drivers and passengers (3,193) involved in crashes who did not wear their seat belts out of all females in crashes for which seat belt use was known was 1.3 percent.

Of the reported drivers and passengers in motor vehicles crashes under 25 years of age, 3,472 (2.4%) were not wearing seat belts.

When looking at known seat belt use for motor vehicle fatalities only, 206 people (36.1%) killed were not wearing seat belts.

Of the fatalities, there were 174 drivers and passengers killed while not wearing a seat belt in the front seat, 30 people killed while not wearing a seat belt in the rear seat, and two people killed while not wearing seat belt in an other or unknown seating position.

A total of 287 people in motor vehicle crashes were ejected while not wearing a seat belt. Of the 287 people ejected, 175 were drivers, 110 were injured passengers, and two were uninjured passengers. Of the unbelted people who were ejected 61 people (21.3%) were killed.

A 2016 observational study by Wayne State University estimated statewide belt use at 92.8 percent.
SPEEDING

Crashes involving speeding are the result of a hazardous action of “speed too fast.” The actual speeds of motor vehicles are not reported at the scene of the crash.

In 2016, there were 31,712 crashes involving speeding, which accounted for 10.2 percent of all crashes.

Out of the 538,412 motor vehicle drivers involved in crashes, 32,052 (6.0%) had a hazardous action of speed too fast.

In addition to the 32,052 motor vehicle drivers coded as “speed too fast,” 4 pedestrians and 8 bicyclists were also reported to be speeding at the time of the crash.

Single motor vehicle crashes were the most common crash type associated with speed-involved crashes at 70.5 percent (22,372).

The highest number of excessive speed crashes occurred during icy road conditions at 8,873 (28.0%), followed by snowy road conditions with 8,448 (26.6%).

A total of 1,402 (4.4%) motor vehicle drivers were speeding and had also been drinking at the time of the crash. There were 277 (0.9%) motor vehicle drivers who were speeding and also using drugs.

Excessive speed was a factor in 215 (20.2%) fatalities in motor vehicle crashes and 893 (15.9%) suspected serious injuries in 2016.

In addition to the 32,052 crashes where speeding was a hazardous action, “speed too slow” was reported as a hazardous action for 329 crashes.

INJURY SEVERITY IN CRASHES INVOLVING SPEEDING

- KILLED: 215 (2.3%)
- SUSPECTED SERIOUS INJURIES: 893 (9.4%)
- SUSPECTED MINOR INJURIES: 2,675 (28.1%)
- POSSIBLE INJURIES: 5,735 (60.3%)
In a red-light-running crash, at least one motor vehicle driver, pedestrian, or bicyclist disregarded a traffic control classified as a signal, related to or within 150 feet of an intersection.

There were a total of 6,267 crashes involving red-light-running in 2016, which accounts for 2.0% of the total crashes for that year.

The number of red-light running crashes increased 24.6 percent in the five-year period from 5,031 in 2012 to 6,267 in 2016.

The most common red-light-running crashes were angle crashes, which account for 81.4% of all red-light-running crashes.

Red-light-running crashes commonly involved more than one motor vehicle (98.1%).

The number of motor vehicle drivers who had been drinking and also ran red lights in crashes was 146 (2.3%). The number of motor vehicle drivers who were using drugs and also ran red lights in crashes was 40 (0.6%).

There were 17 (%) motorcycle drivers who failed to stop at a red light in 2016.

Out of the 1,064 people killed, 41 (3.9%) were the result of a red-light-running crash.

A total of 43 pedestrians and 71 bicyclists were involved in red-light-running crashes, with 2 (4.7%) pedestrians and 2 (2.8%) bicyclists killed. An additional 87 nonmotorists were injured.

Of the 16,673 people involved in red-light-running crashes, 41 people were killed and 4,235 people were injured in 2016.