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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 245,432 crashes, of which 1,010 (0.4%) were fatal, 44,417 (18.1%) were personal injury, and 200,005 (81.5%) were property damage only. Compared to 2019, this is a 21.9 percent decrease in total crashes, a increase of 12.0 percent in fatal crashes, a 18.6 percent decrease in personal injury crashes, and a 22.8 percent decrease in property damage crashes.

A total of 1,083 people were killed as a result of the 1,010 fatal crashes for an average of 1.1 deaths per fatal crash.

One out of every 9,203 people in Michigan was killed in a traffic crash; one out of every 163 people was injured.

For each person killed, 56 people were injured in crashes.

There were 5,433 people who received suspected serious injuries, which prevent normal activities and require hospitalization.

A total of 404,286 motor vehicles were involved in 245,432 reported crashes.

Of the 1,083 traffic crash deaths, 692 (63.9%) were drivers of vehicles, 178 (16.4%) were passengers in motor vehicles, 175 (16.2%) were pedestrians, and 38 (3.5%) were bicyclists.

Of the 678 drivers and passengers killed where seat belt data was collected, 228 (33.6%) were not wearing seat belts and 294 (43.4%) were wearing seat belts. It is unknown whether 156 (23.0%) of the fatalities were belted.

More male drivers were involved in crashes than female drivers. Of the 209,816 male drivers involved in crashes, 1,092 (0.5%) were involved in fatal crashes. Of the 154,100 female drivers involved in crashes, 437 (0.3%) were involved in fatal crashes.

There were 537 deaths that resulted from 515 single-vehicle fatal crashes.

Of the 984 motor vehicle drivers involved in fatal crashes where a hazardous action occurred, excessive speed was reported by police as the hazardous action for 190 (19.3%) of the drivers.

Of the 1,010 fatal crashes, 315 (31.2%) occurred at intersections.

Most fatal crashes occurred on dry roadways (79.9%) and in clear weather conditions (72.2%).

The majority of all crashes occurred during daylight (58.6%).

There were 74 (7.3%) fatal crashes during the 6:00-6:59 PM time period, more than any other time period.

The most fatal crashes, 175 (17.3%), occurred on Saturday.

There were 682 crashes, including 15 fatal crashes, associated with a police pursuit situation.

Emergency vehicles were involved in 2,245 crashes and four of the crashes were fatal. There were 1,800 police vehicles, 189 fire vehicles, and 324 ambulances involved in crashes.

A traffic crash was reported every 2 minutes and 9 seconds.

One person was killed every 8 hours and 7 minutes as a result of a traffic crash. One person was injured every 8 minutes and 39 seconds in a traffic crash.

The annual vehicle miles traveled was 86,311,046 (thousands) in 2020.
According to 2019 data provided by the Michigan Department of Health and Human Services, the number one cause of unintentional fatal injuries in Michigan for children age 0-14 is suffocation and the second cause is motor vehicle crashes.

The 2018 Direct Observation Survey of Child Restraint/Booster Seat Use in Michigan reported child restraint use rates of 98.2% for children age 0-3 and 54.5% for children age 4-7.

A total of 28 children (0-14 years old) were killed in motor vehicle crashes, including one driver age 8. The 0-14 age group accounted for 2.6 percent of all traffic deaths.

In addition, 3,180 children were injured in motor vehicle crashes.

Restraint usage among drivers and injured passengers age 0-14, as reported to police at the scene of a traffic crash, was 91.5%. The age group with the lowest restraint usage was children age 11 to 14 (90.2%).

Children accounted for 2.3 percent (4) of the pedestrians killed in Michigan, and 10.7 percent (144) of all pedestrian injuries.

Children under 15 years of age accounted for two (5.3%) of the 38 bicyclist deaths and 132 (14.1%) of all injured bicyclists.

### CRASH INJURY SEVERITY IN CHILDREN AGES 0-14

- **KILLED**: 28 (0.9%)
- **SUSPECTED SERIOUS INJURY**: 188 (5.9%)
- **SUSPECTED MINOR INJURY**: 620 (25.9%)
- **POSSIBLE INJURY**: 2,172 (67.7%)
Inexperience, risk-taking behavior, immaturity, and greater risk exposure are all factors that increase crash risk for young drivers. According to the Centers for Disease Control and Prevention, crashes are the leading cause of death among people age 15-20.

There were 473,443 licensed drivers ages 15-20* who represented 6.7 percent of Michigan’s driving population. The drivers in this age group represented 10.3 percent (41,685) of drivers in all crashes and 7.7 percent (126) of drivers in fatal crashes.

The 15-20 age group accounted for 7.3 percent (79) of all traffic deaths, and 51.9 percent (41) of those deaths were drivers.

In addition, 8,161 teenagers and young adults were injured in motor vehicle crashes, representing 13.4 percent of all people injured in crashes.

Generally, younger drivers had a higher incidence of speeding, failing to yield, and inability to stop in assured clear distance as a hazardous action. They also had higher rates of collision with a ditch and hitting a tree as the most harmful event in the crash. They were less likely to be alone in their car at the time of the crash.

The most common hazardous action coded for the 126 drivers age 15-20 involved in fatal crashes was speed too fast, with 19.8% (25) of the total.

Weekends accounted for 24.9 percent of crash involvements for drivers age 15-20, compared with only 22.7 percent of crash involvements for drivers 21 and older.

Teenagers and young adults accounted for 4.0 percent (7) of the pedestrians killed in Michigan, and 10.3 percent (138) of all pedestrian injuries.

One (2.6%) of the 38 bicyclist deaths were in the 15-20 age group.

*Licensed drivers between the ages of 14 years and 9 months old and 15 years old are included in this total.
In Michigan, 17.7 percent of residents are age 65 or older according to 2019 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.

INJURY SEVERITY IN MOTOR VEHICLE CRASHES WITH A DRIVER AGE 65 AND OVER

There were 1,604,006 licensed drivers age 65 and over who represented 22.5 percent of Michigan’s active driving population. The drivers in this age group represented 10.0 percent (40,432) of drivers in all crashes and 13.7 percent (222) of drivers in fatal crashes.

A total of 228 people age 65 and over were killed in traffic crashes, and 140 (61.4%) of them were drivers. 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.

In addition, 6,745 people age 65 and over were injured in traffic crashes, representing 11.1 percent of all people injured in crashes. Of the pedestrians killed in Michigan, 23.4 percent (41) were age 65 and over; 11.2 percent (151) of the pedestrians injured were age 65 and over.

Drivers and injured passengers, age 65 to 110, had a seatbelt usage of 99.2%, as reported to police at the scene of a crash. Twelve (31.6%) bicyclists out of the 38 total killed were age 65 and over.
Cell phone use can be a distraction for the driver, the bicyclist, and the pedestrian. Cell phone use in crashes is measured by reported use, which is recorded by the police officer at the scene of the crash.

A total of 2,394 crashes occurred in Michigan where a motor vehicle driver was using a cell phone. Fifteen of those crashes involved a fatality.

A total of 2,397 motor vehicle drivers, 15 pedestrians, and five bicyclists were reported to be using cell phones in 2,414 crashes.

Of the 15 pedestrians using a cell phone, two pedestrians were killed, three suffered a suspected serious injury, four suffered a suspected minor injury, and six suffered a possible injury.

Of the 2,397 motor vehicle drivers using cell phones, 417 (17.4%) were 20 years of age or younger.

There were 988 (40.9%) rear-end crashes where a driver was using a cell phone.

Of the total 2,414 crashes involving cell phone use, 681 (28.2%) also involved a lane departure.

Of the total 2,414 crashes involving cell phone use, 897 (37.2%) were intersection related.

There were 2,397 motor vehicle drivers using a cell phone in crashes: 2,057 passenger cars, SUVs, or vans; 274 pickup trucks; 32 trucks or buses over 10,000 lbs.; five motor homes; 10 small trucks under 10,000 lbs.; five motorcycles; six vehicle types coded as “other;” and eight uncoded and errors.
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 1,010 fatal crashes that occurred in Michigan, 303 (30.0%) were alcohol-related, involving at least one drinking operator, bicyclist, or pedestrian.

There were 326 alcohol-related fatalities, which accounts for 30.1 percent of the total number of people killed (1,083).

The percentage of alcohol-related fatalities was about 8.6 times higher than fatalities in all crashes and the most serious injury level (suspected serious) was about 5.3 times higher.

There were 182 (60.1%) crashes involving a single motor vehicle out of the 303 alcohol-related fatal crashes.

Of the 175 pedestrian deaths, 49 (28.0%) were the result of an HBD crash and 32 (65.3%) of those pedestrians had been drinking.

There were 152 motorcyclist deaths, and 47 (30.9%) of those deaths were the result of an HBD crash. Of the 47 motorcyclist alcohol-involved crash deaths, 30 (63.8%) motorcycle operators were coded as drinking and two (4.3%) were motorcycle passengers of a drinking operator.
Out of 38 bicyclist deaths, five (13.2%) were the result of an HBD crash and four out of the five bicyclists (80.0%) had been drinking.

Out of two snowmobiler deaths, two (100.0%) were the result of an HBD crash, and both snowmobilers had been drinking.

HBD injury crashes were highest in August (402), and the highest number of HBD fatal crashes, 40, occurred in July.

Saturday had the highest number of HBD fatal crashes at 66, followed by Sunday at 50.

Saturday had the highest proportion (39.2%) of alcohol-related fatalities when compared to all fatalities occurring on Saturday.

The 9:00-9:59 PM time period had the highest number of HBD fatal crashes with 29, while the 11:00-11:59 AM time period had the lowest number with one.

Of the 8,956 drinking drivers involved in crashes, 6,436 (71.9%) were male and 2,518 (28.1%) were female. There were two drinking drivers for whom gender was unknown.

There were 1,766 (19.7%) drinking drivers in crashes who were age 24 or younger.

Out of the total 8,956 drinking drivers in crashes, 1,305 (14.6%) of the drivers were also suspected of using drugs.
There were 1,235 bicyclists involved in motor vehicle crashes in Michigan in 2020.

A total of 38 bicyclists were killed in 37 fatal crashes on Michigan roadways. An additional 933 bicyclists were injured in 927 police-reported crashes on traffic crash records.

Male bicyclists (936) were involved in more bicycle crashes than female bicyclists (276), with 32 male bicyclists killed and six female bicyclists killed. Gender was not reported for 23 bicyclists in crashes.

Police reported that 22 of the bicyclists killed (57.9%) were “going straight ahead” just prior to crash.

In motor vehicle crashes, 970 bicyclists were riding in daylight conditions, 10 were riding during dawn, 42 were riding during dusk, 151 were riding in dark lighted conditions, 59 were riding in dark unlighted conditions, and 3 bicyclists were riding in unknown lighting conditions.

The peak hour for bicyclist involvement in crashes was from 4:00-4:59 PM, with 124 bicyclists involved. The peak hour for bicyclist fatalities was from 4:00-4:59 PM, with five bicyclist fatalities.

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

There was one (2.6%) bicyclist death among children under 11 years of age and one (2.6%) bicyclist killed in the 11-15 age group. Teen/young adults (ages 16-20) accounted for one (2.6%) of the bicyclist fatalities. Adults ages 21-64 accounted for 23 (60.5%) of the bicyclist fatalities. Twelve (31.6%) 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 1,784 pedestrians involved in 1,682 motor vehicle crashes.

Of the 1,784 pedestrians involved in crashes, 175 (9.8%) were killed and 1,343 (75.3%) were injured.

There were 121 (69.1%) male pedestrians killed and 54 (30.9%) female pedestrians killed.

Of all pedestrian actions prior to a crash, “crossing not at an intersection” was the most deadly, accounting for 57 (32.6%) of the pedestrian fatalities.

For each pedestrian killed, there were about 8 pedestrians injured.

The highest number of pedestrian-involved crashes occurred during January, with 184 (10.9%).

The time period with the most pedestrian-involved crashes occurred from 6:00-6:59 PM, with 154 (9.2%).

Saturday was the deadliest day for pedestrians with 28 (16.5%) of the crashes where a pedestrian was killed and 29 (16.6%) of the pedestrian fatalities.

Of the 175 pedestrians killed, 49 (28.0%) of the deaths were the result of an alcohol-involved crash and 32 (65.3%) of those pedestrians had been drinking.

A total of five (2.9%) pedestrian fatalities occurred among youth age 15 and under. Teen/young adults (ages 16-20) accounted for six (3.4%) of the pedestrian fatalities. Adults ages 21-64 accounted for 123 (70.3%) of the pedestrian fatalities. There were 41 (23.4%) fatalities in the 65 and over age group.
In 2020, the death rate for motorcyclists was 21.3 per 100 million vehicle miles traveled compared to the overall mileage death rate of 1.3 per 100 million vehicle miles traveled.

There were 2,988 motorcycle-involved crashes in which 152 motorcyclists were killed and 2,429 were injured.

Motorcycles were involved in 1.2 percent of all traffic crashes in Michigan in 2020.

Out of the 148 motorcycle operators killed, 121 (81.8%) were reported by police as “going straight ahead” just prior to the crash.

There were 141 (92.8%) male motorcyclists and 11 (7.2%) female motorcyclists killed in traffic crashes.

Of the motorcyclists killed, 47 (30.9%) deaths were the result of a had-been-drinking crash and 32 (68.1%) of those motorcyclists had drivers coded as drinking.

Among the 152 motorcycle fatalities, 72 (47.4%) motorcyclists were wearing helmets and 65 (42.8%) motorcyclists were not wearing helmets. Helmet use was unknown for 15 (9.9%) motorcyclists.

There were 237,481 motorcycles registered in 2020 according to the Michigan Department of State.

A 2017 observational survey by Michigan State University estimated statewide helmet use at 71.4 percent and high-visibility gear at 3.6 percent.

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.
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 4.6 percent (11,344) of the 245,432 traffic crashes in Michigan. The 2020 crash count is a 28.2 percent decrease from the 2019 total of 15,798 crashes.

There were 78 people killed and 2,636 people injured in heavy truck/bus crashes.

A total of 11,867 heavy truck/bus drivers were involved in crashes, with seven of those drivers killed.

The number of had-been-drinking heavy truck/bus drivers was 23.

There were 54 pedestrians and 19 bicyclists involved in heavy truck/bus involved crashes. Nine pedestrians (16.7%) and three bicyclists (15.8%) were killed.

In 2020 vehicle miles traveled for heavy trucks/buses was 6,798,378 (thousands), resulting in a fatal crash rate of 1.1 per 100 million VMT compared to the overall fatal crash rate of 1.2 per 100 million VMT.

### Injury Severity in Crashes Where Heavy Trucks/Buses Were Involved

- **Possible Injuries**: (59.6%) - 1,618
- **Suspected Minor Injuries**: (27.2%) - 737
- **Suspected Serious Injuries**: (10.4%) - 281
- **Killed**: (2.9%) - 78
There were 461 school bus-related crashes, none of which resulted in fatalities.

Of the 461 school bus-related crashes, 161 (34.9%) took place between 6:00-8:59 AM and 142 (30.8%) occurred between 3:00-5:59 PM. The remaining 158 (34.3%) crashes occurred during other times of the day.

Of the 461 school bus-related crashes, 196 (42.5%) occurred at an intersection.

There were 584 people involved and no people killed on school buses.

No people on a school bus received suspected serious injuries, two people received suspected minor injuries, and 15 people received possible injuries.

There was one pedestrian and no bicyclists involved in school bus-related crashes.

INJURY SEVERITY IN CRASHES WHERE SCHOOL BUSES WERE INVOLVED
Deer crashes include situations where a deer is a contributing factor but does not necessarily come in contact with a traffic unit.

Michigan had 51,103 (20.8% of the total crashes) motor vehicle-deer crashes.

Passenger cars, SUVs, and vans represented 77.9 percent (40,010) of the vehicles involved.

As a result of vehicle-deer crashes, 1,400 people were injured and five people were killed. Three (60.0%) of those killed were occupants in passenger vehicles and two (40.0%) killed were motorcyclists.

Motor vehicle-deer involved crashes were highest during the 7:00-7:59 AM time period (4,951).

The top 10 counties experiencing vehicle-deer crashes were: Oakland 1,854; Kent 1,712; Jackson 1,471; Ottawa 1,363; Lapeer 1,243; Allegan 1,242; Genesee 1,169; Clinton 1,131; Washtenaw 1,068; and Sanilac 1,064.

The highest number of vehicle-deer crashes occurred during November (9,001).

Of the motor vehicle-deer crashes, 21,766 (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 392,107 reported drivers and passengers involved in crashes for which seat belt use was known, 386,135 (98.5%) were reported to have been using seat belts and 5,972 (1.5%) were reported to have not been using seat belts.

The reported percentage of male drivers and passengers (3,770) 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 (2,200) involved in crashes who did not wear their seat belts out of all females in crashes for which seat belt use was known was 1.2 percent.

Of the reported drivers and passengers in motor vehicles crashes under 25 years of age, 2,272 (2.2%) were not wearing seat belts.

When looking at known seat belt use for motor vehicle fatalities only, 228 people (43.7%) killed were not wearing seat belts.

Of the fatalities, there were 208 drivers and passengers killed while not wearing a seat belt in the front seat, 18 people killed while not wearing a seat belt in the rear seat, and two people killed while not wearing a seat belt in an other or unknown seating position.

A total of 305 people in motor vehicle crashes were ejected while not wearing a seat belt. Of the 305 people ejected, 204 were drivers, 97 were injured passengers, and four were uninjured passengers. Of the unbelted people who were ejected 79 people (25.9%) were killed.

A 2019 observational study by Michigan State University estimated statewide belt use at 94.4 percent.
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 2020, there were 22,260 crashes involving speeding, which accounted for 9.1 percent of all crashes.

Out of the 404,286 motor vehicle drivers involved in crashes, 22,391 (5.5%) had a hazardous action of speed too fast.

In addition to the 22,391 motor vehicle drivers coded as “speed too fast,” eight 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 72.8 percent (16,202).

The highest number of excessive speed crashes occurred during dry road conditions at 6,119 (27.5%), followed by snowy road conditions with 5,013 (22.5%).

A total of 1,352 (6.0%) of the speeding motor vehicle drivers had also been drinking at the time of the crash, and 315 (1.4%) of the speeding motor vehicle drivers had also used drugs.

Excessive speed was a factor in 200 (18.5%) fatalities in motor vehicle crashes and 821 (15.1%) suspected serious injuries in 2020.

In addition to the 22,260 crashes where speeding was a hazardous action, “speed too slow” was reported as a hazardous action for 140 crashes.

### Injury Severity in Crashes Involving Speeding

- **Killed:** 200 (2.7%)
- **Suspected Serious Injuries:** 821 (11.2%)
- **Suspected Minor Injuries:** 2,169 (29.7%)
- **Possible Injuries:** 4,109 (56.3%)
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 5,521 crashes involving red-light-running in 2020, which accounts for 2.2% of the total crashes for that year.

The number of red-light running crashes decreased 11.9 percent in the five-year period from 6,267 in 2016 to 5,521 in 2020.

The most common red-light-running crashes were angle crashes at 4,694, which account for 85.0% of all red-light-running crashes.

Red-light-running crashes commonly involved more than one motor vehicle, with a frequency of 5,445 in 2020 (98.6%).

The number of motor vehicle drivers who had been drinking and also ran red lights in crashes was 130 (2.3%). The number of motor vehicle drivers who were using drugs and also ran red lights in crashes was 41 (0.7%).

There were 19 motorcycle drivers who failed to stop at a red light in 2020, which is 0.3% of all motor vehicle drivers who ran red lights.

Out of the 1,083 people killed, 30 (2.8%) were the result of a red-light-running crash.

A total of 35 pedestrians and 31 bicyclists were involved in red-light-running crashes. Two pedestrians and two bicyclists were killed, and 55 nonmotorists were injured.

Of the 14,864 people involved in red-light-running crashes, 30 people were killed and 3,889 people were injured in 2020.