

DOT HS 813 573

May 2024

# **Occupant Protection in Passenger Vehicles**

#### In this fact sheet for 2022 the information is presented as follows.

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Occupant protection discussed in this fact sheet includes seat belts, car seats for children under 5 years old, and frontal air bags in passenger vehicles. Passenger vehicles are passenger cars and light trucks (pickups, SUVs, and vans) with gross vehicle weight ratings (GVWRs) of 10,000 pounds or less. Vehicle occupants are drivers and passengers.

# Key Findings

- Fifty percent of passenger vehicle occupants killed in traffic crashes in 2022 were unrestrained (based on known restraint use).
- In traffic crashes in 2022, considering known driver restraint use by passenger vehicle type, 61 percent of pickup drivers who were killed were unrestrained, compared to 48 percent of SUV drivers, 46 percent of passenger car drivers, and 38 percent of van drivers.
- Sixty-one percent (based on known restraint use) of passenger vehicle occupant fatalities in the 25-to-34 age group in traffic crashes in 2022 were unrestrained the highest percentage of all age groups in this report.
- In traffic crashes in 2022, among passenger vehicle occupants with known restraint use, 54 percent of male fatalities were unrestrained as compared to 41 percent of females.
- In 2022 among passenger vehicle occupant traffic fatalities with known restraint use, 48 percent seated in the front row and 60 percent of those in the second row were unrestrained.
- Among passenger vehicle occupant fatalities in traffic crashes in 2022 with known restraint use, 43 percent were unrestrained during the day compared to 57 percent at night.

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

Due to a vehicle classification change, the 2020 and later-year vehicle type classifications are not comparable to 2019 and earlier-year vehicle type classifications. This change affects any analysis with a vehicle component to it. Refer to the end of this publication for more information on Product Information Catalog and Vehicle Listing (vPIC).

A motor vehicle traffic crash is defined as an incident that involved one or more motor vehicles in-transport that originated on or had a harmful event (injury or damage) on a public trafficway, such as a road or highway. Crashes that occurred on private property not regularly used by the public for transport, including some parts of parking lots and driveways, are excluded. The terms "motor vehicle traffic crash" and "traffic crash" are used interchangeably in this document.

## Overview

According to NHTSA's 2022 National Occupant Protection Use Survey (NOPUS, Report No. DOT HS 813 407), the estimated seat belt use rate over the decade 2013 to 2022 increased from 87.2 percent in 2013 to 91.6 percent in 2022. NOPUS provides the only nationwide probability-based estimate of observed seat belt use in the United States. This represents estimates of observed front seat occupant (driver and passenger) seat belt use during daylight hours (7 a.m. to 6 p.m.) and does not necessarily represent restraint use among occupants involved in crashes.

Restraint use for passenger vehicle occupants killed in traffic crashes from 2013 to 2022 is shown in Table 1. There were 42,514 traffic fatalities in the United States in 2022, of which 25,420 (60%) were occupants of passenger vehicles. Of the 25,420 killed in 2022, there were 11,410 (45%) who were restrained and 11,302 (44%) who were unrestrained at the time of the crashes. Restraint use was not known for the remaining 2,708 (11%) occupants killed. Considering only occupant fatalities whose restraint use was known, 50 percent were restrained and 50 percent were unrestrained. The number of unrestrained passenger vehicle occupants killed in 2022 declined 4.8 percent compared to 2021.

			Restra	int Use					Percent Based on		
	Restrained		Unrestrained		Unknown		Total		Known Restraint Use		
Year	Number	Percent	Number	Percent	Number Percent		Number Percent		Restrained	Unrestrained	
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	10,891	49%	9,523	43%	1,958	9%	22,372	100%	53%	47%	
2020	10,532	44%	10,925	46%	2,457	10%	23,914	100%	49%	51%	
2021	11,899	45%	11,877	45%	2,689	10%	26,465	100%	50%	50%	
2022	11,410	45%	11,302	44%	2,708	11%	25,420	100%	50%	50%	

Table 1. Passenger Vehicle Occu	pants Killed in Traffic Crashes.	by Restraint Use. 2013–2022

Source: FARS 2013-2021 Final File, 2022 Annual Report File (ARF)

Note: Percentages may not add up to 100 percent due to individual rounding. Due to a vehicle classification change, the 2020 and later year data are not comparable to 2019 and earlier years.

The percentages of unrestrained passenger vehicle occupants killed in motor vehicle traffic crashes are shown in Figure 1. Among passenger vehicle occupants killed, when restraint use was known, the percentage of unrestrained deaths stayed the same in 2022 compared to 2021 at 50 percent.



# Figure 1. Percentages of Unrestrained\* Passenger Vehicle Occupants Killed in Traffic Crashes, 2013–2022

Source: FARS 2013-2021 Final File, 2022 ARF

\*Based on known restraint use.

Note: Due to a vehicle classification change, the 2020 and later year data are not comparable to 2019 and earlier years.

# **Occupant Characteristics**

## Passenger Vehicle Types

Table 2 shows traffic fatalities separately for drivers and passengers for each passenger vehicle type. Seventy-six percent of the passenger vehicle occupants killed in 2022 were drivers, and 24 percent were passengers.

In 2022 there were 19,362 passenger vehicle drivers killed in traffic crashes, the majority (50%) in passenger cars. Among the 17,380 passenger vehicle driver fatalities for whom restraint use was known, 50 percent were unrestrained. However, the percentage of drivers killed who were unrestrained differed by vehicle type: 61 percent of pickup drivers, 48 percent of SUV drivers, 46 percent of passenger car drivers, and 38 percent of van drivers.

# Table 2. Drivers and Passengers Killed in Traffic Crashes, by Passenger Vehicle Type andRestraint Use, 2022

				Restra	int Use					Percent Based on	
		Restrained		Unrest	Unrestrained		Unknown		tal	Known Re	estraint Use
Passenger Vehicle Type		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Restrained	Unrestrained
Drivers	Passenger Car	4,649	48%	4,035	42%	1,014	10%	9,698	100%	54%	46%
Killed	Light Truck*	4,119	43%	4,577	47%	968	10%	9,664	100%	47%	53%
	–Pickup	1,318	35%	2,070	55%	363	10%	3,751	100%	39%	61%
	–SUV	2,414	46%	2,264	43%	535	10%	5,213	100%	52%	48%
	–Van	385	55%	240	35%	69	10%	694	100%	62%	38%
	Total	8,768	45%	8,612	44%	1,982	10%	19,362	100%	50%	50%
Passengers	Passenger Car	1,317	44%	1,301	43%	375	13%	2,993	100%	50%	50%
Killed	Light Truck*	1,325	43%	1,389	45%	351	11%	3,065	100%	49%	51%
	–Pickup	280	34%	448	55%	93	11%	821	100%	38%	62%
	–SUV	882	47%	806	43%	202	11%	1,890	100%	52%	48%
	–Van	162	46%	135	38%	56	16%	353	100%	55%	45%
	Total	2,642	44%	2,690	44%	726	12%	6,058	100%	50%	50%

Source: FARS 2022 ARF

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

\*Includes passenger vehicle occupants in other/unknown light-truck vehicle types.

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There were 6,058 passengers killed in passenger vehicles in 2022 traffic crashes, and 49 percent were riding in passenger cars. Among the 5,332 passengers killed in passenger vehicles for whom restraint use was known, 50 percent were unrestrained, but use varied by vehicle type: 62 percent of passengers killed in pickups were unrestrained, compared to 50 percent in passenger cars, 48 percent in SUVs, and 45 percent in vans. Figure 2 compares the percentage of known unrestrained drivers killed versus passengers killed for each passenger vehicle type.





Source: FARS 2022 ARF

\*Based on known restraint use.

## Age and Sex

Table 3 shows information on restraint use by age group for passenger vehicle occupants killed in 2022 traffic crashes. Among those where restraint use was known, the 25-to-34 age group had the highest percentage (61%) of unrestrained occupants, followed by the 21-to-24 age group (60%). Figure 3 shows these percentages.

Table 3. Passenger Vehicle Occupants Killed in Traffic Crashes, by Age Group and Restraint	
Use, 2022	

			Restra	int Use					Percent Based on Known		
Age	Restr	ained	Unrest	rained	Unkr	nown	То	tal	Restra	aint Use	
Group	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Restrained	Unrestrained	
<4	138	68%	50	25%	14	7%	202	100%	73%	27%	
4–7	98	57%	51	30%	22	13%	171	100%	66%	34%	
8–12	118	52%	88	39%	20	9%	226	100%	57%	43%	
13–14	55	35%	77	49%	25	16%	157	100%	42%	58%	
15–20	974	37%	1,347	51%	303	12%	2,624	100%	42%	58%	
21–24	780	35%	1,147	51%	301	14%	2,228	100%	40%	60%	
25–34	1,677	34%	2,623	53%	606	12%	4,906	100%	39%	61%	
35–44	1,374	37%	1,862	51%	435	12%	3,671	100%	42%	58%	
45–54	1,280	43%	1,339	45%	325	11%	2,944	100%	49%	51%	
55-64	1,514	51%	1,212	41%	258	9%	2,984	100%	56%	44%	
65–74	1,483	60%	789	32%	203	8%	2,475	100%	65%	35%	
75+	1,893	68%	703	25%	173	6%	2,769	100%	73%	27%	
Total*	11,410	45%	11,302	44%	2,708	11%	25,420	100%	50%	50%	

Source: FARS 2022 ARF

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

\*Includes passenger vehicle occupants of unknown age.

In 2022 there were 202 passenger vehicle occupant fatalities among children under 4 years old, and 27 percent were unrestrained (based on known restraint use). In the 4-to-7 age group, there were 171 fatalities; 34 percent were unrestrained (based on known restraint use).





Source: FARS 2022 ARF

\*Based on known restraint use.

Nearly twice as many male occupants (16,829) as female occupants (8,563) in passenger vehicles were killed in traffic crashes in 2022, as shown in Table 4. When restraint use was known, 54 percent of the males killed and 41 percent of the females killed were unrestrained (Figure 4) in passenger vehicles. Restraint use was unknown for 11 percent of male passenger vehicle occupant fatalities and 9 percent of the female passenger vehicle occupant fatalities.

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			Restra	int Use					Percent Based on Known			
	Restr	strained Unrestrained		Unknown		Total		Restraint Use				
Sex	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Restrained	Unrestrained		
Male	6,845	41%	8,098	48%	1,886	11%	16,829	100%	46%	54%		
Female	4,554	53%	3,201	37%	808	9%	8,563	100%	59%	41%		
Total*	11,410	45%	11,302	44%	2,708	11%	25,420	100%	50%	50%		

Source: FARS 2022 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 in Traffic Crashes, by Sex and Restraint Use,\* 2022



Source: FARS 2022 ARF \*Based on known restraint use.

#### Seating Position

Table 5 shows restraint use for passenger vehicle occupants killed in traffic crashes in 2022, by their seating position. Among killed passenger vehicle occupants with known restraint use, 48 percent of those in the front row and 60 percent of those in the second row were unrestrained.

				Restra	int Use					Percent	Based on
			Restrained		Unrestrained		Unknown		tal	Known Restraint Use	
Seating Position		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Restrained	Unrestrained
	Total	10,711	46%	10,070	43%	2,389	10%	23,170	100%	52%	48%
Frant	Left (Driver)	8,769	45%	8,611	44%	1,983	10%	19,363	100%	50%	50%
Front Row	Middle	8	25%	19	59%	5	16%	32	100%	30%	70%
T COW	Right	1,932	51%	1,433	38%	399	11%	3,764	100%	57%	43%
	Other/Unknown	2	18%	7	64%	2	18%	11	100%	22%	78%
	Total	644	36%	951	53%	201	11%	1,796	100%	40%	60%
0	Left	262	39%	342	51%	70	10%	674	100%	43%	57%
Second Row	Middle	45	22%	134	64%	29	14%	208	100%	25%	75%
T COW	Right	331	38%	441	51%	90	10%	862	100%	43%	57%
	Other/Unknown	6	12%	34	65%	12	23%	52	100%	15%	85%
Other*		30	17%	137	76%	14	8%	181	100%	18%	82%
Unknown		25	9%	144	53%	104	38%	273	100%	15%	85%
Total		11,410	45%	11,302	44%	2,708	11%	25,420	100%	50%	50%

#### Table 5. Passenger Vehicle Occupants Killed in Traffic Crashes, by Seating Position and Restraint Use, 2022

Source: FARS 2022 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

Table 6 represents passenger vehicles involved (those who were killed as well as those who survived) in fatal traffic crashes by their survival status, time of day, and restraint use. Fifty percent of passenger vehicle occupants killed were unrestrained (based on known restraint use), compared to 14 precent for those who survived. Looking at all passenger vehicle occupants involved in fatal traffic crashes in 2022 with known restraint use:

- 28 percent were unrestrained at the time of the crashes;
- 24 percent were unrestrained during the day; and
- 31 percent were unrestrained at night.

For those passenger vehicle occupants with known restraint use who survived fatal traffic crashes in 2022:

- 13 percent were unrestrained during daytime; and
- 16 percent of crash survivors were unrestrained during nighttime.

# Table 6. Passenger Vehicle Occupants Involved in Fatal Traffic Crashes, by Survival Status,Time of Day, and Restraint Use, 2022

				Restra	int Use					Percent Based on Known		
Survival Status/Time of Day		Restrained		Unrest	Unrestrained		Unknown		tal	Restraint Use		
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Restrained	Unrestrained	
Killed	Daytime	6,638	52%	4,949	39%	1,103	9%	12,690	100%	57%	43%	
	Nighttime	4,704	38%	6,252	50%	1,579	13%	12,535	100%	43%	57%	
	Unknown	68	35%	101	52%	26	13%	195	100%	40%	60%	
	Total	11,410	45%	11,302	44%	2,708	11%	25,420	100%	50%	50%	
Survived	Daytime	16,355	80%	2,365	12%	1,624	8%	20,344	100%	87%	13%	
	Nighttime	16,435	73%	3,171	14%	2,997	13%	22,603	100%	84%	16%	
	Unknown	42	52%	13	16%	26	32%	81	100%	76%	24%	
	Total	32,832	76%	5,549	13%	4,647	11%	43,028	100%	86%	14%	
Total	Daytime	22,993	70%	7,314	22%	2,727	8%	33,034	100%	76%	24%	
-	Nighttime	21,139	60%	9,423	27%	4,576	13%	35,138	100%	69%	31%	
	Unknown	110	40%	114	41%	52	19%	276	100%	49%	51%	
	Total	44,242	65%	16,851	25%	7,355	11%	68,448	100%	72%	28%	

Source: FARS 2022 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 traffic crashes in 2022 with known restraint use, the percentage of unrestrained fatalities during daytime was 43 percent compared to 57 percent during nighttime (Figure 5).

# Figure 5. Percentages of Passenger Vehicle Occupants Killed in Traffic Crashes, by Time of Day and Restraint Use,\* 2022



Source: FARS 2022 ARF

\*Based on known restraint use.

For passenger vehicle occupants involved in fatal traffic crashes in 2022, half of those killed were unrestrained, compared to only 15 percent of those who survived (Figure 6).





Source: FARS 2022 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 2022 fatal traffic crashes based on known restraint use, 83 percent of passenger vehicle occupants who were totally ejected from vehicles were killed. Seat belts are very effective in preventing total ejections; in 2022 only 1 percent of all passenger vehicle occupants involved (those killed as well as survivors) in fatal traffic 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 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).

## 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.

## 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).

## State

Figure 7 shows the percentages of unrestrained passenger vehicle occupants killed in traffic crashes for each State for 2022, based on known restraint use. Table 7 shows seat belt use information for passenger vehicle occupants killed in traffic crashes in 2022 by State. Also in Table 7 are observed seat belt use rates in the States, the District of Columbia, and Puerto Rico. The national seat belt use rate results were obtained from NOPUS by observing occupants in traffic on roads at selected sites. Observed seat belt use rates at the State level were obtained from probability-based observational surveys conducted during daylight hours (7 a.m. to 6 p.m.) by each State, certified by NHTSA.





Source: FARS 2022 ARF \*Based on known restraint use.

Table 7. Passenger Vehicle Occupants Killed in Traffic Crashes, by State, Restraint Use, and	
Observed Seat Belt Use Rate, 2022	

	Total	-		Restra	int Use			Percent	Observed	
	Occupants	Restr	ained		trained	Unkr	lown		wn Use	Seat Belt
State	Killed	Number			Percent	Number	Percent	-	Unrestrained	Use Rate*
Alabama	710	282	40%	362	51%	66	9%	44%	56%	92.7%
Alaska	56	31	55%	17	30%	8	14%	65%	35%	91.5%
Arizona	588	239	41%	268	46%	81	14%	47%	53%	87.0%
Arkansas	415	163	39%	188	45%	64	15%	46%	54%	79.1%
California	2,306	1,221	53%	842	37%	243	11%	59%	41%	95.3%
Colorado	462	222	48%	227	49%	13	3%	49%	51%	87.0%
Connecticut	211	83	39%	74	35%	54	26%	53%	47%	92.1%
	101	61	60%	35	35%	54	20% 5%	64%	36%	92.1%
Delaware										
District of Columbia	8	3	38%	4	50%	1 41	13% 2%	43%	57%	95.1%
Florida	1,748	930	53%	777	44%			54%	46%	88.3%
Georgia	1,092	456	42%	518	47%	118	11%	47%	53%	89.3%
Hawaii	41	24	59%	16	39%	1	2%	60%	40%	95.9%
Idaho	153	52	34%	81	53%	20	13%	39%	61%	87.6%
Illinois	824	338	41%	274	33%	212	26%	55%	45%	93.0%
Indiana	649	260	40%	229	35%	160	25%	53%	47%	93.0%
Iowa	232	107	46%	102	44%	23	10%	51%	49%	95.9%
Kansas	283	114	40%	142	50%	27	10%	45%	55%	87.2%
Kentucky	484	230	48%	254	52%	0	0%	48%	52%	86.7%
Louisiana	540	204	38%	280	52%	56	10%	42%	58%	86.1%
Maine	124	58	47%	65	52%	1	1%	47%	53%	93.4%
Maryland	328	153	47%	150	46%	25	8%	50%	50%	92.7%
Massachusetts	264	96	36%	137	52%	31	12%	41%	59%	77.0%
Michigan	687	331	48%	230	33%	126	18%	59%	41%	92.9%
Minnesota	283	153	54%	78	28%	52	18%	66%	34%	93.3%
Mississippi	511	226	44%	197	39%	88	17%	53%	47%	78.9%
Missouri	680	245	36%	363	53%	72	11%	40%	60%	88.9%
Montana	138	51	37%	82	59%	5	4%	38%	62%	92.9%
Nebraska	171	57	33%	85	50%	29	17%	40%	60%	76.3%
Nevada	207	88	43%	82	40%	37	18%	52%	48%	93.1%
New Hampshire	89	25	28%	52	58%	12	13%	32%	68%	93.1 <i>%</i> 75.7%
			<u>54%</u>	140	39%	25	7%	58%	42%	
New Jersey	360	195								92.9%
New Mexico	282	118	42%	142	50%	22	8%	45%	55%	89.8%
New York	582	320	55%	203	35%	59	10%	61%	39%	91.9%
North Carolina	1,070	526	49%	505	47%	39	4%	51%	49%	90.9%
North Dakota	56	12	21%	39	70%	5	9%	24%	76%	80.6%
Ohio	809	304	38%	401	50%	104	13%	43%	57%	80.8%
Oklahoma	453	192	42%	219	48%	42	9%	47%	53%	80.0%
Oregon	346	189	55%	108	31%	49	14%	64%	36%	96.5%
Pennsylvania	689	260	38%	334	48%	95	14%	44%	56%	89.9%
Rhode Island	33	14	42%	19	58%	0	0%	42%	58%	87.1%
South Carolina	699	284	41%	375	54%	40	6%	43%	57%	90.6%
South Dakota	92	33	36%	49	53%	10	11%	40%	60%	88.1%
Tennessee	877	376	43%	437	50%	64	7%	46%	54%	90.5%
Texas	2,703	1,241	46%	1,175	43%	287	11%	51%	49%	90.4%
Utah	180	79	44%	85	47%	16	9%	48%	52%	91.8%
Vermont	46	18	39%	27	59%	1	2%	40%	60%	90.4%
Virginia	666	290	44%	373	56%	3	0%	44%	56%	75.6%
Washington	433	209	48%	153	35%	71	16%	58%	42%	93.9%
West Virginia	171	57	33%	85	50%	29	17%	40%	60%	92.5%
Wisconsin	400	165	41%	161	40%	74	19%	51%	49%	87.5%
Wyoming	88	25	28%	61	69%	2	2%	29%	71%	78.3%
U.S. Total	<b>25,420</b>	11,410	<b>45%</b>	11,302	<b>44%</b>	2,708	11%	<b>50%</b>	50%	91.6%
Puerto Rico	130	41	<b>45%</b> 32%	89	<b>44%</b> 68%	2,708	0%	32%	<b>50%</b> 68%	91.8%

Sources: FARS 2022 ARF; NOPUS 2022 Notes: Shaded States are those with primary seat belt laws for front seat occupants in 2022. 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 2022 in Report No. DOT HS 813 407).

For more information on State observed seat belt use rates, see the Crash\*Stat *Seat Belt Use in 2022—Use Rates in the States and Territories* (Report No. DOT HS 813 487). Note that restraint use (observed data as well as that for passenger vehicle 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 <u>www.ghsa.org/state-laws/issues/Seat-Belts</u>.

## **Restraint Use Laws**

The first mandatory seat belt use law was enacted in New York in 1984. 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 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 2022 there were 34 States, the District of Columbia, and Puerto Rico that had primary seat belt laws in effect for front seat occupants, enabling law enforcement officers to stop vehicles and write citations when they observed violations of the seat belt law. In 15 States the laws specified secondary enforcement, meaning that police officers were permitted to write citations only after a vehicle was 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.

The first mandatory child restraint use law was implemented in Tennessee in 1978. 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 <u>www.ghsa.org</u>.

- 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

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 (92.2% versus 89.5% in 2022) (see Report No. DOT HS 813 407, Figure 3).

## **Important Safety Reminders**

#### Child Restraint Systems

- 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 <u>www.nhtsa.gov/equipment/car-seats-and-booster-seats</u>.
- Use either the lower anchors and tether, or the seat belt and tether when installing forward-facing seats.
- 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.
- To get assistance with installation, find a certified child passenger safety technician at a location near you using NHTSA's Inspection Station locator: <u>www.nhtsa.gov/equipment/car-seats-and-booster-seats#installation-help-inspection</u>
- Remember to register your car seat or booster seat so you can be notified in the event of a safety recall.
- Plan for using car seats or booster seats when travelling and riding in taxis or ride-share vehicle.
- Find out when your child is ready to use an adult seat belt, please reference the Car Seat Recommendations for Children located at: <u>www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/carseat-recommendations-for-children-by-age-size.pdf</u>. Be sure to read information for Booster Seat and Seat Belt Use.
- Keep children in the back seat until at least age 13. It's the safest place to ride.

### Seat Belts

- 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.
- It is important to keep yourself safe when driving and when riding in the front AND back seat of all vehicles.
- Always wear your seat belt when riding in taxis and rideshare vehicles.
- 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.
- If you're pregnant, always wear a seat belt to maximize your safety and the safety of your unborn child. For more information, see <u>www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/pregnant-seat-belt-use.pdf</u>.
- You still need to wear your seat belt even if your car or truck has air bags or advanced safety features.
- 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 <u>www.nhtsa.gov</u>.

*—NHTSA's Research and Program Development* 

# 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). <u>https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/806572</u>

# 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 trafficway customarily open to the public 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 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 <u>www.nhtsa.gov/crash-data-systems/fatality-analysis-reporting-system</u>.

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 2022 ARF, the 2021 Final File was released to replace the 2021 ARF. The final fatality count in motor vehicle traffic crashes for 2021 was 43,230, which was updated from 42,939 in the 2021 ARF. The number of passenger vehicle occupant fatalities from the 2021 Final File was 26,465, which was updated from 26,325 from the 2021 ARF.

## Product Information Catalog and Vehicle Listing (vPIC) Vehicle Classification

Historically, vehicle type classifications (e.g., passenger cars, light trucks, large trucks, motorcycles, buses) from FARS used for analysis and data reporting were based on analyst-coded vehicle body type. NHTSA did not have manufacturer authoritative data to assist in vehicle body type coding. NCSA has developed a Product Information Catalog and Vehicle Listing (vPIC) dataset that is being used to decode VINs (Vehicle Identification Numbers) and extract vehicle information. Details of vehicles (make, model, body class, etc.) involved in crashes are obtained from vPIC via VIN-linkage. The VIN-derived information from vPIC uses the manufacturer's classification of body class, which allows for more accurate vehicle type analysis.

The vPIC-based analysis data are available beginning with 2020 FARS data files. Starting with the release of 2021 FARS, all vehicle-related analysis for 2020 and later years will be based on vPIC vehicle classification. As a result, the 2020 and later-year vehicle type classifications are not comparable to 2019 and earlier-year vehicle type classifications. This change affects any analysis with a vehicle component to it. More information on vPIC can be found at <a href="https://vpic.nhtsa.dot.gov/">https://vpic.nhtsa.dot.gov/</a>.

The suggested APA format citation for this document is:

National Center for Statistics and Analysis. (2024, May). Occupant protection in passenger vehicles: 2022 data (Traffic Safety Facts. Report No. DOT HS 813 573). 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 <u>NCSARequests@dot.gov</u> or 800-934-8517. NCSA programs can be found at <u>www.nhtsa.gov/data</u>. To report a motor vehicle safety-related problem or to inquire about safety information, contact the Vehicle Safety Hotline at 888-327-4236 or <u>www.nhtsa.gov/report-a-safety-problem</u>.

The following data tools and resources can be found at https://cdan.dot.gov/.

- Fatal Motor Vehicle Traffic Crash Data Visualizations
- Motor Vehicle Traffic Crash Databook
- Fatality and Injury Reporting System Tool (FIRST)
- State Traffic Safety Information (STSI)
- Traffic Safety Facts Annual Report Tables
- FARS Data Tables (FARS Encyclopedia)
- Crash Viewer
- Product Information Catalog and Vehicle Listing (vPIC)
- FARS, NASS GES, CRSS, NASS Crashworthiness Data System (CDS), and Crash Investigation Sampling System (CISS) data can be downloaded for further analysis.

Other fact sheets available from NCSA:

- Alcohol-Impaired Driving
- Bicyclists and Other Cyclists
- Children
- Large Trucks
- Motorcycles
- Older Population
- Passenger Vehicles
- Pedestrians
- Race and Ethnicity
- Rural/Urban Traffic Fatalities
- School-Transportation-Related Traffic Crashes
- Speeding
- State Alcohol-Impaired-Driving Estimates
- State Traffic Data
- Summary of Motor Vehicle Traffic Crashes
- Young Drivers

Detailed data on motor vehicle traffic crashes are published annually in *Traffic Safety Facts: A Compilation of Motor Vehicle Traffic Crash Data*. The fact sheets and Traffic Safety Facts annual report can be found at <a href="https://crashstats.nhtsa.dot.gov/">https://crashstats.nhtsa.dot.gov/</a>.



U.S. Department of Transportation

National Highway Traffic Safety Administration