

Traffic Safety Facts

2017 Data

April 2019

DOT HS 812 691



Key Findings

- Forty-seven percent of passenger vehicle occupants killed in traffic crashes in 2017 were unrestrained.
- In 2017 some 59 percent of the passenger vehicle occupants in the 25-to-34 age group killed in traffic crashes were not using restraints — the highest percentage of all age groups in this report.
- In traffic crashes in 2017, among male fatalities with known restraint use, 51 percent were unrestrained; among female fatalities with known restraint use, 39 percent were unrestrained.
- In traffic crashes in 2017, considering known restraint use by passenger vehicle type, 59 percent of drivers of pickup trucks who were killed were unrestrained, compared to 52 percent for SUV drivers, 41 percent for passenger car drivers, and 41 percent for van drivers.
- In 2017 seat belts saved an estimated 14,955 lives of passenger vehicle occupants 5 and older.
- In 2017 an estimated 2,790 lives were saved by frontal air bags.
- An estimated 325 lives of children under 5 were saved by use of restraints in 2017.



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National Highway Traffic Safety Administration

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Occupant Protection in Passenger Vehicles

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, pickup trucks, vans, and SUVs. Vehicle occupants are both drivers and passengers. In this fact sheet, the 2017 information on passenger vehicle occupant protection is presented as follows.

- Overview
- Occupant Demographics
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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. Data from the National Occupant Protection Use Survey (NOPUS) and observed belt use rate survey data obtained from individual States are also used in this fact sheet. Both sets of surveys are based on the observation of front seat (driver and passenger) seat belt use as it occurs in traffic, and is not crash data.

Overview

According to NOPUS for 2017 (Report No. DOT HS 812 662), estimated belt use increased from 83.1 percent in 2008 to 89.7 percent in 2017. NOPUS provides nationwide probability-based observed data on seat belt use in the United States (Pickrell & Li, 2019).

The number of passenger vehicle occupants who were restrained and unrestrained, and those whose restraint use was not known, for 2008 to 2017 is shown in Table 1. In 2017 there were 37,133 traffic fatalities in the United States, of which 23,551 (63%) were occupants of passenger vehicles. Of the 23,551 passenger vehicle occupants killed in 2017, some 11,388 (48%) were restrained and 10,076 (43%) were unrestrained at the time of the crashes. Restraint use was not known for the remaining 2,087 (9%) of the occupants. Looking only at those passenger vehicle occupants who were killed and their restraint use known, 53 percent were restrained and 47 percent were unrestrained.

Table 1
Restraint Use of Passenger Vehicle Occupants Killed, 2008–2017

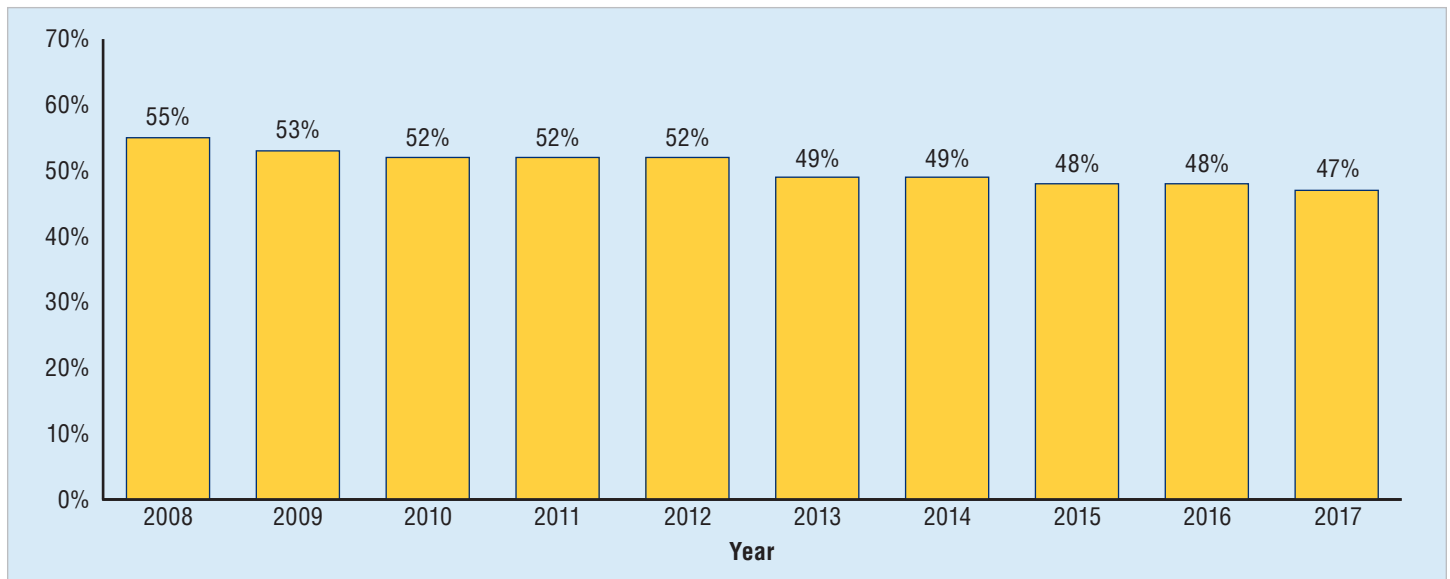
Year	Restraint Use						Total		Percent Known Restrained	Percent Known Unrestrained
	Restrained		Unrestrained		Unknown					
	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
2008	10,691	42%	12,925	51%	1,846	7%	25,462	100%	45%	55%
2009	10,190	43%	11,545	49%	1,712	7%	23,447	100%	47%	53%
2010	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	11,376	48%	10,514	44%	1,987	8%	23,877	100%	52%	48%
2017	11,388	48%	10,076	43%	2,087	9%	23,551	100%	53%	47%

Source: FARS 2008–2016 Final File, and 2017 ARF.

The percentage of unrestrained passenger vehicle occupants killed in motor vehicle traffic crashes is graphed in Figure 1. This unrestrained percentage has decreased from 2008 to 2017. Among passenger vehicle occupants killed, when restraint use

was known, the percentage of unrestrained deaths decreased by 8 percentage points, from 55 percent in 2008 to 47 percent in 2017.

Figure 1
Percentages of Passenger Vehicle Occupants Who Were Killed and Unrestrained, 2008–2017



Source: FARS 2008–2016 Final File, and 2017 ARF.

Occupant Demographics

Age

Information on restraint use by age group for passenger vehicle occupants who were killed in 2017 is shown in Table 2.

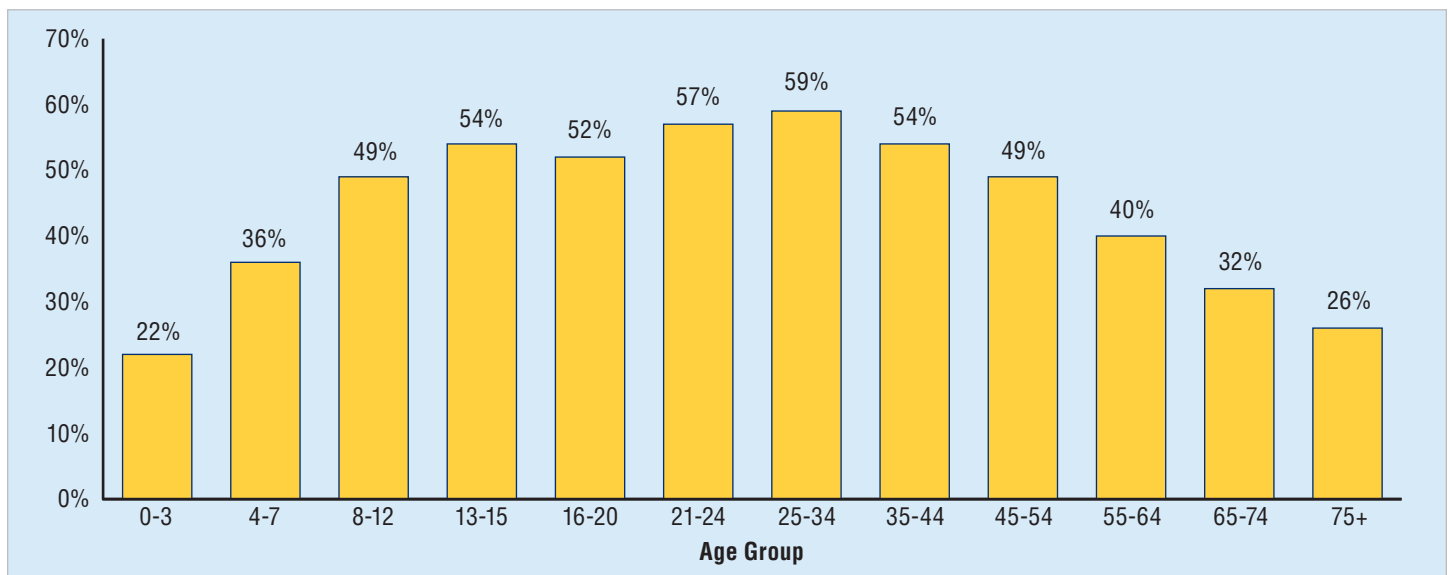
Among passenger vehicle occupant fatalities where restraint use was known, the 25-to-34 age group had the highest percentage of unrestrained occupants (59%), followed by the 21-to-24 age group at 57 percent unrestrained. These percentages are shown in Figure 2.

Table 2
Passenger Vehicle Occupants Killed, by Age Group and Restraint Use, 2017

Age (Years)	Restrained		Unrestrained		Unknown		Total		Percent Restrained Based on Known Use	Percent Unrestrained Based on Known Use
	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
<4	182	74%	50	20%	15	6%	247	100%	78%	22%
4-7	113	57%	64	32%	23	12%	200	100%	64%	36%
8-12	105	46%	102	45%	21	9%	228	100%	51%	49%
13-15	100	39%	119	47%	35	14%	254	100%	46%	54%
16-20	1,034	44%	1,102	47%	230	10%	2,366	100%	48%	52%
21-24	917	38%	1,231	52%	238	10%	2,386	100%	43%	57%
25-34	1,588	36%	2,292	53%	478	11%	4,358	100%	41%	59%
35-44	1,249	41%	1,476	49%	289	10%	3,014	100%	46%	54%
45-54	1,341	47%	1,293	45%	222	8%	2,856	100%	51%	49%
55-64	1,581	56%	1,069	38%	191	7%	2,841	100%	60%	40%
65-74	1,303	63%	620	30%	145	7%	2,068	100%	68%	32%
75+	1,866	69%	647	24%	180	7%	2,693	100%	74%	26%
Unknown	9	23%	11	28%	20	50%	40	100%	45%	55%
Total	11,388	48%	10,076	43%	2,087	9%	23,551	100%	53%	47%

Source: FARS 2017 ARF.

Figure 2
Percentages of Passenger Vehicle Occupants Who Were Killed and Unrestrained, by Age Group, 2017



Source: FARS 2017 ARF.

In 2017 there were 247 passenger vehicle occupant fatalities among children younger than 4; 22 percent were unrestrained (based on known restraint use). In the 4-to-7 age group, there were 200 fatalities; 36 percent were unrestrained (based on known restraint use).

Gender

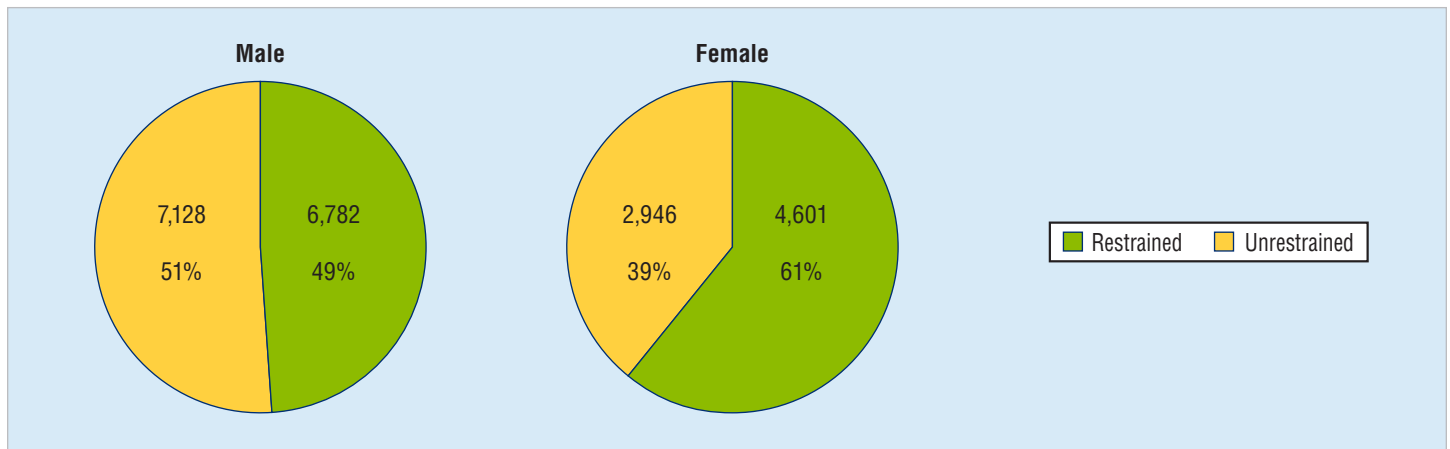
Almost twice as many male occupants (15,359) as female occupants (8,180) were killed in 2017, as shown in Table 3. When restraint use was known, 51 percent of male fatalities and 39 percent of female fatalities were unrestrained (Figure 3). Restraint use was unknown for 9 percent of male occupant fatalities and 8 percent of the female fatalities.

Table 3
Passenger Vehicle Occupants Killed, by Gender and Restraint Use, 2017

Gender	Restrained		Unrestrained		Unknown		Total		Percent Restrained Based on Known Use	Percent Unrestrained Based on Known Use
	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
Male	6,782	44%	7,128	46%	1,449	9%	15,359	100%	49%	51%
Female	4,601	56%	2,946	36%	633	8%	8,180	100%	61%	39%
Unknown	5	42%	2	17%	5	42%	12	100%	71%	29%
Total	11,388	48%	10,076	43%	2,087	9%	23,551	100%	53%	47%

Source: FARS 2017 ARF.

Figure 3
Passenger Vehicle Occupants Killed, by Gender and Restraint Use



Source: FARS 2017 ARF.

Seating Position

Restraint use by seating position for passenger vehicle occupants killed in 2017 is presented in Table 4. Among killed passenger vehicle occupants with known restraint use, 46 percent

of those in the front row and 56 percent of those in the second row of seats were unrestrained.

Table 4
Passenger Vehicle Occupants Killed, by Seating Position and Restraint Use, 2017

Seating Position		Restrained		Unrestrained		Unknown		Total		Percent Restrained Based on Known Use	Percent Unrestrained Based on Known Use
		Number	Percent	Number	Percent	Number	Percent	Number	Percent		
Front Row	Total	10,637	50%	8,920	42%	1,801	8%	21,358	100%	54%	46%
	Left (Driver)	8,577	49%	7,539	43%	1,462	8%	17,578	100%	53%	47%
	Middle	6	24%	18	72%	1	4%	25	100%	25%	75%
	Right	2,053	55%	1,357	36%	337	9%	3,747	100%	60%	40%
	Other/Unknown	1	13%	6	75%	1	13%	8	100%	14%	86%
Second Row	Total	697	39%	891	50%	184	10%	1,772	100%	44%	56%
	Left (Driver)	273	39%	364	52%	68	10%	705	100%	43%	57%
	Middle	71	34%	114	55%	23	11%	208	100%	38%	62%
	Right	350	42%	388	47%	88	11%	826	100%	47%	53%
	Other/Unknown	3	9%	25	76%	5	15%	33	100%	11%	89%
Other		42	20%	155	73%	15	7%	212	100%	21%	79%
Unknown		12	6%	110	53%	87	42%	209	100%	10%	90%
Total		11,388	48%	10,076	43%	2,087	9%	23,551	100%	53%	47%

Source: FARS 2017 ARF.

Passenger Vehicle Types

Table 5 shows passenger vehicle occupant fatalities separately for drivers and passengers for each passenger vehicle type. In 2017 there were 17,572 passenger vehicle drivers killed in traffic crashes, the majority in passenger cars. Among the 16,110 passenger vehicle driver fatalities for which restraint use was

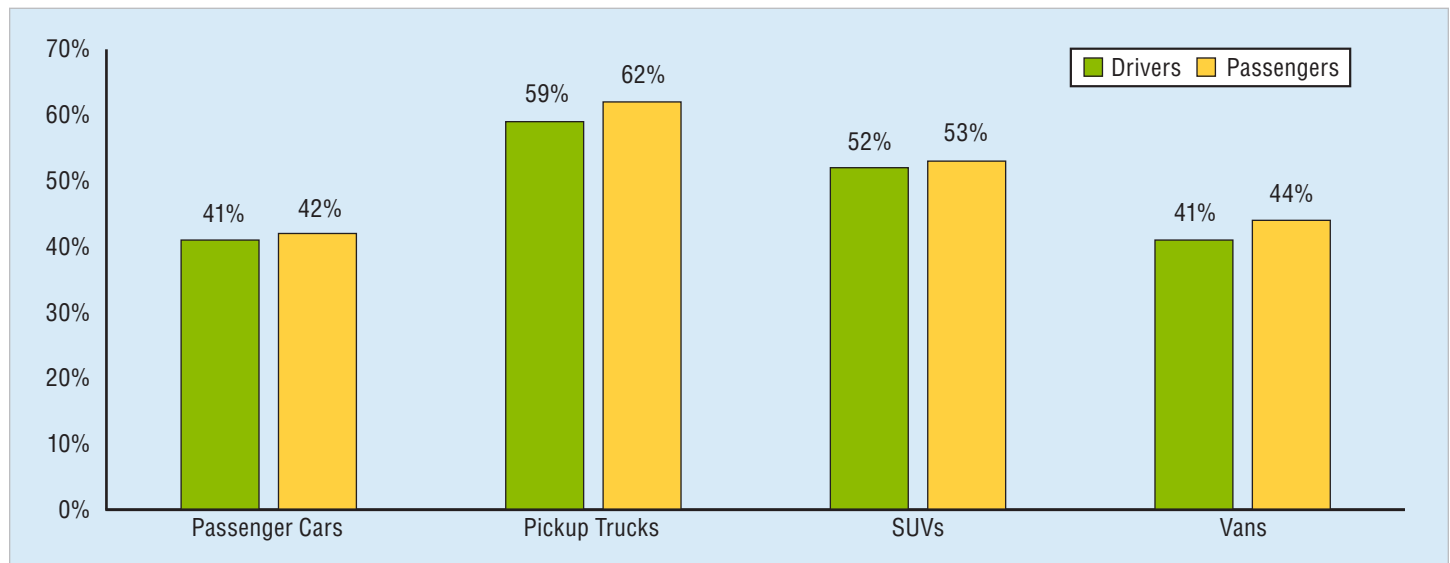
known, 47 percent were unrestrained. However, restraint use differed by vehicle type: 59 percent (1,940) of the drivers of pickup trucks, 52 percent (1,545) of SUV drivers, 41 percent (3,737) of passenger car drivers, and 41 percent (287) of van drivers killed were unrestrained.

Table 5
Drivers and Passengers Killed, by Passenger Vehicle Type and Restraint Use, 2017

Type of Passenger Vehicle		Restrained		Unrestrained		Unknown		Total		Percent Restrained Based on Known Use	Percent Unrestrained Based on Known Use
		Number	Percent	Number	Percent	Number	Percent	Number	Percent		
Drivers Killed	Passenger Cars	5,319	54%	3,737	38%	859	9%	9,915	100%	59%	41%
	Pickup Trucks	1,363	38%	1,940	54%	268	8%	3,571	100%	41%	59%
	Sport Utility Vehicles	1,452	44%	1,545	47%	267	8%	3,264	100%	48%	52%
	Vans	420	55%	287	37%	62	8%	769	100%	59%	41%
	Other Light Trucks	19	36%	28	53%	6	11%	53	100%	40%	60%
	Total	8,573	49%	7,537	43%	1,462	8%	17,572	100%	53%	47%
Passengers Killed	Passenger Cars	1,767	51%	1,292	37%	389	11%	3,448	100%	58%	42%
	Pickup Trucks	275	35%	441	56%	69	9%	785	100%	38%	62%
	Sport Utility Vehicles	572	43%	645	48%	117	9%	1,334	100%	47%	53%
	Vans	196	49%	157	39%	46	12%	399	100%	56%	44%
	Other Light Trucks	5	38%	4	31%	4	31%	13	100%	56%	44%
	Total	2,815	47%	2,539	42%	625	10%	5,979	100%	53%	47%

Source: FARS 2017 ARF.

Figure 4
Driver and Passenger Fatalities, Percent Known Unrestrained, by Passenger Vehicle Type, 2017



Source: FARS 2017 ARF.

There were 6,234 passengers killed in passenger vehicles in 2017. Among the 5,979 fatalities for which restraint use was known, 47 percent (2,539) were unrestrained, but use varied by vehicle type: 62 percent (441) of the passengers killed in pickup trucks were unrestrained, compared to 53 percent (645) in SUVs, 44 percent (157) in vans, and 42 percent (1,292) in passenger cars. Figure 4 compares the percent known unrestrained use of drivers killed versus passengers killed for each passenger vehicle type.

Restraint Use and Benefits

Seat Belts

The safety benefits of seat belt use are significant and well documented. Seat belts help keep occupants inside of the vehicles and also prevent them from acting as projectiles inside of 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, as shown in Table 6. 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 386,718 lives) would 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% belt use, are available for each State in the *Crash*Stat Lives Saved in 2017 by Restraint Use and Minimum Drinking Age Laws* at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812691>.

Table 6
Estimated Number of Lives Saved by Restraint Systems in Passenger Vehicles, 1975–2017

Restraint Type	1975–2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
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
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
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 Would 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*.
 *Note: Total from 1987-2007. Frontal air bags were first widely adopted in 1987 production vehicles.

Looking at all passenger vehicle occupants (those that were killed as well as those that survived) in fatal crashes in 2017 with known restraint use:

- Twenty-six percent were unrestrained at the time of the crash and the remaining 74 percent were restrained (Table 7);
- Twenty-two percent were unrestrained during daytime hours; and
- Twenty-nine percent were unrestrained during nighttime hours.

For those passenger vehicle occupants with known restraint use who survived fatal crashes in 2017:

- During daytime hours, 11 percent of passenger vehicle occupants who survived fatal crashes were unrestrained (thus 89% of the survivors were restrained); and
- Fifteen percent of crash survivors were unrestrained during nighttime hours.

Table 7
Passenger Vehicle Occupants Involved in Fatal Crashes by Survival Status, Time of Day, and Restraint Use, 2017

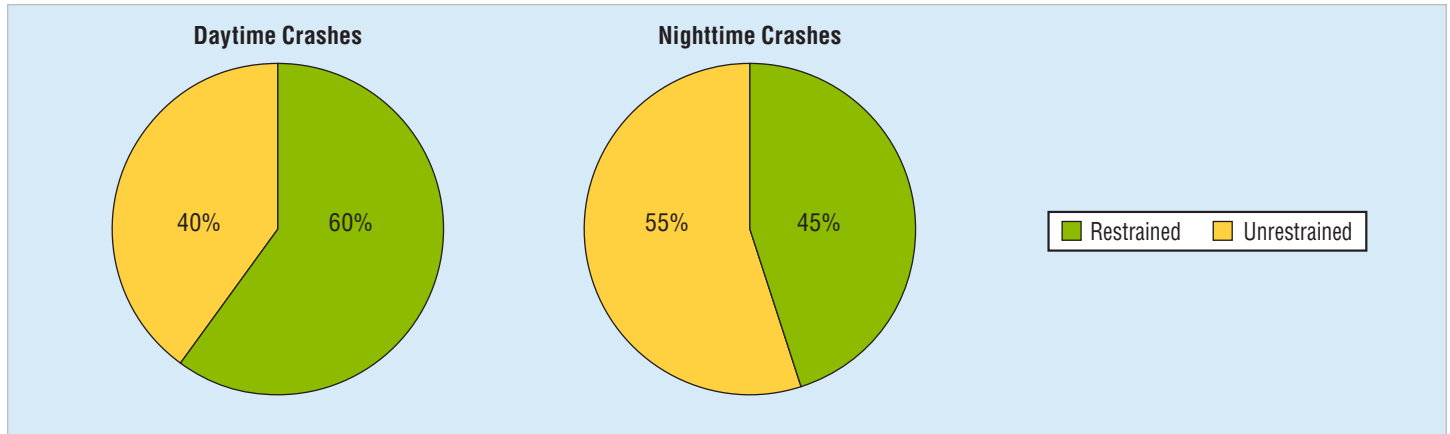
Survival Status and Time of Day		Restrained		Unrestrained		Unknown		Total		Percent Restrained Based on Known Use	Percent Unrestrained Based on Known Use
		Number	Percent	Number	Percent	Number	Percent	Number	Percent		
Killed	Daytime	6,885	56%	4,558	37%	913	7%	12,356	100%	60%	40%
	Nighttime	4,445	40%	5,414	49%	1,152	10%	11,011	100%	45%	55%
	Unknown	58	32%	104	57%	22	12%	184	100%	36%	64%
	Total	11,388	48%	10,076	43%	2,087	9%	23,551	100%	53%	47%
Survived	Daytime	16,664	83%	2,102	10%	1,357	7%	20,123	100%	89%	11%
	Nighttime	14,928	76%	2,661	14%	2,013	10%	19,602	100%	85%	15%
	Unknown	47	48%	28	29%	22	23%	97	100%	63%	37%
	Total	31,639	79%	4,791	12%	3,392	9%	39,822	100%	87%	13%
Total	Daytime	23,549	73%	6,660	21%	2,270	7%	32,479	100%	78%	22%
	Nighttime	19,373	63%	8,075	26%	3,165	10%	30,613	100%	71%	29%
	Unknown	105	37%	132	47%	44	16%	281	100%	44%	56%
	Total	43,027	68%	14,867	23%	5,479	9%	63,373	100%	74%	26%

Source: FARS 2017 ARF. Note: Daytime is considered 6 a.m. to 5:59 p.m.; Nighttime is considered 6 p.m. to 5:59 a.m.

Among killed passenger vehicle occupants in fatal crashes in 2017 with known restraint use, the percentage of unrestrained

fatalities during daytime hours was 40 percent compared to 55 percent during nighttime hours (Figure 5).

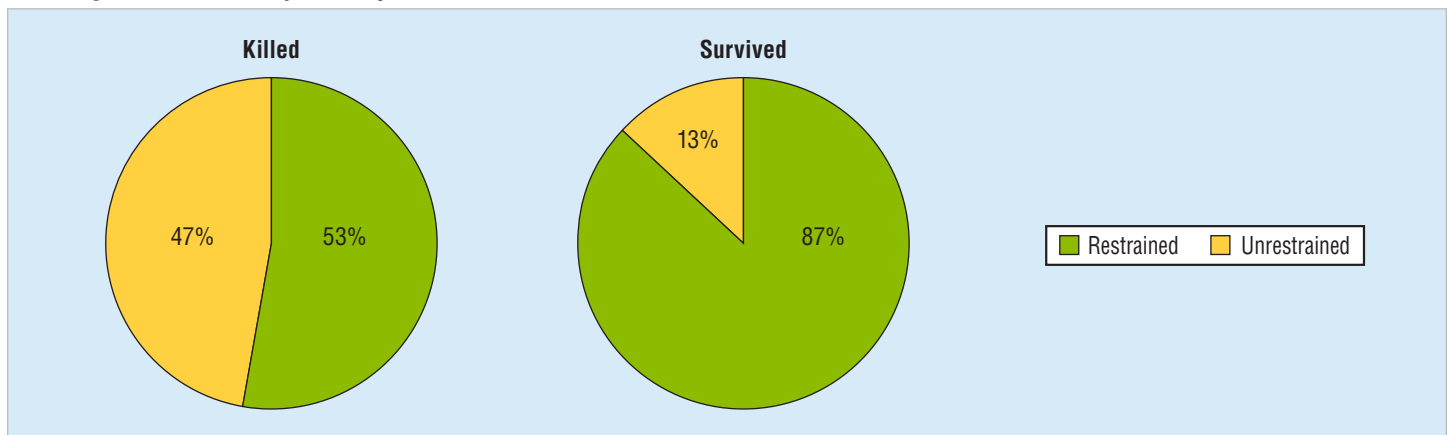
Figure 5
Passenger Vehicle Occupants Killed, by Time of Day and Restraint Use, 2017



Source: FARS 2017 ARF.

For passenger vehicle occupants involved in fatal crashes in 2017, nearly half (47%) of those who were killed were unrestrained in the crash, compared to only 13 percent of those who survived (Figure 6).

Figure 6
Passenger Vehicle Occupants, by Survival Status and Restraint Use, 2017



Source: FARS 2017 ARF.

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 as a result of impact or rollover. In fatal crashes in 2017 about 83 percent of passenger vehicle occupants who were totally ejected from vehicles were killed. Seat belts are very effective in preventing total ejections; in 2017 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 28 percent of those unrestrained.

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 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 6.

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, respectively (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.

For more information on children in motor vehicle crashes, see the *Children Traffic Safety Facts: 2017 Data* at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812XXX>.

Find the right car seat: infant, convertible, or booster seat. At NHTSA, we know that finding the right car seat and installing it correctly is no easy task. Then there's the question of when to transition your child to another type of car seat. Follow the steps to help you through the decision-making process and keep your child safe by visiting www.nhtsa.gov/equipment/car-seats-and-booster-seats

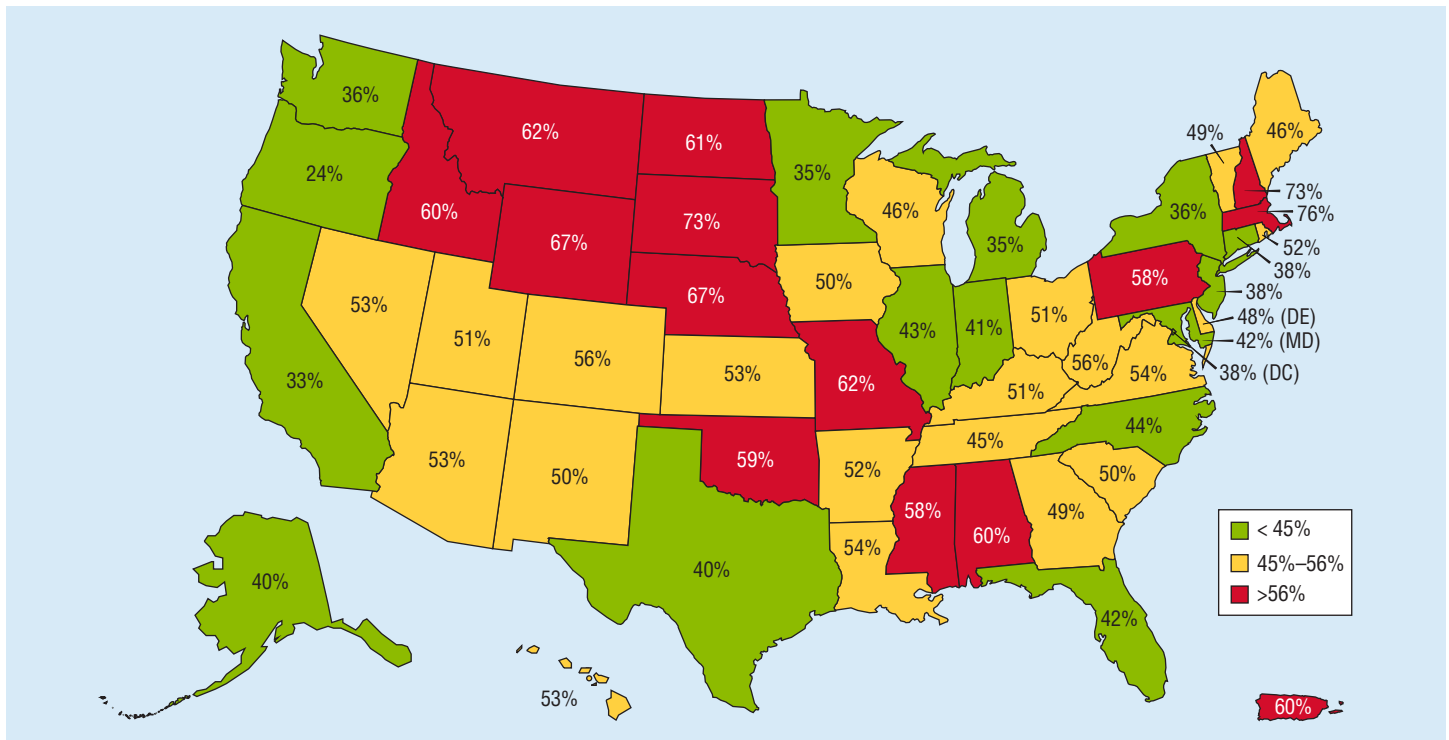
State Belt Use

Table 8 shows seat belt use information for passenger vehicle occupants killed in crashes in 2017, 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 6 is a map that shows the percent of the known unrestrained use of passenger vehicle occupants killed in each State for 2017.

For more information on State observed seat belt use rates, see the Crash*Stat titled *Seat Belt Use in 2017—Use Rates in the States and Territories* (Pickrell, 2017). 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's web site at <http://www.ghsa.org/state-laws/issues/Seat-Belts>.

Additional State- and county-level data is available at NHTSA's State Traffic Safety Information website at <https://cdan.nhtsa.gov/stsi.htm>.

Figure 7
Percent of the Known Unrestrained Use of Passenger Vehicle Occupants Killed, by State, 2017



Source: FARS 2017 ARF.

Table 8

Passenger Vehicle Occupants Killed, Restraint Use of Occupants Killed, and Observed Seat Belt Use Rate, by State, 2017

State	Total Occupants Killed	Restraint Use of Occupants Killed						Percent Restrained Based on Known Use	Percent Unrestrained Based on Known Use	Observed Seat Belt Use Rate*
		Restrained		Unrestrained		Unknown				
		Number	Percent	Number	Percent	Number	Percent			
Alabama	711	265	37%	398	56%	48	7%	40%	60%	92.9%
Alaska	48	25	52%	17	35%	6	13%	60%	40%	90.1%
Arizona	490	209	43%	235	48%	46	9%	47%	53%	86.1%
Arkansas	351	156	44%	170	48%	25	7%	48%	52%	81.0%
California	1,974	1,207	61%	600	30%	167	8%	67%	33%	96.2%
Colorado	410	175	43%	222	54%	13	3%	44%	56%	83.8%
Connecticut	162	82	51%	51	31%	29	18%	62%	38%	90.3%
Delaware	69	34	49%	32	46%	3	4%	52%	48%	91.4%
District of Columbia	14	5	36%	3	21%	6	43%	63%	38%	93.6%
Florida	1,642	919	56%	671	41%	52	3%	58%	42%	90.2%
Georgia	1,057	489	46%	463	44%	105	10%	51%	49%	97.1%
Hawaii	59	19	32%	21	36%	19	32%	48%	53%	96.9%
Idaho	178	64	36%	95	53%	19	11%	40%	60%	81.2%
Illinois	720	353	49%	268	37%	99	14%	57%	43%	93.8%
Indiana	613	301	49%	210	34%	102	17%	59%	41%	93.0%
Iowa	222	98	44%	98	44%	26	12%	50%	50%	91.4%
Kansas	344	147	43%	169	49%	28	8%	47%	53%	82.0%
Kentucky	575	283	49%	290	50%	2	0%	49%	51%	86.8%
Louisiana	488	204	42%	244	50%	40	8%	46%	54%	87.1%
Maine	114	61	54%	53	46%	0	0	54%	46%	88.9%
Maryland	321	162	50%	116	36%	43	13%	58%	42%	92.1%
Massachusetts	207	41	20%	129	62%	37	18%	24%	76%	73.7%
Michigan	660	355	54%	193	29%	112	17%	65%	35%	94.1%
Minnesota	235	134	57%	71	30%	30	13%	65%	35%	92.0%
Mississippi	544	225	41%	314	58%	5	1%	42%	58%	78.8%
Missouri	666	229	34%	378	57%	59	9%	38%	62%	84.0%
Montana	143	53	37%	86	60%	4	3%	38%	62%	78.0%
Nebraska	168	49	29%	101	60%	18	11%	33%	67%	85.9%
Nevada	143	62	43%	69	48%	12	8%	47%	53%	90.6%
New Hampshire	70	19	27%	51	73%	0	0	27%	73%	67.6%
New Jersey	331	196	59%	118	36%	17	5%	62%	38%	94.1%
New Mexico	224	107	48%	107	48%	10	4%	50%	50%	91.5%
New York	539	307	57%	169	31%	63	12%	64%	36%	93.4%
North Carolina	956	504	53%	402	42%	50	5%	56%	44%	91.4%
North Dakota	82	28	34%	44	54%	10	12%	39%	61%	79.3%
Ohio	825	358	43%	376	46%	91	11%	49%	51%	82.8%
Oklahoma	434	164	38%	232	53%	38	9%	41%	59%	86.9%
Oregon	282	173	61%	56	20%	53	19%	76%	24%	96.8%
Pennsylvania	716	247	34%	342	48%	127	18%	42%	58%	85.6%
Rhode Island	48	22	46%	24	50%	2	4%	48%	52%	88.3%
South Carolina	644	301	47%	306	48%	37	6%	50%	50%	92.3%
South Dakota	95	24	25%	64	67%	7	7%	27%	73%	74.8%
Tennessee	732	367	50%	302	41%	63	9%	55%	45%	88.5%
Texas	2,369	1,306	55%	869	37%	194	8%	60%	40%	91.9%
Utah	169	78	46%	82	49%	9	5%	49%	51%	88.8%
Vermont	45	21	47%	20	44%	4	9%	51%	49%	84.5%
Virginia	574	263	46%	307	53%	4	1%	46%	54%	85.3%
Washington	345	183	53%	104	30%	58	17%	64%	36%	94.8%
West Virginia	218	76	35%	98	45%	44	20%	44%	56%	89.7%
Wisconsin	437	210	48%	180	41%	47	11%	54%	46%	89.4%
Wyoming	88	28	32%	56	64%	4	5%	33%	67%	84.8%
U.S. Total	23,551	11,388	48%	10,076	43%	2,087	9%	53%	47%	89.7%
Puerto Rico	147	59	40%	88	60%	0	0	40%	60%	87.9%

Sources: FARS 2017 ARF; Pickrell, 2018. Shaded States are those with primary seat belt laws in 2017.

*Observed Seat Belt Use Rates were obtained from probability-based observational surveys conducted by each State. Observations were made of moving traffic, not crashes.

Restraint Use Laws

- The first mandatory belt use law (“primary law”) was enacted in New York in 1984.
- The first mandatory child restraint use law was implemented in Tennessee in 1978.

Adult 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 belt use and thereby reduce deaths and injuries in motor vehicle crashes.

In 2017 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 website of the Governors Highway Safety Association 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 National Occupant Protection Use Survey (NOPUS) have found that seat belt use in primary law States is consistently higher than use in States with secondary laws or no law (90.9% versus 85.7%, respectively, in 2017) (see Pickrell & Li, 2018, Figure 3).

References

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- 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). Washington, DC: Author. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/806572>.
- Pickrell, T. M., & Li, R.H. (2018, April). *Seat belt use in 2017—Overall results* (Traffic Safety Facts Research Note. Report No. DOT HS 812 465). Washington, DC: National Highway Traffic Safety Administration. Available at <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812465>.

Fatality Analysis Reporting System (FARS)

The Fatality Analysis Reporting System (FARS) contains data on every fatal traffic crash within the 50 States, the District of Columbia, and Puerto Rico. To be included in FARS, a crash must involve a motor vehicle traveling on a public trafficway and must result 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 about a year later. The updated version of the file is aptly 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.

The updated final counts for a given previous calendar year will be reflected with the release of the recent year's ARF. For example, along with the release of the 2017 ARF, the 2016 Final file was also released to replace the previous year's 2016 ARF. The final fatality count in motor vehicle traffic crashes for 2016 was 37,806, which was updated from 37,461 from the 2016 ARF. The number of passenger vehicle occupants killed from the 2016 Final file was 23,877 versus 23,714 from the 2016 ARF.

The suggested APA format citation for this document is:

National Center for Statistics and Analysis. (2019, April). *Occupant protection in passenger vehicles: 2017 data* (Traffic Safety Facts. Report No. DOT HS 812 691). Washington, DC: National Highway Traffic Safety Administration.

For more information

Information on traffic fatalities is available from the National Center for Statistics and Analysis, NSA-230, 1200 New Jersey Avenue SE, Washington, DC 20590. NCSA can be contacted at 800-934-8517 or by e-mail at ncsarequests@dot.gov. General information on highway traffic safety can be found at www.nhtsa.gov/research-data/. To report a safety-related problem or to inquire about motor vehicle safety information, contact the Vehicle Safety Hotline at 888-327-4236.

Other fact sheets available from the National Center for Statistics and Analysis 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 from the Fatality Analysis Reporting System and the General Estimates System*. The fact sheets and annual Traffic Safety Facts report can be found at <https://crashstats.nhtsa.dot.gov/>.



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