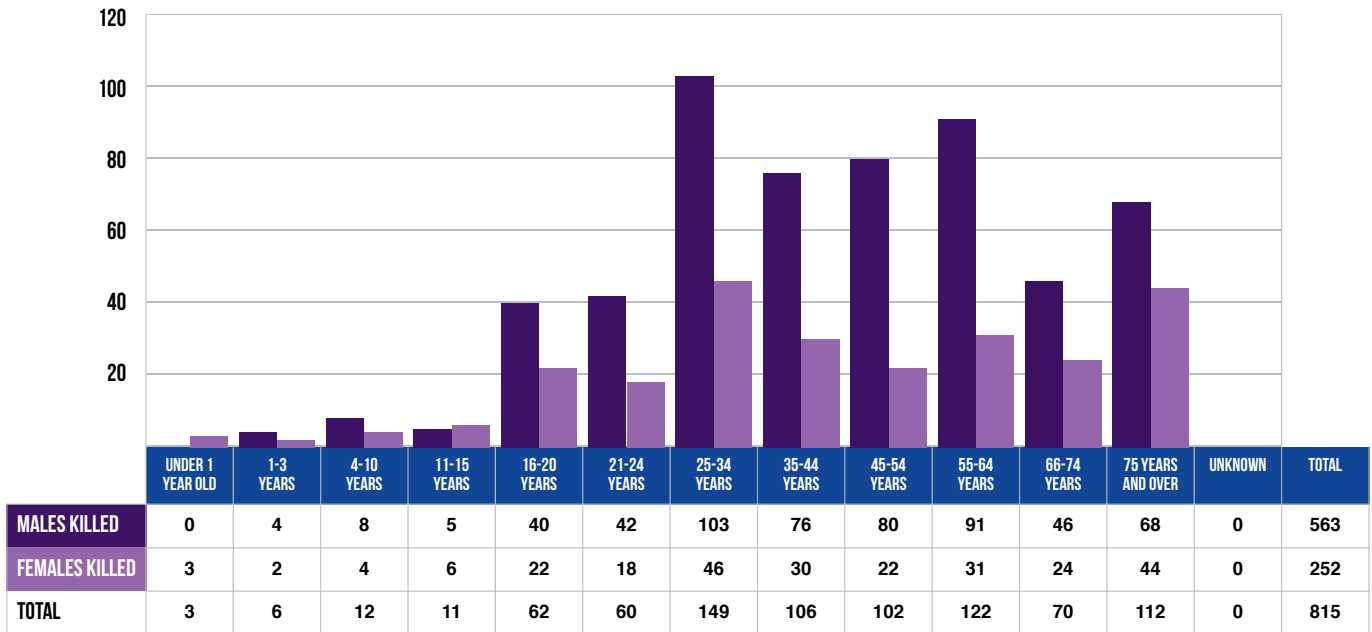


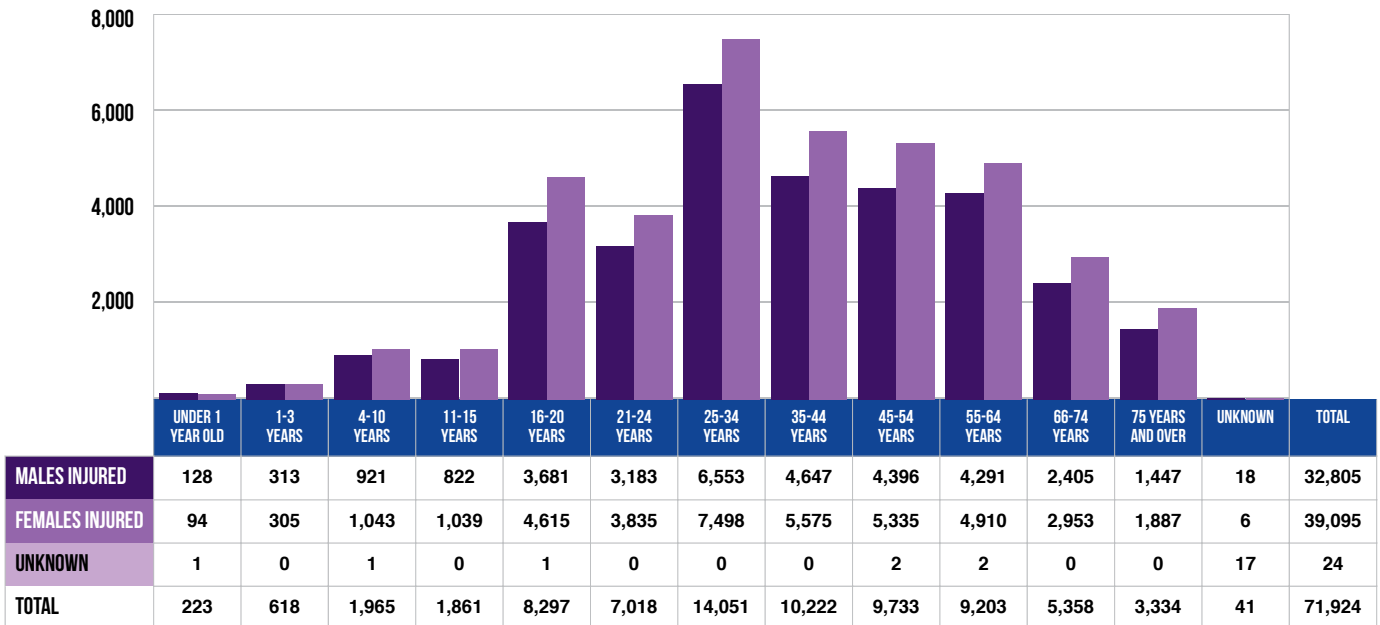
AGE AND GENDER OF OCCUPANTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

OCCUPANTS KILLED



The majority (69.1%) of occupants killed in traffic crashes in 2019 were male.

OCCUPANTS INJURED



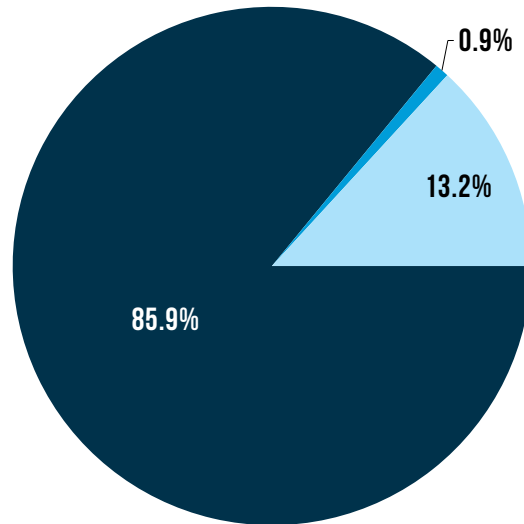
The majority (54.4%) of occupants injured in traffic crashes in 2019 were female.

Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.

REPORTED OCCUPANT RESTRAINT USAGE FOR ALL DRIVERS AND INJURED PASSENGERS

REPORTED OCCUPANT RESTRAINT USAGE

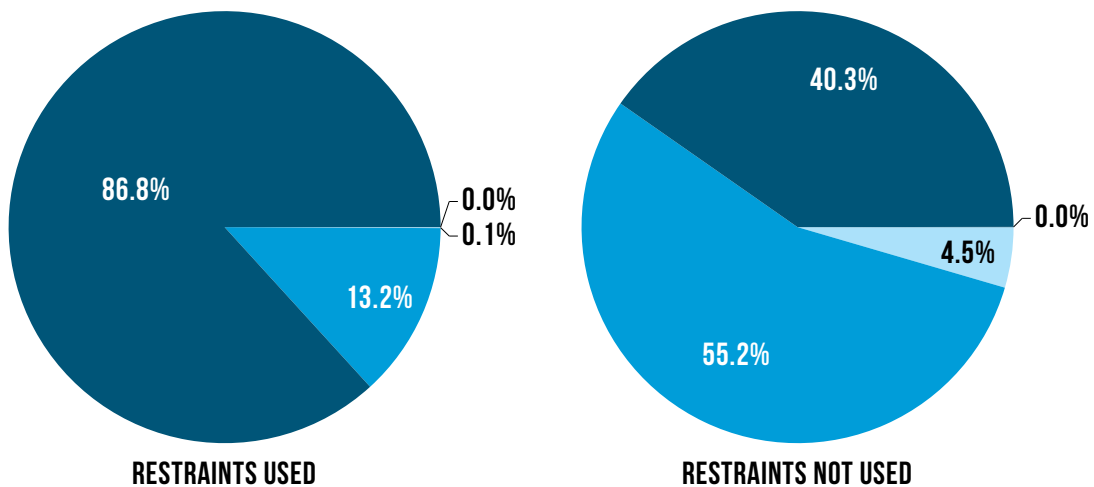
■ RESTRAINTS USED
 ■ RESTRAINTS NOT USED
 ■ UNKNOWN



Of the 549,957 drivers and injured passengers involved in crashes, 472,680 (85.9%) were REPORTED to be using occupant restraints.

INJURY SEVERITY

■ FATAL
 ■ INJURY
 ■ NO INJURY
 ■ UNKNOWN



Occupants in crashes were 61 times more likely to be killed if they were not wearing their restraints.

Note: These charts do not include helmet usage.

MOTOR VEHICLE OCCUPANTS & INJURY SEVERITY BY SEATING POSITION AND KNOWN BELT USAGE

| SEATING POSITION | BELTS USED * | | FATAL | INJURY | | | NO INJURY |
|-------------------------|----------------|--------------|------------|--------------|---------------|---------------|----------------|
| | Number | % of Total | | A | B | C | |
| Left Front | 457,248 | 97.0 | 261 | 2,401 | 12,393 | 32,840 | 409,353 |
| Center Front | 613 | 0.1 | 1 | 20 | 70 | 257 | 265 |
| Right Front | 9,814 | 2.1 | 62 | 487 | 1,803 | 7,051 | 411 |
| Left Rear Second Seat | 1,392 | 0.3 | 8 | 64 | 279 | 1,041 | 0 |
| Center Rear Second Seat | 205 | 0.0 | 3 | 7 | 28 | 167 | 0 |
| Right Rear Second Seat | 1,494 | 0.3 | 5 | 60 | 299 | 1,130 | 0 |
| Left Rear Third Seat | 163 | 0.0 | 0 | 7 | 33 | 123 | 0 |
| Center Rear Third Seat | 34 | 0.0 | 0 | 1 | 7 | 26 | 0 |
| Right Rear Third Seat | 120 | 0.0 | 1 | 8 | 19 | 92 | 0 |
| Left Rear Fourth Seat | 19 | 0.0 | 0 | 0 | 0 | 19 | 0 |
| Center Rear Fourth Seat | 12 | 0.0 | 0 | 1 | 4 | 7 | 0 |
| Right Rear Fourth Seat | 22 | 0.0 | 0 | 0 | 5 | 17 | 0 |
| Other Passenger Area | 15 | 0.0 | 0 | 1 | 0 | 12 | 2 |
| Unknown | 103 | 0.0 | 0 | 3 | 5 | 25 | 70 |
| Uncoded & Errors | 1 | 0.0 | 0 | 0 | 0 | 1 | 0 |
| TOTAL † | 471,255 | 100.0 | 341 | 3,060 | 14,945 | 42,808 | 410,101 |

* Belts Used includes use of lap, shoulder, or both belts, or restraint failure. Children who were using or not using a child restraint are in separate tables on the next two pages.

† This total does not include five occupants with unknown injury severity.

| SEATING POSITION | BELTS NOT USED * | | FATAL | INJURY | | | NO INJURY |
|-------------------------|------------------|--------------|------------|------------|------------|--------------|--------------|
| | Number | % of Total | | A | B | C | |
| Left Front | 3,141 | 65.4 | 158 | 368 | 491 | 420 | 1,704 |
| Center Front | 49 | 1.0 | 0 | 4 | 17 | 12 | 16 |
| Right Front | 415 | 8.6 | 29 | 83 | 139 | 138 | 26 |
| Left Rear Second Seat | 261 | 5.4 | 10 | 32 | 72 | 147 | 0 |
| Center Rear Second Seat | 79 | 1.6 | 1 | 12 | 25 | 40 | 1 |
| Right Rear Second Seat | 282 | 5.9 | 8 | 37 | 87 | 150 | 0 |
| Left Rear Third Seat | 44 | 0.9 | 2 | 6 | 2 | 34 | 0 |
| Center Rear Third Seat | 20 | 0.4 | 2 | 1 | 7 | 10 | 0 |
| Right Rear Third Seat | 26 | 0.5 | 0 | 2 | 2 | 22 | 0 |
| Left Rear Fourth Seat | 8 | 0.2 | 0 | 0 | 3 | 5 | 0 |
| Center Rear Fourth Seat | 8 | 0.2 | 0 | 1 | 2 | 5 | 0 |
| Right Rear Fourth Seat | 14 | 0.3 | 0 | 0 | 3 | 11 | 0 |
| Other Passenger Area | 174 | 3.6 | 3 | 17 | 36 | 118 | 0 |
| Unknown | 283 | 5.9 | 4 | 3 | 13 | 51 | 212 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL † | 4,804 | 100.0 | 217 | 566 | 899 | 1,163 | 1,959 |

* No belts were available or no belts were used. Children who were using or not using a child restraint are in separate tables on the next two pages.

† This total does not include one occupant with unknown injury severity.

Note: Michigan law requires that all persons must wear a seatbelt when riding in the front seat of a motor vehicle.

REPORTED RESTRAINT USAGE - CHILDREN

On July 1, 2008, Michigan law was amended. (<http://legislature.mi.gov/doc.aspx?mcl-257-710e>)

Any child under four years of age must be in an approved Child Safety Seat (CSS)/Child Restraint Device (CRD), and riding in the rear seat. All children less than 8 years of age AND who are less than 4'9" in height, must be properly restrained in a child restraint system. All children ages 8 through 15 must wear a properly adjusted and fastened seat belt when riding in either the front or back seat of a vehicle.

| RESTRAINT USAGE | CHILDREN | | FATAL | INJURY | | |
|---------------------------------------|------------|--------------|----------|----------|-----------|------------|
| | Number | % of Total | | A | B | C |
| AGE 0 | | | | | | |
| Belts Used | 25 | 11.1 | 0 | 0 | 5 | 20 |
| No Belts Used | 7 | 3.1 | 0 | 0 | 3 | 4 |
| Child Restraint Used - Forward Facing | 23 | 10.2 | 0 | 0 | 5 | 18 |
| Child Restraint Used - Rear Facing | 147 | 65.3 | 2 | 2 | 9 | 134 |
| Child Restraint Used - Booster Seat | 6 | 2.7 | 0 | 0 | 1 | 5 |
| Child Restraint Not Used | 7 | 3.1 | 1 | 0 | 2 | 4 |
| Restraint Failed | 1 | 0.4 | 0 | 0 | 0 | 1 |
| Unknown | 9 | 4.0 | 0 | 0 | 0 | 9 |
| Total | 225 | 100.0 | 3 | 2 | 25 | 195 |
| AGE 1 | | | | | | |
| Belts Used | 4 | 2.4 | 0 | 0 | 0 | 4 |
| No Belts Used | 3 | 1.8 | 0 | 0 | 0 | 3 |
| Child Restraint Used - Forward Facing | 69 | 41.3 | 2 | 2 | 7 | 58 |
| Child Restraint Used - Rear Facing | 74 | 44.3 | 0 | 1 | 8 | 65 |
| Child Restraint Used - Booster Seat | 3 | 1.8 | 0 | 0 | 0 | 3 |
| Child Restraint Not Used | 8 | 4.8 | 0 | 2 | 2 | 4 |
| Restraint Failed | 1 | 0.6 | 0 | 0 | 0 | 1 |
| Unknown | 5 | 3.0 | 0 | 0 | 0 | 5 |
| Total | 167 | 100.0 | 2 | 5 | 17 | 143 |
| AGE 2 | | | | | | |
| Belts Used | 5 | 2.1 | 0 | 0 | 1 | 4 |
| No Belts Used | 9 | 3.8 | 0 | 1 | 1 | 7 |
| Child Restraint Used - Forward Facing | 168 | 71.8 | 0 | 3 | 43 | 122 |
| Child Restraint Used - Rear Facing | 25 | 10.7 | 0 | 0 | 2 | 23 |
| Child Restraint Used - Booster Seat | 17 | 7.3 | 0 | 0 | 1 | 16 |
| Child Restraint Not Used | 5 | 2.1 | 0 | 2 | 1 | 2 |
| Restraint Failed | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Unknown | 5 | 2.1 | 0 | 0 | 2 | 3 |
| Total | 234 | 100.0 | 0 | 6 | 51 | 177 |

REPORTED RESTRAINT USE - CHILDREN (CONTINUED)

| RESTRAINT USAGE | CHILDREN | | FATAL | INJURY | | |
|---------------------------------------|--------------|--------------|-----------|------------|------------|--------------|
| | Number | % of Total | | A | B | C |
| AGE 3 | | | | | | |
| Belts Used | 27 | 12.1 | 0 | 3 | 5 | 19 |
| No Belts Used | 5 | 2.2 | 1 | 0 | 0 | 4 |
| Child Restraint Used - Forward Facing | 132 | 59.2 | 1 | 4 | 22 | 105 |
| Child Restraint Used - Rear Facing | 11 | 4.9 | 0 | 0 | 2 | 9 |
| Child Restraint Used - Booster Seat | 33 | 14.8 | 1 | 2 | 5 | 25 |
| Child Restraint Not Used | 7 | 3.1 | 1 | 1 | 2 | 3 |
| Restraint Failed | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Unknown | 8 | 3.6 | 0 | 2 | 3 | 3 |
| Total | 223 | 100.0 | 4 | 12 | 39 | 168 |
| AGE 4-7 | | | | | | |
| Belts Used | 359 | 34.2 | 2 | 9 | 73 | 275 |
| No Belts Used | 40 | 3.8 | 0 | 3 | 12 | 25 |
| Child Restraint Used - Forward Facing | 309 | 29.5 | 0 | 7 | 52 | 250 |
| Child Restraint Used - Rear Facing | 6 | 0.6 | 0 | 0 | 0 | 6 |
| Child Restraint Used - Booster Seat | 260 | 24.8 | 1 | 12 | 56 | 191 |
| Child Restraint Not Used | 29 | 2.8 | 1 | 0 | 11 | 17 |
| Restraint Failed | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Unknown | 46 | 4.4 | 1 | 4 | 14 | 27 |
| Total | 1,049 | 100.0 | 5 | 35 | 218 | 791 |
| AGE 8-15 | | | | | | |
| Belts Used | 2,227 | 82.3 | 5 | 76 | 436 | 1,710 |
| No Belts Used | 201 | 7.4 | 5 | 27 | 50 | 119 |
| Child Restraint Used - Forward Facing | 38 | 1.4 | 0 | 1 | 8 | 29 |
| Child Restraint Used - Rear Facing | 1 | 0.0 | 0 | 0 | 0 | 1 |
| Child Restraint Used - Booster Seat | 76 | 2.8 | 0 | 1 | 13 | 62 |
| Child Restraint Not Used | 2 | 0.1 | 0 | 0 | 0 | 2 |
| Restraint Failed | 1 | 0.0 | 0 | 0 | 1 | 0 |
| Unknown | 161 | 5.9 | 5 | 15 | 31 | 110 |
| Total | 2,707 | 100.0 | 15 | 120 | 539 | 2,033 |

Information about uninjured passengers is not required to be reported by the officer on the crash report, thus these tables relate the experience of only those children with injuries in crashes.

Note: Safety equipment usage is often self-reported and may not reflect actual usage.

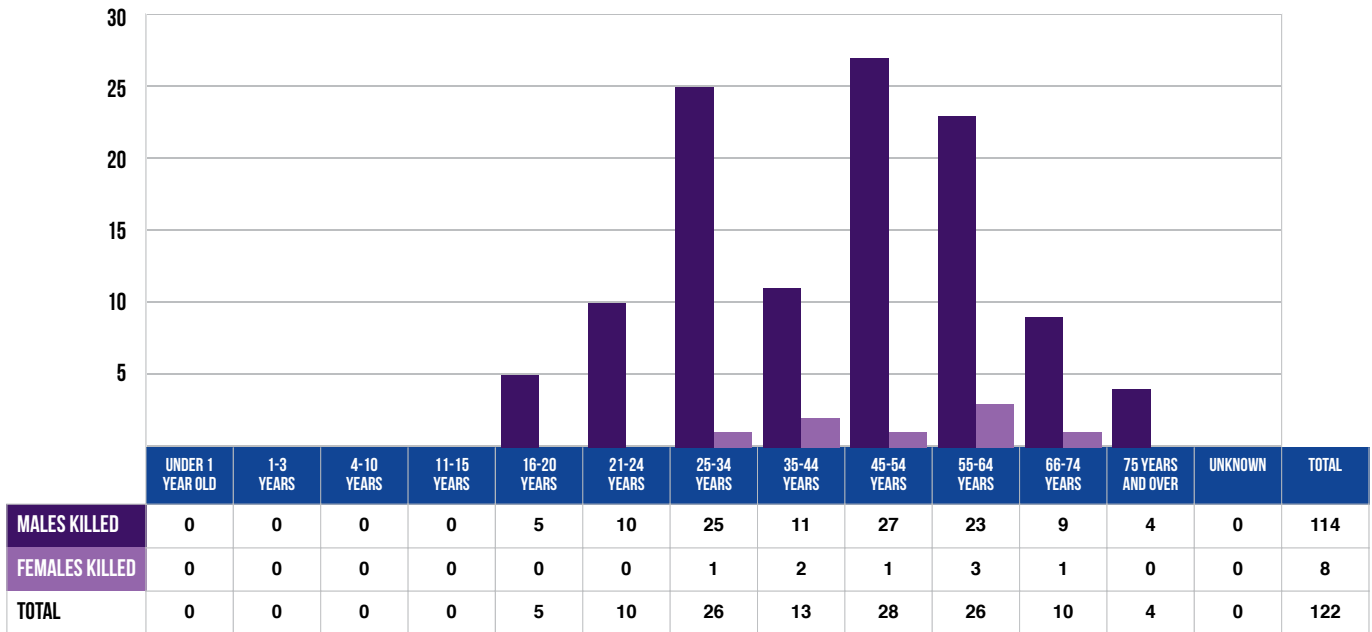
MOTOR VEHICLE OCCUPANT INJURY SEVERITY BY KNOWN AIRBAG DEPLOYMENT

| MOTOR VEHICLE OCCUPANT AIRBAG DEPLOYMENT | OCCUPANTS* | | FATAL | OCCUPANT INJURY SEVERITY | | | NO INJURY |
|--|----------------|--------------|------------|--------------------------|---------------|---------------|----------------|
| | Number | % of Total | | A | B | C | |
| Deployed - front | 40,752 | 7.4 | 200 | 1,351 | 5,193 | 9,735 | 24,272 |
| Deployed - side | 4,937 | 0.9 | 21 | 80 | 488 | 1,264 | 3,084 |
| Deployed - curtain | 3,451 | 0.6 | 19 | 68 | 434 | 902 | 2,028 |
| Deployed - combination | 21,820 | 3.9 | 208 | 1,196 | 3,766 | 6,612 | 10,038 |
| Deployed - other | 372 | 0.1 | 2 | 6 | 35 | 91 | 238 |
| Not deployed | 412,971 | 74.6 | 150 | 1,282 | 6,716 | 27,306 | 377,498 |
| Not equipped | 13,463 | 2.4 | 171 | 920 | 1,488 | 1,805 | 7,173 |
| Unknown | 49,572 | 9.0 | 44 | 118 | 249 | 810 | 7,031 |
| Uncoded & Errors | 6,389 | 1.2 | 0 | 0 | 1 | 8 | 14 |
| TOTAL | 553,727 | 100.0 | 815 | 5,021 | 18,370 | 48,533 | 431,376 |

*Includes 49,612 occupants (drivers and passengers) with unknown injury severity.

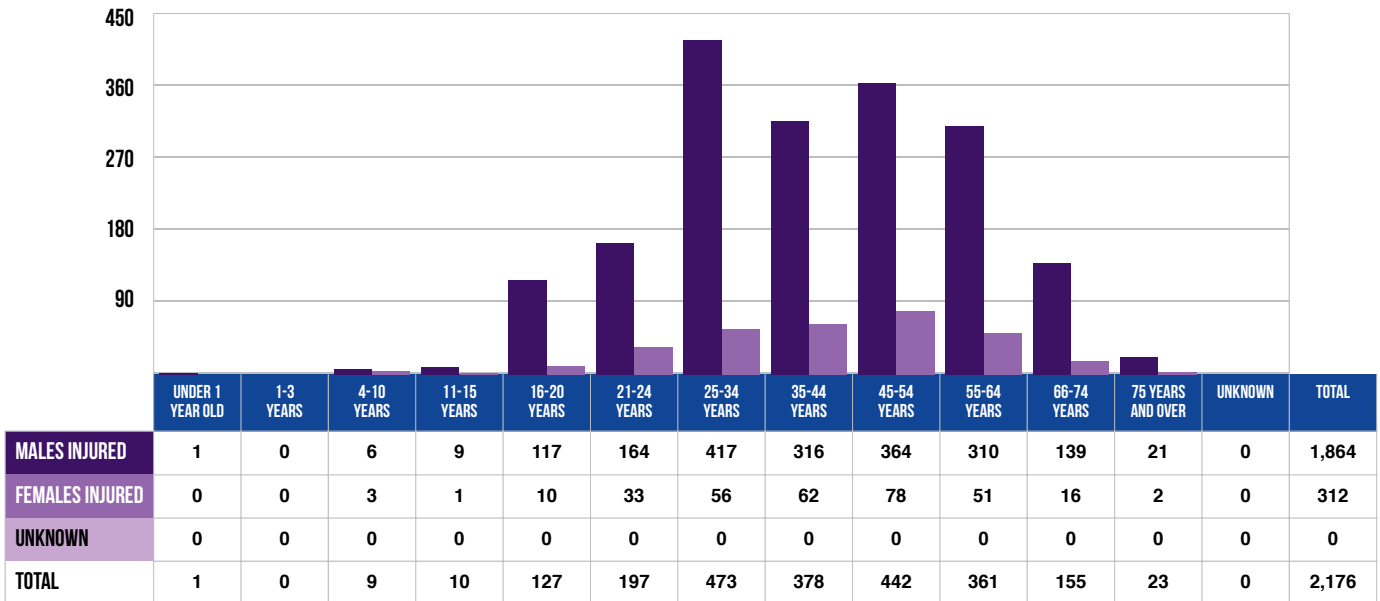
AGE AND GENDER OF MOTORCYCLISTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

MOTORCYCLISTS KILLED



Of the 122 motorcyclists killed in traffic crashes in 2019, 93.4 percent were male. In comparison, 69.1 percent of all occupants killed in crashes were male.

MOTORCYCLISTS INJURED



Of the 2,176 motorcyclists injured in traffic crashes in 2019, 85.7 percent were male. In comparison, 45.6 percent of all occupants injured in crashes were male.

MOTORCYCLE HELMET USAGE AND INJURY SEVERITY

| AGE OF MOTORCYCLIST | FATALITIES | INJURY | | | NO INJURY |
|---------------------------|------------|------------|------------|------------|------------|
| | | A | B | C | |
| HELMET WORN | | | | | |
| 3 years and under | 0 | 0 | 1 | 0 | 0 |
| 4 - 10 years | 0 | 1 | 5 | 2 | 4 |
| 11 - 15 years | 0 | 1 | 7 | 1 | 2 |
| 16 - 20 years | 4 | 27 | 47 | 29 | 29 |
| 21 - 24 years | 5 | 29 | 77 | 35 | 45 |
| 25 - 34 years | 14 | 71 | 141 | 84 | 106 |
| 35 - 44 years | 6 | 46 | 86 | 55 | 69 |
| 45 - 54 years | 11 | 65 | 97 | 55 | 82 |
| 55 - 64 years | 12 | 77 | 100 | 65 | 86 |
| 65 - 74 years | 4 | 42 | 48 | 24 | 31 |
| 75 years and over | 0 | 7 | 8 | 4 | 9 |
| Unknown | 0 | 0 | 0 | 0 | 0 |
| Subtotal | 56 | 366 | 617 | 354 | 463 |
| HELMET NOT WORN | | | | | |
| 3 years and under | 0 | 0 | 0 | 0 | 0 |
| 4 - 10 years | 0 | 1 | 0 | 0 | 0 |
| 11 - 15 years | 0 | 1 | 0 | 0 | 2 |
| 16 - 20 years | 1 | 7 | 7 | 6 | 1 |
| 21 - 24 years | 3 | 15 | 20 | 10 | 7 |
| 25 - 34 years | 8 | 70 | 54 | 31 | 41 |
| 35 - 44 years | 6 | 54 | 78 | 35 | 42 |
| 45 - 54 years | 16 | 89 | 85 | 34 | 41 |
| 55 - 64 years | 13 | 40 | 48 | 18 | 35 |
| 65 - 74 years | 3 | 13 | 16 | 6 | 7 |
| 75 years and over | 4 | 1 | 1 | 1 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 0 |
| Subtotal | 54 | 291 | 309 | 141 | 176 |
| HELMET USE UNKNOWN | | | | | |
| 3 years and under | 0 | 0 | 0 | 0 | 0 |
| 4 - 10 years | 0 | 0 | 0 | 0 | 0 |
| 11 - 15 years | 0 | 0 | 0 | 0 | 0 |
| 16 - 20 years | 0 | 1 | 0 | 2 | 1 |
| 21 - 24 years | 2 | 1 | 6 | 4 | 4 |
| 25 - 34 years | 4 | 7 | 11 | 4 | 7 |
| 35 - 44 years | 1 | 8 | 8 | 8 | 10 |
| 45 - 54 years | 1 | 5 | 11 | 1 | 11 |
| 55 - 64 years | 1 | 2 | 8 | 3 | 9 |
| 65 - 74 years | 3 | 1 | 4 | 1 | 2 |
| 75 years and over | 0 | 1 | 0 | 0 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 1 |
| Subtotal | 12 | 26 | 48 | 23 | 45 |
| TOTAL | 122 | 683 | 974 | 518 | 684 |

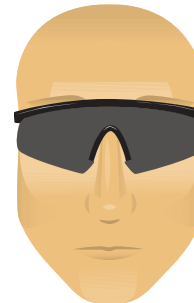
2011 Michigan motor vehicle crash data represents the last full year of data that was collected during Michigan's universal helmet law, enacted in 1969: Michigan Vehicle Code Public Act 300 of 1949, Section 257.658, requiring all motorcycle riders to wear a helmet. On April 13, 2012, Michigan changed their helmet law from a universal to a partial helmet law. The partial law allows some certified Michigan riders, who are over 21 and carry additional insurance, to ride without a helmet.

HELMET WORN



DRIVERS KILLED: 53
PASSENGERS KILLED: 3

HELMET NOT WORN



DRIVERS KILLED: 50
PASSENGERS KILLED: 4

HELMET USE UNKNOWN



DRIVERS KILLED: 11
PASSENGERS KILLED: 1

OCCUPANT INJURY OUTCOME BY VEHICLE TYPE

| VEHICLE | KILLED | INJURY | | | TOTAL KABC | % OF ALL CRASH INVOLVED KABC OCCUPANTS |
|--|------------|--------------|---------------|---------------|---------------|--|
| | | A | B | C | | |
| Passenger car, SUV, van | 561 | 3,542 | 15,045 | 43,015 | 62,163 | 85.5 |
| Motor home | 1 | 8 | 46 | 95 | 150 | 0.2 |
| Pickup truck | 82 | 495 | 1,738 | 3,795 | 6,110 | 8.4 |
| Small Truck under 10,000 lbs. GVWR | 2 | 16 | 52 | 127 | 197 | 0.3 |
| Motorcycle | 122 | 683 | 974 | 519 | 2,298 | 3.2 |
| Moped/goped | 11 | 61 | 125 | 98 | 295 | 0.4 |
| Go-cart/golf cart | 2 | 5 | 7 | 5 | 19 | 0.0 |
| Snowmobile | 8 | 44 | 34 | 27 | 113 | 0.2 |
| Off-Road Vehicle - ORV/All-Terrain Vehicle - ATV | 7 | 90 | 97 | 48 | 242 | 0.3 |
| Other | 4 | 14 | 42 | 86 | 146 | 0.2 |
| Unknown | 0 | 1 | 1 | 8 | 10 | 0.0 |
| CDL Truck/Bus (breakdown below) | 15 | 62 | 209 | 710 | 996 | 1.4 |
| Total Number of Occupants | 815 | 5,021 | 18,370 | 48,533 | 72,739 | 100.0 |

| HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING | KILLED | INJURY | | | TOTAL KABC | % OF ALL CRASH INVOLVED KABC OCCUPANTS |
|---|-----------|-----------|------------|------------|------------|--|
| | | A | B | C | | |
| 10,000 lbs. or less | 0 | 1 | 1 | 5 | 7 | 0.7 |
| 10,001 - 26,000 lbs. | 3 | 19 | 67 | 183 | 272 | 27.3 |
| Greater than 26,000 lbs. | 12 | 42 | 141 | 522 | 717 | 72.0 |
| Uncoded & Errors | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Total Number of Occupants | 15 | 62 | 209 | 710 | 996 | 100.0 |

Note:

- 1) School bus is not recorded on the UD-10 and cannot be broken out of CDL Truck/Bus.
- 2) These crashes involve a motor vehicle in transport on a public trafficway (in Michigan) and result in injury, death, or at least \$1,000 in property damage.