

Traffic Safety Facts

2019 Data

September 2021

DOT HS 813 176



In this fact sheet for 2019 the information is presented as follows.

- [Overview](#)
- [Occupant Characteristics](#)
 - [Passenger Vehicle Types](#)
 - [Age and Sex](#)
 - [Seating Position](#)
- [Restraint Use and Benefits](#)
 - [Seat Belts](#)
 - [Frontal Air Bags](#)
 - [Child Restraints](#)
- [State](#)
- [Restraint Use Laws](#)
- [Important Safety Reminders](#)

Occupant Protection

Occupant protection discussed in this fact sheet includes seat belts, car seats for those under 5, and frontal air bags in passenger vehicles. Passenger vehicles consist of passenger cars and light trucks (pickups, SUVs, and vans). Vehicle occupants include drivers and passengers.

Key Findings

- Forty-seven percent of passenger vehicle occupants killed in traffic crashes in 2019 were unrestrained (based on known restraint use).
- In traffic crashes in 2019, considering known driver restraint use by passenger vehicle type, 57 percent of pickup drivers who were killed were unrestrained, compared to 47 percent of SUV drivers, 42 percent of passenger car drivers, and 38 percent of van drivers.
- Fifty-eight percent (based on known restraint use) of passenger vehicle occupant fatalities in the 21-to-24 and 25-to-34 age groups in 2019 traffic crashes were unrestrained — the highest percentage of all age groups in this report.
- In traffic crashes in 2019, among male fatalities with known restraint use, 51 percent were unrestrained; among female fatalities with known restraint use, 40 percent were unrestrained.
- In 2019 among passenger vehicle occupant fatalities with known restraint use, 45 percent seated in the front row and 58 percent of those in the second row of seats were unrestrained.
- Among passenger vehicle occupant fatalities in fatal crashes in 2019 with known restraint use, 39 percent were unrestrained during the day compared to 55 percent at night.

This fact sheet contains information on fatal motor vehicle crashes and fatalities based on data from the Fatality Analysis Reporting System (FARS). Refer to the end of this publication for more information on FARS.

A motor vehicle traffic crash is defined as an incident that involved one or more motor vehicles in transport that originated on a public trafficway, such as a road or highway. Crashes that occurred on private property, including parking lots and driveways, are excluded. The terms “motor vehicle traffic crash” and “traffic crash” are used interchangeably.

Overview

According to NHTSA’s National Occupant Protection Use Survey (NOPUS) for 2019 (Report No. DOT HS 812 875), the estimated seat belt use rate increased from 85.1 percent in 2010 to 90.7 percent in 2019. NOPUS provides the only nationwide probability-based estimate of observed seat belt use in the United States. It is based on the observation of front seat occupant (driver and passenger) seat belt use during an average daylight moment, and does not necessarily represent restraint use among occupants involved in crashes.



U.S. Department of Transportation
National Highway Traffic Safety Administration

1200 New Jersey Avenue SE
Washington, DC 20590

Restraint use for passenger vehicle occupants killed in crashes between 2010 and 2019 is shown in Table 1. In 2019 there were 36,096 traffic fatalities in the United States, of which 22,215 (62%) were occupants of passenger vehicles. Of the 22,215 passenger vehicle occupants killed in 2019, there were 10,815 (49%)

who were restrained and 9,466 (43%) who were unrestrained at the time of the crashes. Restraint use was not known for the remaining 1,934 (9%) occupants. Considering only passenger vehicle occupant fatalities whose restraint use was known, 53 percent were restrained and 47 percent were unrestrained.

Table 1
Passenger Vehicle Occupants Killed, by Restraint Use, 2010–2019

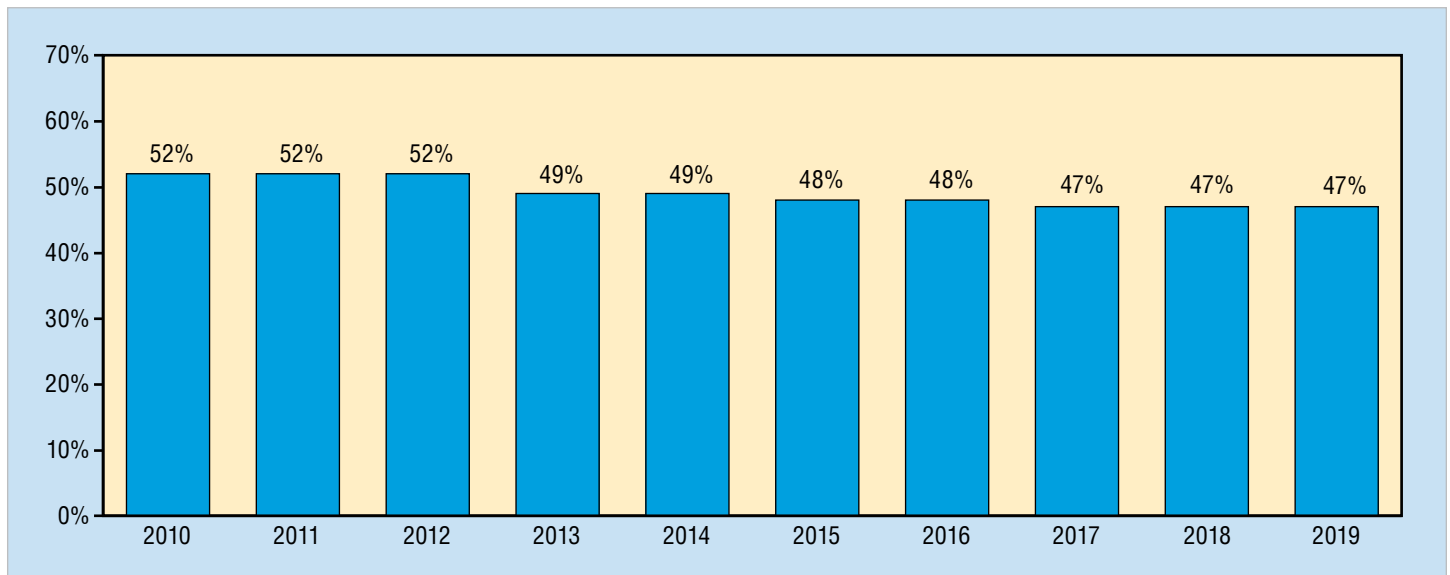
| Year | Restraint Use | | | | | | Total | | Percent Based on Known Restraint Use | |
|------|---------------|---------|--------------|---------|---------|---------|--------|---------|--------------------------------------|--------------|
| | Restrained | | Unrestrained | | Unknown | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Restrained | Unrestrained |
| 2010 | 9,969 | 45% | 10,590 | 48% | 1,714 | 8% | 22,273 | 100% | 48% | 52% |
| 2011 | 9,471 | 44% | 10,215 | 48% | 1,630 | 8% | 21,316 | 100% | 48% | 52% |
| 2012 | 9,746 | 45% | 10,370 | 48% | 1,663 | 8% | 21,779 | 100% | 48% | 52% |
| 2013 | 9,840 | 46% | 9,622 | 45% | 1,761 | 8% | 21,223 | 100% | 51% | 49% |
| 2014 | 9,961 | 47% | 9,410 | 45% | 1,679 | 8% | 21,050 | 100% | 51% | 49% |
| 2015 | 10,763 | 48% | 9,975 | 44% | 1,903 | 8% | 22,641 | 100% | 52% | 48% |
| 2016 | 11,343 | 48% | 10,463 | 44% | 1,981 | 8% | 23,787 | 100% | 52% | 48% |
| 2017 | 11,488 | 49% | 10,116 | 43% | 2,059 | 9% | 23,663 | 100% | 53% | 47% |
| 2018 | 11,055 | 48% | 9,845 | 43% | 1,945 | 9% | 22,845 | 100% | 53% | 47% |
| 2019 | 10,815 | 49% | 9,466 | 43% | 1,934 | 9% | 22,215 | 100% | 53% | 47% |

Source: FARS 2010–2018 Final File, and 2019 Annual Report File (ARF)
 Note: Percentages may not add up to 100 percent due to individual rounding.

The percentage of unrestrained passenger vehicle occupants killed in motor vehicle traffic crashes is graphed in Figure 1. Among passenger vehicle occupants killed, when restraint use

was known, the percentage of unrestrained deaths decreased by 5 percentage points, from 52 percent in 2010 to 47 percent in 2019.

Figure 1
Percentages of Unrestrained* Passenger Vehicle Occupants Killed, 2010–2019



Source: FARS 2010–2018 Final File, 2019 ARF
 *Based on known restraint use.

Occupant Characteristics

Passenger Vehicle Types

Table 2 shows passenger vehicle occupant fatalities separately for drivers and passengers for each passenger vehicle type. Seventy-five percent of the passenger vehicle occupants killed in 2019 were drivers, and 25 percent were passengers.

In 2019 there were 16,629 passenger vehicle drivers killed in traffic crashes, the majority (55%) in passenger cars. Among the 15,254 passenger vehicle driver fatalities for whom restraint use was known, 46 percent were unrestrained. However, the percentage of drivers killed who were unrestrained differed by vehicle type: 57 percent of pickup drivers, 47 percent of SUV drivers, 42 percent of passenger car drivers, and 38 percent of van drivers.

Table 2
Drivers and Passengers Killed, by Passenger Vehicle Type and Restraint Use, 2019

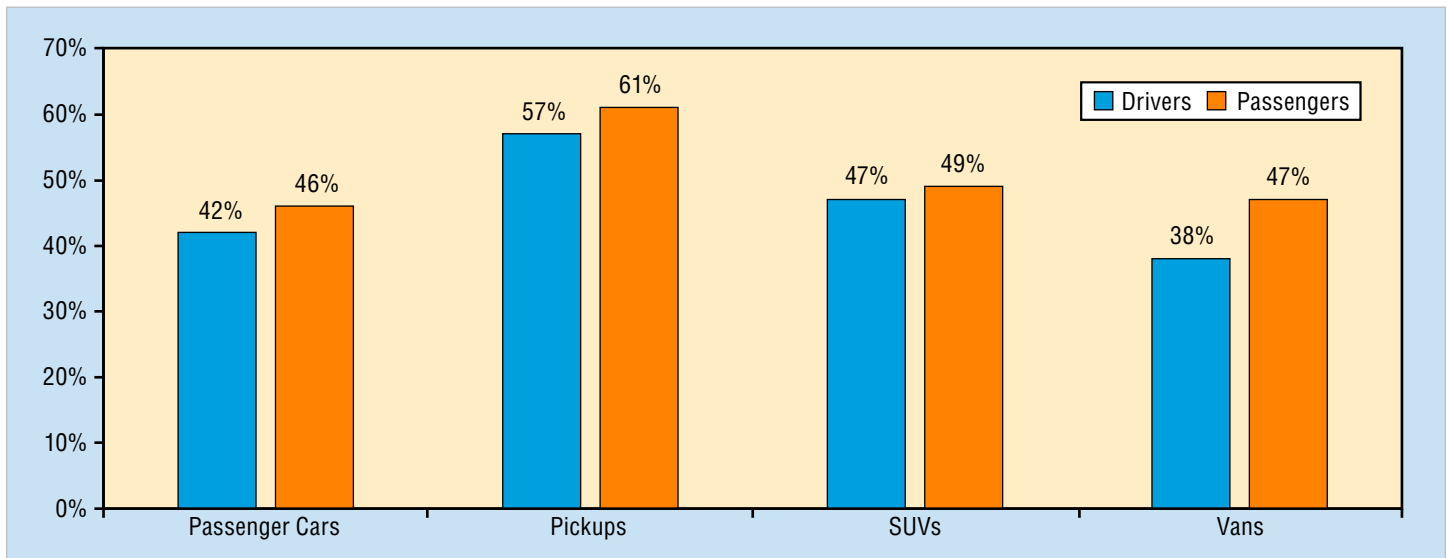
| Passenger Vehicle Type | Restraint Use | | | | | | Total | | Percent Based on Known Restraint Use | | |
|------------------------|---------------|--------------|--------------|--------------|------------|--------------|------------|---------------|--------------------------------------|--------------|------------|
| | Restrained | | Unrestrained | | Unknown | | | | Restrained | Unrestrained | |
| | Number | Percent | Number | Percent | Number | Percent | | | | | |
| Drivers Killed | Passenger Car | 4,868 | 53% | 3,490 | 38% | 753 | 8% | 9,111 | | | 100% |
| | Light Truck* | 3,384 | 45% | 3,512 | 47% | 622 | 8% | 7,518 | 100% | 49% | 51% |
| | –Pickup | 1,353 | 40% | 1,786 | 52% | 282 | 8% | 3,421 | 100% | 43% | 57% |
| | –SUV | 1,649 | 49% | 1,473 | 43% | 271 | 8% | 3,393 | 100% | 53% | 47% |
| | –Van | 367 | 56% | 227 | 35% | 63 | 10% | 657 | 100% | 62% | 38% |
| | Total | 8,252 | 50% | 7,002 | 42% | 1,375 | 8% | 16,629 | 100% | 54% | 46% |
| Passengers Killed | Passenger Car | 1,514 | 48% | 1,304 | 42% | 310 | 10% | 3,128 | 100% | 54% | 46% |
| | Light Truck* | 1,049 | 43% | 1,160 | 47% | 249 | 10% | 2,458 | 100% | 47% | 53% |
| | –Pickup | 275 | 36% | 426 | 55% | 72 | 9% | 773 | 100% | 39% | 61% |
| | –SUV | 606 | 46% | 579 | 44% | 131 | 10% | 1,316 | 100% | 51% | 49% |
| | –Van | 167 | 46% | 151 | 42% | 42 | 12% | 360 | 100% | 53% | 47% |
| | Total | 2,563 | 46% | 2,464 | 44% | 559 | 10% | 5,586 | 100% | 51% | 49% |

Source: FARS 2019 ARF
Note: Percentages may not add up to 100 percent due to individual rounding.
*Includes other/unknown light-truck vehicle types.

There were 5,586 passengers killed in passenger vehicles in 2019. Fifty-six percent of the passengers killed were riding in passenger cars. Among the 5,027 passenger vehicle passenger fatalities for whom restraint use was known, 49 percent were unrestrained, but use varied by vehicle type: 61 percent of the

passengers killed in pickups were unrestrained, compared to 49 percent in SUVs, 47 percent in vans, and 46 percent in passenger cars. Figure 2 compares the percentage of known unrestrained drivers killed versus passengers killed for each passenger vehicle type.

Figure 2
Percentages of Unrestrained* Drivers and Passengers Killed, by Passenger Vehicle Type, 2019



Source: FARS 2019 ARF
*Based on known restraint use.

Age and Sex

Information on restraint use by age group for passenger vehicle occupants who were killed in 2019 is shown in Table 3. Among passenger vehicle occupant fatalities where restraint use was known, the 21-to-24 and 25-to-34 age groups had

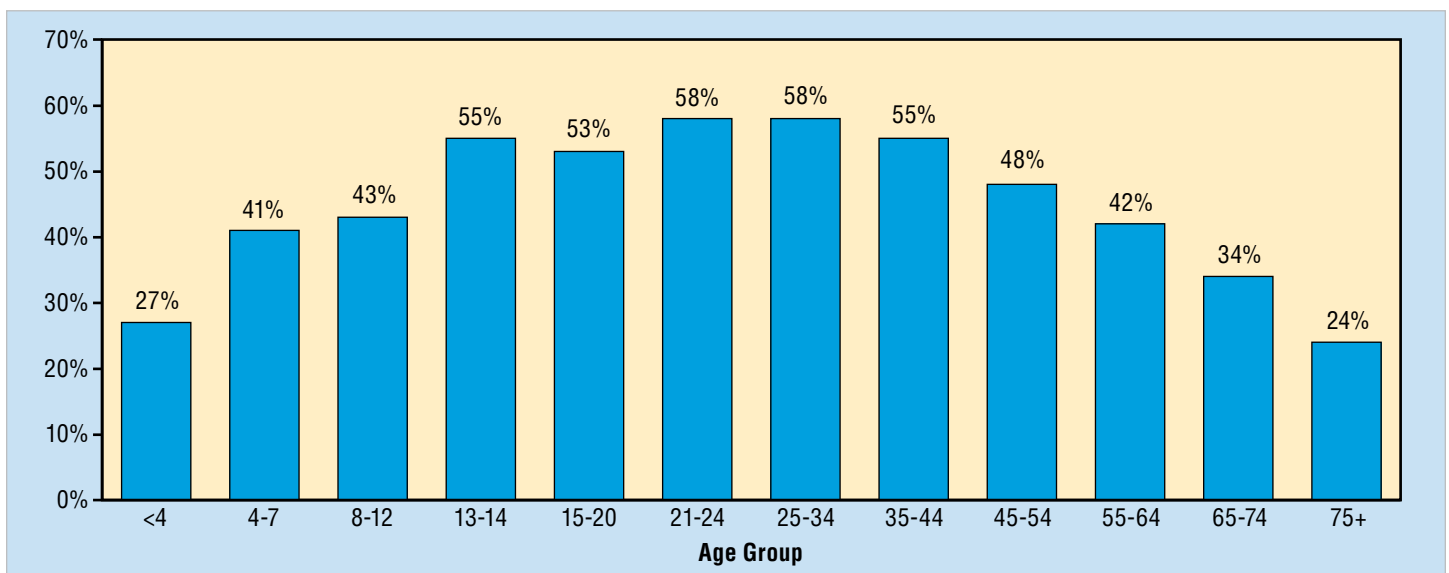
the highest percentages of unrestrained occupants (58%), followed by the 13-to-14 and 35-to-44 age groups at 55 percent unrestrained. These percentages are shown in Figure 3.

Table 3
Passenger Vehicle Occupants Killed, by Age Group and Restraint Use, 2019

| Age Group | Restraint Use | | | | | | Total | | Percent Based on Known Restraint Use | |
|---------------|---------------|------------|--------------|------------|--------------|-----------|---------------|-------------|--------------------------------------|--------------|
| | Restrained | | Unrestrained | | Unknown | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Restrained | Unrestrained |
| <4 | 118 | 67% | 44 | 25% | 15 | 8% | 177 | 100% | 73% | 27% |
| 4-7 | 107 | 53% | 73 | 36% | 22 | 11% | 202 | 100% | 59% | 41% |
| 8-12 | 118 | 52% | 89 | 39% | 22 | 10% | 229 | 100% | 57% | 43% |
| 13-14 | 49 | 40% | 60 | 49% | 14 | 11% | 123 | 100% | 45% | 55% |
| 15-20 | 939 | 42% | 1,047 | 47% | 227 | 10% | 2,213 | 100% | 47% | 53% |
| 21-24 | 779 | 38% | 1,054 | 51% | 227 | 11% | 2,060 | 100% | 42% | 58% |
| 25-34 | 1,489 | 37% | 2,080 | 52% | 416 | 10% | 3,985 | 100% | 42% | 58% |
| 35-44 | 1,238 | 41% | 1,488 | 50% | 259 | 9% | 2,985 | 100% | 45% | 55% |
| 45-54 | 1,248 | 48% | 1,154 | 44% | 199 | 8% | 2,601 | 100% | 52% | 48% |
| 55-64 | 1,431 | 53% | 1,048 | 39% | 230 | 8% | 2,709 | 100% | 58% | 42% |
| 65-74 | 1,370 | 62% | 709 | 32% | 139 | 6% | 2,218 | 100% | 66% | 34% |
| 75+ | 1,920 | 71% | 615 | 23% | 159 | 6% | 2,694 | 100% | 76% | 24% |
| Total* | 10,815 | 49% | 9,466 | 43% | 1,934 | 9% | 22,215 | 100% | 53% | 47% |

Source: FARS 2019 ARF
 Note: Percentages may not add up to 100 percent due to individual rounding.
 *Includes passenger vehicle occupants of unknown age.

Figure 3
Percentages of Unrestrained* Passenger Vehicle Occupants Killed, by Age Group, 2019



Source: FARS 2019 ARF
 *Based on known restraint use.

In 2019 there were 177 passenger vehicle occupant fatalities among children younger than 4, and 27 percent were unrestrained (based on known restraint use). In the 4-to-7 age group, there were 202 fatalities; 41 percent were unrestrained (based on known restraint use).

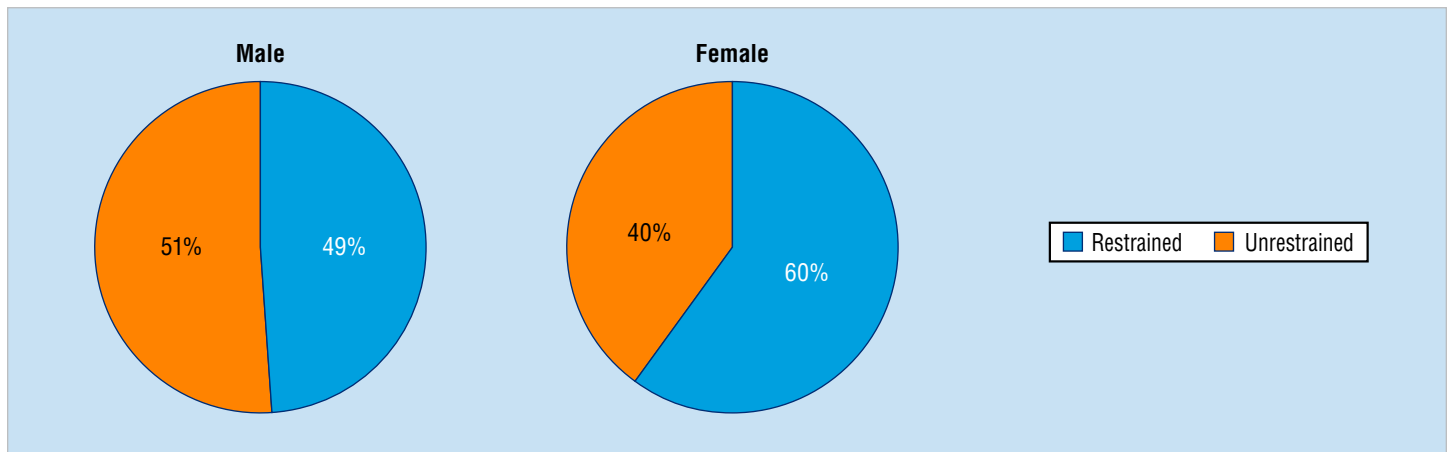
Nearly twice as many male occupants (14,435) as female occupants (7,752) were killed in 2019, as shown in Table 4. When restraint use was known, 51 percent of the males killed and 40 percent of the females killed were unrestrained (Figure 4). Restraint use was unknown for 9 percent of male occupant fatalities and 8 percent of the female fatalities.

Table 4
Passenger Vehicle Occupants Killed, by Sex and Restraint Use, 2019

| Sex | Restraint Use | | | | | | Total | | Percent Based on Known Restraint Use | |
|---------------|---------------|------------|--------------|------------|--------------|-----------|---------------|-------------|--------------------------------------|--------------|
| | Restrained | | Unrestrained | | Unknown | | | | | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Restrained | Unrestrained |
| Male | 6,489 | 45% | 6,633 | 46% | 1,313 | 9% | 14,435 | 100% | 49% | 51% |
| Female | 4,315 | 56% | 2,822 | 36% | 615 | 8% | 7,752 | 100% | 60% | 40% |
| Total* | 10,815 | 49% | 9,466 | 43% | 1,934 | 9% | 22,215 | 100% | 53% | 47% |

Source: FARS 2019 ARF
 Note: Percentages may not add up to 100 percent due to individual rounding.
 *Includes passenger vehicle occupants of unknown sex.

Figure 4
Percentages of Passenger Vehicle Occupants Killed, by Sex and Restraint Use*, 2019



Source: FARS 2019 ARF
 *Based on known restraint use.

Seating Position

Restraint use for passenger vehicle occupants killed in 2019, by their seating position, is presented in Table 5. Among killed occupants with known restraint use, 45 percent of those in the

front row and 58 percent of those in the second row of seats were unrestrained.

Table 5
Passenger Vehicle Occupants Killed, by Seating Position and Restraint Use, 2019

| Seating Position | | Restraint Use | | | | | | Total | | Percent Based on Known Restraint Use | |
|------------------|---------------|---------------|------------|--------------|------------|--------------|-----------|---------------|-------------|--------------------------------------|--------------|
| | | Restrained | | Unrestrained | | Unknown | | | | | |
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Restrained | Unrestrained |
| Front Row | Total | 10,152 | 50% | 8,349 | 41% | 1,699 | 8% | 20,200 | 100% | 55% | 45% |
| | Left (Driver) | 8,252 | 50% | 7,005 | 42% | 1,374 | 8% | 16,631 | 100% | 54% | 46% |
| | Middle | 10 | 34% | 14 | 48% | 5 | 17% | 29 | 100% | 42% | 58% |
| | Right | 1,890 | 53% | 1,324 | 37% | 319 | 9% | 3,533 | 100% | 59% | 41% |
| | Other/Unknown | 0 | 0% | 6 | 86% | 1 | 14% | 7 | 100% | 0% | 100% |
| Second Row | Total | 623 | 38% | 854 | 52% | 155 | 9% | 1,632 | 100% | 42% | 58% |
| | Left | 245 | 38% | 328 | 51% | 72 | 11% | 645 | 100% | 43% | 57% |
| | Middle | 73 | 34% | 130 | 60% | 14 | 6% | 217 | 100% | 36% | 64% |
| | Right | 300 | 41% | 361 | 50% | 64 | 9% | 725 | 100% | 45% | 55% |
| | Other/Unknown | 5 | 11% | 35 | 78% | 5 | 11% | 45 | 100% | 13% | 88% |
| Other* | | 31 | 16% | 144 | 76% | 14 | 7% | 189 | 100% | 18% | 82% |
| Unknown | | 9 | 5% | 119 | 61% | 66 | 34% | 194 | 100% | 7% | 93% |
| Total | | 10,815 | 49% | 9,466 | 43% | 1,934 | 9% | 22,215 | 100% | 53% | 47% |

Source: FARS 2019 ARF
 Note: Percentages may not add up to 100 percent due to individual rounding.
 *Includes additional rows, cargo areas, trailing units, and vehicle exteriors.

Restraint Use and Benefits

Seat Belts

Looking at all passenger vehicle occupants (those that were killed as well as those that survived) in fatal crashes in 2019 with known restraint use:

- Twenty-six percent were unrestrained at the time of the crashes (Table 6);
- Twenty-two percent were unrestrained during the day; and
- Thirty percent were unrestrained at night.

For those passenger vehicle occupants with known restraint use who survived fatal crashes in 2019:

- During daytime, 12 percent of passenger vehicle occupants who survived fatal crashes were unrestrained (thus 88% of the survivors were restrained); and
- Sixteen percent of crash survivors were unrestrained during nighttime.

Table 6
Passenger Vehicle Occupants Involved in Fatal Crashes, by Survival Status, Time of Day, and Restraint Use, 2019

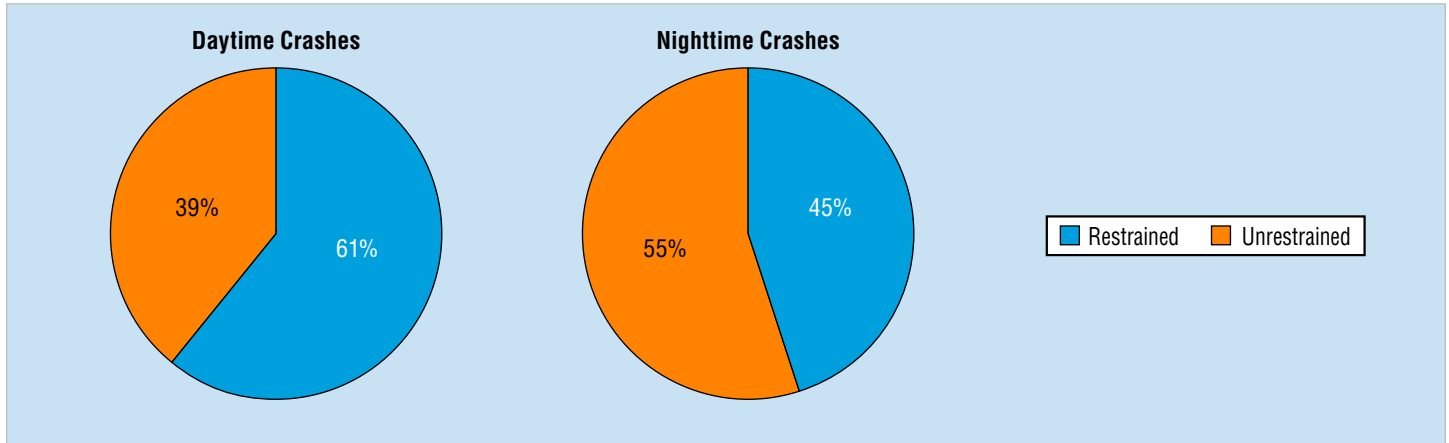
| Survival Status/ Time of Day | | Restraint Use | | | | | | Total | | Percent Based on Known Restraint Use | |
|---------------------------------|--------------|---------------|------------|---------------|------------|--------------|-----------|---------------|-------------|--------------------------------------|--------------|
| | | Restrained | | Unrestrained | | Unknown | | | | | |
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Restrained | Unrestrained |
| Killed | Daytime | 6,629 | 56% | 4,288 | 36% | 834 | 7% | 11,751 | 100% | 61% | 39% |
| | Nighttime | 4,124 | 40% | 5,083 | 49% | 1,070 | 10% | 10,277 | 100% | 45% | 55% |
| | Unknown | 62 | 33% | 95 | 51% | 30 | 16% | 187 | 100% | 39% | 61% |
| | Total | 10,815 | 49% | 9,466 | 43% | 1,934 | 9% | 22,215 | 100% | 53% | 47% |
| Survived | Daytime | 15,626 | 82% | 2,123 | 11% | 1,384 | 7% | 19,133 | 100% | 88% | 12% |
| | Nighttime | 13,858 | 75% | 2,654 | 14% | 2,085 | 11% | 18,597 | 100% | 84% | 16% |
| | Unknown | 33 | 53% | 7 | 11% | 22 | 35% | 62 | 100% | 83% | 18% |
| | Total | 29,517 | 78% | 4,784 | 13% | 3,491 | 9% | 37,792 | 100% | 86% | 14% |
| Total | Daytime | 22,255 | 72% | 6,411 | 21% | 2,218 | 7% | 30,884 | 100% | 78% | 22% |
| | Nighttime | 17,982 | 62% | 7,737 | 27% | 3,155 | 11% | 28,874 | 100% | 70% | 30% |
| | Unknown | 95 | 38% | 102 | 41% | 52 | 21% | 249 | 100% | 48% | 52% |
| | Total | 40,332 | 67% | 14,250 | 24% | 5,425 | 9% | 60,007 | 100% | 74% | 26% |

Source: FARS 2019 ARF
 Note: Percentages may not add up to 100 percent due to individual rounding.
 Daytime – 6 a.m. to 5:59 p.m.; Nighttime – 6 p.m. to 5:59 a.m.

Among passenger vehicle occupants killed in fatal crashes in 2019 with known restraint use, the percentage of unrestrained

fatalities during daytime was 39 percent compared to 55 percent during nighttime (Figure 5).

Figure 5
Percentages of Passenger Vehicle Occupants Killed, by Time of Day and Restraint Use*, 2019

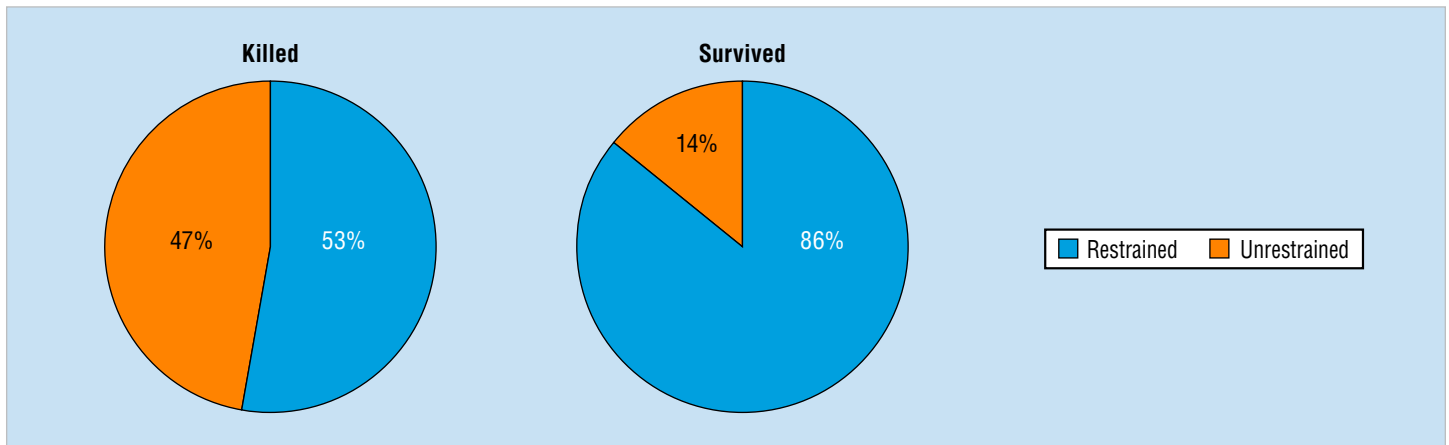


Source: FARS 2019 ARF
 *Based on known restraint use.

For passenger vehicle occupants involved in fatal crashes in 2019, nearly half (47%) of those who were killed were

unrestrained in the crashes, compared to only 14 percent of those who survived (Figure 6).

Figure 6
Percentages of Passenger Vehicle Occupants Involved in Fatal Crashes, by Survival Status and Restraint Use*, 2019



Source: FARS 2019 ARF
 *Based on known restraint use.

Ejection from the vehicle is one of the most injurious events that can happen to a person in a crash. In NHTSA’s FARS data, ejection refers to occupants being totally or partially thrown from the vehicles. In 2019 crashes, 81 percent of passenger vehicle occupants who were totally ejected from vehicles were killed. Seat belts are very effective in preventing total ejections; in 2019 only 1 percent of all passenger vehicle occupants (those killed as well as survivors) in fatal crashes reported to have been using restraints were totally ejected, compared to 26 percent of those unrestrained.

The safety benefits of seat belt use are significant and well-documented. Seat belts help keep occupants inside vehicles and also prevent them from becoming projectiles inside the vehicle and hurting others. NHTSA has estimated that lap/shoulder seat belts, when used, reduce the risk of:

- fatal injury to front-seat passenger car occupants by 45 percent;
- moderate-to-critical injury to front-seat passenger car occupants by 50 percent;

- fatal injury to front-seat light-truck occupants by 60 percent; and
- moderate-to-critical injury to front-seat light-truck occupants by 65 percent (Kahane, 2015; NHTSA, 1984).

Among passenger vehicle occupants 5 and older, seat belts saved an estimated 14,955 lives in 2017 (latest data available), as shown in Table 7. If all passenger vehicle occupants 5 and older had worn seat belts, 17,504 lives (that is, an additional 2,549) could have been saved in 2017. From 1975, when

NHTSA’s FARS database began, through 2017, seat belts have saved an estimated 374,276 lives. If all passengers had worn seat belts during these years, a total of 760,994 (that is, an additional 386,719 lives) could have been saved. The estimated number of lives saved by child restraints, seat belts, and frontal air bags, as well as the additional lives that could have been saved at 100-percent seat belt use, are available for each State in the *Crash*Stat Lives Saved in 2017 by Restraint Use and Minimum Drinking Age Laws* (Report No. DOT 812 683).

Table 7

Estimated Number of Lives Saved in Passenger Vehicles, by Restraint System, 1975–2017

| Restraint System | 1975–2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | Total |
|---|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|
| Frontal Air Bags | 25,294* | 2,557 | 2,481 | 2,403 | 2,341 | 2,422 | 2,398 | 2,400 | 2,597 | 2,774 | 2,790 | 50,457 |
| Child Restraints (age 4 and younger) | 8,884 | 262 | 281 | 286 | 245 | 267 | 246 | 236 | 255 | 319 | 325 | 11,606 |
| Seat Belts (age 5+) | 241,865 | 13,312 | 12,757 | 12,670 | 12,071 | 12,386 | 12,644 | 12,801 | 14,062 | 14,753 | 14,955 | 374,276 |
| Lives Savable at 100% Seat Belt Use | 597,558 | 17,482 | 16,447 | 16,026 | 15,467 | 15,416 | 15,415 | 15,678 | 16,777 | 17,224 | 17,504 | 760,994 |
| Additional Lives That Could Have Been Saved at 100% Seat Belt Use | 355,693 | 4,171 | 3,690 | 3,356 | 3,396 | 3,030 | 2,771 | 2,877 | 2,715 | 2,471 | 2,549 | 386,719 |

Source: *Lives Saved in 2017 by Restraint Use and Minimum Drinking Age Laws* (Report No. DOT HS 812 683)

*Frontal air bags did not exist prior to 1987

Frontal Air Bags

Frontal air bags, combined with lap/shoulder belts, offer effective safety protection for passenger vehicle occupants. NHTSA analyses indicate frontal air bags reduce fatalities by 14 percent when no seat belts were used, and 11 percent when seat belts were used in conjunction with frontal air bags (Kahane, 2015).

Air bags are supplemental protection and are designed to work in combination with seat belts. In addition, they are not designed to deploy in all crashes. Most are designed to inflate in moderate-to-severe frontal crashes. Some crashes at lower speeds may result in injuries, but generally not the serious injuries that air bags are designed to prevent. Lap/shoulder belts should always be used, even in vehicles with air bags.

In 2017 (latest data available) an estimated 2,790 lives were saved by frontal air bags. From 1987, when front air bags were first widely adopted in production vehicles, through 2017, a total of 50,457 lives were saved, as shown in Table 7.

Child Restraints

NHTSA has estimated that car seats reduce the risk of fatal injury by 71 percent for infants (younger than 1 year old) and by 54 percent for toddlers (1 to 4 years old) in passenger cars. For infants and toddlers in light trucks, the corresponding reductions are 58 percent and 59 percent (Kahane, 2015).

Among children under 5, an estimated 325 lives were saved in 2017 by restraint use. Of these 325 lives saved, 312 were associated with the use of car seats and 14 with the use of adult seat belts. At 100-percent car seat use for those under 5 years old, an estimated 371 (that is, an additional 46) lives could have been saved in 2017. Since 1975 there have been 11,606 lives of children under age 5 saved because of child restraint use.

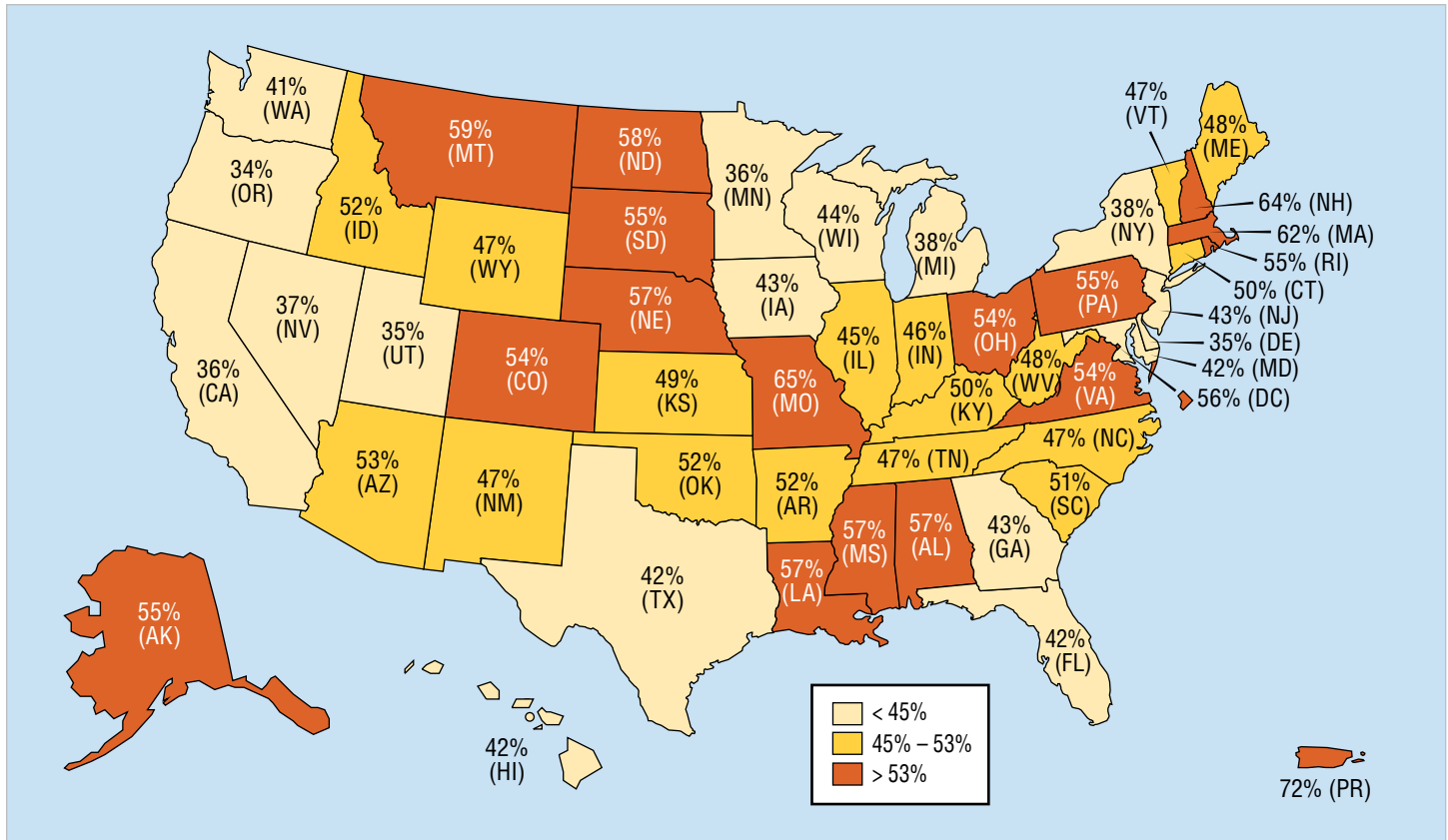
State

Figure 7 shows the percentage of the known unrestrained use of passenger vehicle occupants killed in each State for 2019. Table 8 shows seat belt use information for passenger vehicle occupants killed in crashes in 2019 by State. Also in Table 8

are observed seat belt use rates in the States, the District of Columbia, and Puerto Rico. These results were obtained by observing occupants in traffic on roads at selected sites.

Figure 7

Percentages of Unrestrained* Passenger Vehicle Occupants Killed, by State, 2019



Source: FARS 2019 ARF
 *Based on known restraint use.

Table 8

Passenger Vehicle Occupants Killed, by State, Restraint Use, and Observed Seat Belt Use Rate, 2019

| State | Total Occupants Killed | Restraint Use | | | | | | Percent Based on Known Use | | Observed Seat Belt Use Rate* |
|----------------------|------------------------|---------------|------------|--------------|------------|--------------|-----------|----------------------------|--------------|------------------------------|
| | | Restrained | | Unrestrained | | Unknown | | Restrained | Unrestrained | |
| | | Number | Percent | Number | Percent | Number | Percent | | | |
| Alabama | 673 | 268 | 40% | 352 | 52% | 53 | 8% | 43% | 57% | 92.3% |
| Alaska | 48 | 18 | 38% | 22 | 46% | 8 | 17% | 45% | 55% | 94.1% |
| Arizona | 466 | 190 | 41% | 214 | 46% | 62 | 13% | 47% | 53% | 90.6% |
| Arkansas | 350 | 151 | 43% | 165 | 47% | 34 | 10% | 48% | 52% | 81.9% |
| California | 1,900 | 1,126 | 59% | 620 | 33% | 154 | 8% | 64% | 36% | 96.0% |
| Colorado | 370 | 160 | 43% | 189 | 51% | 21 | 6% | 46% | 54% | 88.3% |
| Connecticut | 137 | 58 | 42% | 57 | 42% | 22 | 16% | 50% | 50% | 93.7% |
| Delaware | 72 | 44 | 61% | 24 | 33% | 4 | 6% | 65% | 35% | 92.5% |
| District of Columbia | 10 | 4 | 40% | 5 | 50% | 1 | 10% | 44% | 56% | 95.4% |
| Florida | 1,585 | 899 | 57% | 658 | 42% | 28 | 2% | 58% | 42% | 89.8% |
| Georgia | 989 | 514 | 52% | 384 | 39% | 91 | 9% | 57% | 43% | 95.9% |
| Hawaii | 46 | 22 | 48% | 16 | 35% | 8 | 17% | 58% | 42% | 97.1% |
| Idaho | 166 | 76 | 46% | 81 | 49% | 9 | 5% | 48% | 52% | 85.7% |
| Illinois | 643 | 311 | 48% | 250 | 39% | 82 | 13% | 55% | 45% | 94.3% |
| Indiana | 553 | 262 | 47% | 220 | 40% | 71 | 13% | 54% | 46% | 94.9% |
| Iowa | 237 | 125 | 53% | 93 | 39% | 19 | 8% | 57% | 43% | 94.6% |
| Kansas | 315 | 141 | 45% | 137 | 43% | 37 | 12% | 51% | 49% | 84.9% |
| Kentucky | 526 | 264 | 50% | 262 | 50% | 0 | 0% | 50% | 50% | 89.7% |
| Louisiana | 458 | 179 | 39% | 234 | 51% | 45 | 10% | 43% | 57% | 87.5% |
| Maine | 103 | 52 | 50% | 48 | 47% | 3 | 3% | 52% | 48% | 88.5% |
| Maryland | 298 | 147 | 49% | 108 | 36% | 43 | 14% | 58% | 42% | 90.4% |
| Massachusetts | 198 | 60 | 30% | 96 | 48% | 42 | 21% | 38% | 62% | 81.6% |
| Michigan | 644 | 343 | 53% | 206 | 32% | 95 | 15% | 62% | 38% | 94.4% |
| Minnesota | 238 | 129 | 54% | 74 | 31% | 35 | 15% | 64% | 36% | 93.4% |
| Mississippi | 504 | 210 | 42% | 275 | 55% | 19 | 4% | 43% | 57% | 80.5% |
| Missouri | 574 | 181 | 32% | 340 | 59% | 53 | 9% | 35% | 65% | 87.7% |
| Montana | 116 | 45 | 39% | 66 | 57% | 5 | 4% | 41% | 59% | 88.9% |
| Nebraska | 191 | 68 | 36% | 90 | 47% | 33 | 17% | 43% | 57% | 79.7% |
| Nevada | 158 | 94 | 59% | 55 | 35% | 9 | 6% | 63% | 37% | 94.2% |
| New Hampshire | 61 | 21 | 34% | 38 | 62% | 2 | 3% | 36% | 64% | 70.7% |
| New Jersey | 260 | 144 | 55% | 108 | 42% | 8 | 3% | 57% | 43% | 90.2% |
| New Mexico | 247 | 116 | 47% | 101 | 41% | 30 | 12% | 53% | 47% | 91.8% |
| New York | 438 | 248 | 57% | 153 | 35% | 37 | 8% | 62% | 38% | 94.2% |
| North Carolina | 893 | 448 | 50% | 405 | 45% | 40 | 4% | 53% | 47% | 88.4% |
| North Dakota | 69 | 24 | 35% | 33 | 48% | 12 | 17% | 42% | 58% | 83.7% |
| Ohio | 780 | 324 | 42% | 379 | 49% | 77 | 10% | 46% | 54% | 85.9% |
| Oklahoma | 435 | 194 | 45% | 206 | 47% | 35 | 8% | 49% | 52% | 84.7% |
| Oregon | 315 | 170 | 54% | 87 | 28% | 58 | 18% | 66% | 34% | 95.7% |
| Pennsylvania | 665 | 259 | 39% | 318 | 48% | 88 | 13% | 45% | 55% | 88.6% |
| Rhode Island | 35 | 15 | 43% | 18 | 51% | 2 | 6% | 45% | 55% | 88.3% |
| South Carolina | 628 | 292 | 46% | 299 | 48% | 37 | 6% | 49% | 51% | 90.3% |
| South Dakota | 72 | 31 | 43% | 38 | 53% | 3 | 4% | 45% | 55% | 75.2% |
| Tennessee | 777 | 383 | 49% | 343 | 44% | 51 | 7% | 53% | 47% | 91.8% |
| Texas | 2,279 | 1,187 | 52% | 868 | 38% | 224 | 10% | 58% | 42% | 90.9% |
| Utah | 149 | 88 | 59% | 48 | 32% | 13 | 9% | 65% | 35% | 90.2% |
| Vermont | 32 | 17 | 53% | 15 | 47% | 0 | 0% | 53% | 47% | 89.3% |
| Virginia | 559 | 255 | 46% | 301 | 54% | 3 | 1% | 46% | 54% | 85.4% |
| Washington | 303 | 147 | 49% | 104 | 34% | 52 | 17% | 59% | 41% | 93.1% |
| West Virginia | 169 | 78 | 46% | 73 | 43% | 18 | 11% | 52% | 48% | 90.2% |
| Wisconsin | 378 | 180 | 48% | 143 | 38% | 55 | 15% | 56% | 44% | 90.2% |
| Wyoming | 103 | 53 | 51% | 47 | 46% | 3 | 3% | 53% | 47% | 78.3% |
| U.S. Total | 22,215 | 10,815 | 49% | 9,466 | 43% | 1,934 | 9% | 53% | 47% | 90.7%** |
| Puerto Rico | 138 | 39 | 28% | 99 | 72% | 0 | 0% | 28% | 72% | 88.3% |

Sources: FARS 2019 ARF; NOPUS 2019

Notes: Shaded States are those with primary seat belt laws in 2019.

Percentages may not add up to 100 percent due to individual rounding.

*Observed Seat Belt Use Rates were obtained from probability-based observational surveys conducted by each State, certified by NHTSA.

**From NHTSA's NOPUS. Observations were made of moving traffic, not crashes (refer to NOPUS 2019 in Report No. DOT HS 812 947).

For more information on State observed seat belt use rates, see the Crash*Stat titled *Seat Belt Use in 2019—Use Rates in the States and Territories* (Report No. DOT HS 812 947). Note that restraint use (observed data as well as that for occupants killed in traffic crashes) differs considerably by State. Additional information on State seat belts laws, such as the ages and seating positions covered, is available at the Governors Highway Safety Association (GHSA) website at www.ghsa.org/state-laws/issues/Seat-Belts.

Restraint Use Laws

- The first mandatory seat belt use law was enacted in New York in 1984.
- The first mandatory child restraint use law was implemented in Tennessee in 1978.

Adult seat belt use laws are in effect in 49 States, the District of Columbia, and Puerto Rico. The laws differ from State to State, according to conditions such as the type and age of the vehicle, occupant age, and seating position. The goal of these laws is to promote seat belt use and thereby reduce deaths and injuries in motor vehicle crashes.

In 2019 the District of Columbia, Puerto Rico, and 34 States had primary seat belt laws in effect, enabling law enforcement officers to stop vehicles and write citations when they observed violations of the seat belt law. In another 15 States, the laws specified secondary enforcement, meaning that police officers were permitted to write citations only after vehicles were

stopped for some other traffic infraction. New Hampshire is the only State without a seat belt law for adults, although it does have a primary child passenger safety law that covers all drivers and passengers under 18 years old.

Since 1985 all 50 States and the District of Columbia have had child restraint use laws in effect. Child restraint use laws differ from State to State, in terms of the ages of children covered and in other important ways, including height and weight limits, seating position requirements, and various exemptions and exceptions.

The most current information on seat belt laws and child passenger safety laws is available on the GHSA website at www.ghsa.org.

- Seat belt laws—
www.ghsa.org/html/stateinfo/laws/seatbelt_laws.html
- Child passenger safety laws—
www.ghsa.org/html/stateinfo/laws/childsafety_laws.html

A 2008 NHTSA research note, *States With Primary Enforcement Laws Have Lower Fatality Rates* (Updated) (NCSA, 2008), suggested that seat belt use among killed occupants was at least 13 percentage points higher in States with primary enforcement laws. In addition, results from the annual NOPUS have found that seat belt use in primary law States is consistently higher than use in States with secondary laws or no law (92.0% versus 86.2%, respectively, in 2019) (see Report No. DOT HS 812 875, Figure 3).

Fatality Analysis Reporting System

FARS contains data on every fatal motor vehicle traffic crash within the 50 States, the District of Columbia, and Puerto Rico. To be included in FARS, a traffic crash must involve a motor vehicle traveling on a public trafficway that results in the death of a vehicle occupant or a nonoccupant within 30 days of the crash. The Annual Report File (ARF) is the FARS data file associated with the most recent available year, which is subject to change when it is finalized the following year to the final version known as the Final File. The additional time between the ARF and the Final File provides the opportunity for submission of important variable data requiring outside sources, which may lead to changes in the final counts. More information on FARS can be found at www.nhtsa.gov/crash-data-systems/fatality-analysis-reporting-system.

The updated final counts for the previous data year will be reflected with the release of the recent year's ARF. For example, along with the release of the 2019 ARF, the 2018 Final File was released to replace the 2018 ARF. The final fatality count in motor vehicle traffic crashes for 2018 was 36,835, which was updated from 36,560 in the 2018 ARF. The number of passenger vehicle occupant fatalities from the 2018 Final File was 22,845, which was updated from 22,697 from the 2018 ARF.

The 2016 and 2017 Final Files have been amended, but this amendment did not change the overall number of fatal crashes or fatalities.

Important Safety Reminders

Child Restraint Systems

1. As children grow, so do their restraint types (rear-facing, forward-facing, booster seat, or seat belt). Always use the one that fits your child's current age and size. Use the NHTSA Car Seat Finder located at www.nhtsa.gov/equipment/car-seats-and-booster-seats.
2. Use either the lower anchors and tether, or the seat belt and tether when installing forward-facing seats.
3. Every car seat or booster seat has different installation instructions, so make sure you read, understand and follow both the car seat instructions and the vehicle owner's manual.
4. To get assistance with installation, find a certified child passenger safety technician at a location near you using NHTSA's Inspection Station locator: www.nhtsa.gov/equipment/car-seats-and-booster-seats#installation-help-inspection
5. Remember to register your car seat or booster seat so you can be notified in the event of a safety recall.
6. Plan for using car seats or booster seats when travelling and riding in taxis or ride-share vehicle.
7. Find out when your child is ready to use an adult seat belt, please reference the *Car Seat Recommendations for Children* located at: www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/carseat-recommendations-for-children-by-age-size.pdf. Be sure to read information for Booster Seat and Seat Belt Use.
8. Keep children in the back seat until at least age 13. It's the safest place to ride.

Seat Belts

1. Buckling up is the single most effective thing you can do to protect yourself in a crash. Wear your seat belt for the entirety of every trip you make. Protect yourself no matter the time of day, weather, trip distance, vehicle speed, road type, or proximity to your home.
2. It is important to keep yourself safe when driving and when riding in the front AND back seat of all vehicles.
3. Always wear your seat belt when riding in taxis and ride-share vehicles.
4. Always wear your seat belt properly. Learn how to correctly position your belt across the middle of your chest and away from your neck. NEVER put the shoulder belt behind your back or under an arm.
5. If you're pregnant, always wear a seat belt to maximize your safety and the safety of your unborn child. For more information, see www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/pregnant-seat-belt-use.pdf.
6. You still need to wear your seat belt even if your car or truck has air bags or advanced safety features.
7. Encourage your passengers to wear their seat belts when riding in your car. Establish your own safety rules.

For information on all of these safety tips, please visit www.nhtsa.gov.

— NHTSA's Research and Program Development

References

- Kahane, C. J. (2015, January). *Lives saved by vehicle safety technologies and associated Federal Motor Vehicle Safety Standards, 1960 to 2012 – Passenger cars and LTVs – With reviews of 26 FMVSS and the effectiveness of their associated safety technologies in reducing fatalities, injuries, and crashes* (Report No. DOT HS 812 069). National Highway Traffic Safety Administration. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812069>
- National Center for Statistics and Analysis. (2019, December). *Seat belt use in 2019 – Overall results* (Traffic Safety Facts Research Note. Report No. DOT HS 812 875). National Highway Traffic Safety Administration. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812875>
- National Center for Statistics and Analysis. (2020, April). *Seat Belt Use in 2019—Use Rates in the States and Territories* (Traffic Safety Facts Crash•Stats. Report No. DOT HS 812 947). National Highway Traffic Safety Administration. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812947>
- National Center for Statistics and Analysis. (2019, March). *Lives saved in 2017 by restraint use and minimum-drinking-age laws* (Traffic Safety Facts Crash•Stats. Report No. DOT HS 812 683). National Highway Traffic Safety Administration. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812683>
- National Center for Statistics and Analysis (2008, February). *States with primary enforcement laws have lower fatality rates* (Updated) (Report No. DOT HS 810 921). National Highway Traffic Safety Administration. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/810921>.
- National Highway Traffic Safety Administration. (1984, July). *Final regulatory impact analysis: Amendment to Federal Motor Vehicle Safety Standard 208. Passenger car front seat occupant protection* (Report No. DOT HS 806 572). Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/806572>

Additional data visualization tools for fact sheets can be found at <https://cdan.dot.gov/DataVisualization/DataVisualization.htm#>

The suggested APA format citation for this document is:

National Center for Statistics and Analysis. (2021, September). *Occupant protection in passenger vehicles: 2019 data* (Traffic Safety Facts. Report No. DOT HS 813 176). National Highway Traffic Safety Administration.

For More Information:

Motor vehicle traffic crash data are available from the National Center for Statistics and Analysis (NCSA), NSA-230. NCSA can be contacted at NCSARequests@dot.gov or 800-934-8517. NCSA programs can be found at www.nhtsa.gov/data. Additional data tools, such as the State Traffic Safety Information (STSI), Fatality and Injury Reporting System Tool (FIRST), and more can be found at <https://cdan.nhtsa.gov/>. To report a motor vehicle safety-related problem or to inquire about safety information, contact the Vehicle Safety Hotline at 888-327-4236 or www.odi.nhtsa.dot.gov/VehicleComplaint/.

Other fact sheets available from the NCSA are *Alcohol-Impaired Driving, Bicyclists and Other Cyclists, Children, Large Trucks, Motorcycles, Older Population, Passenger Vehicles, Pedestrians, Rural/Urban Comparison of Traffic Fatalities, School Transportation-Related Crashes, Speeding, State Alcohol-Impaired-Driving Estimates, State Traffic Data, Summary of Motor Vehicle Crashes*, and *Young Drivers*. Detailed data on motor vehicle traffic crashes are published annually in *Traffic Safety Facts: A Compilation of Motor Vehicle Crash Data*. The fact sheets and annual Traffic Safety Facts report can be found at <https://crashstats.nhtsa.dot.gov/>.



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**