



DOT HS 813 456 May 2023

# Children

In this fact sheet for 2021 the information is presented as follows.

- Overview
- Restraint Use and Effectiveness
- Children in Alcohol-Impaired-Driving Crashes
- Pedestrians
- Pedalcyclists
- State
- Important Safety Reminders

For the purpose of this fact sheet, children are defined as 14 years old and younger.

# **Key Findings**

- Of the 42,939 traffic fatalities in 2021 in the United States, 1,184 (3%) were children 14 and younger.
- Child traffic fatalities increased by 8 percent from 2020 (1,101) to 2021 (1,184).
- An estimated 162,298 children were injured in traffic crashes in 2021, a 17-percent increase from 139,058 in 2020.
- An average of 3 children were killed and an estimated 445 children were injured every day in traffic crashes in 2021.
- Of the 26,325 passenger vehicle occupants killed in 2021 in traffic crashes, 863 (3%) were children. Of these 863 child passenger vehicle occupants killed in traffic crashes, restraint use was known for 769, of whom 308 (40%) were unrestrained.
- In 2021, based on known restraint use, 69 percent of the children riding with unrestrained passenger vehicle drivers were also unrestrained.
- Of the 1,184 children killed in traffic crashes, an estimated 294 (25%) were killed in alcohol-impaired-driving crashes in 2021.
- Of the 7,388 pedestrian traffic fatalities, 176 (2%) were children in 2021.
- Of the 966 pedalcyclist traffic fatalities, 38 (4%) were children in 2021.

This fact sheet contains information on fatal motor vehicle traffic crashes based on data from the Fatality Analysis Reporting System (FARS) and non-fatal motor vehicle traffic crashes from the Crash Report Sampling System (CRSS). A change instituted with the release of 2020 data is rounding estimates to the nearest whole number instead of the nearest thousand for all police-reported crashes, including injury estimates. Refer to the end of this publication for more information on FARS and CRSS.

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

Motor vehicle traffic crashes are a leading cause of death of children.<sup>1</sup>

#### In 2021:

- There were 60.6 million children in the United States, 18 percent of the total U.S. population.
- Of the 42,939 traffic fatalities in the United States, 1,184 (3%) were children.
- Child traffic fatalities increased by 8 percent from 1,101 in 2020, and 1 percent from 1,173 in 2012.
  - o The 8-percent increase in child traffic fatalities from 2020 to 2021 is smaller than the 10-percent increase in overall traffic fatalities.
- An estimated 162,298 children were injured in traffic crashes, a 17-percent increase from 139,058 in 2020
- An average of 3 children were killed and an estimated 445 children were injured every day in traffic crashes in the United States.
- Males accounted for 56 percent of child fatalities, and an estimated 50 percent of children injured in traffic crashes.

Figure 1 displays the distribution of the 1,184 child traffic fatalities in 2021—80 percent (950) were occupants and 20 percent (234) were nonoccupants (pedestrians, pedalcyclists, or other nonoccupants).

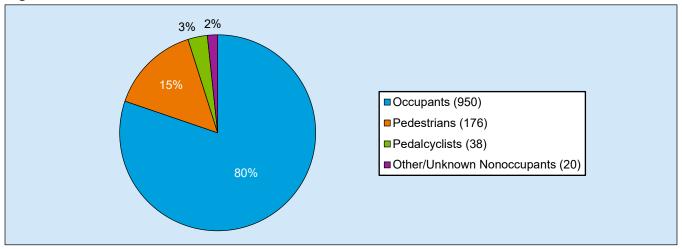


Figure 1. Child Traffic Fatalities, 2021

Source: FARS 2021 Annual Report File (ARF)

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

As shown in Figure 2, the number of child traffic fatalities increased by 1 percent from 1,173 in 2012 to 1,184 in 2021 and the child fatality rate per 100,000 child population increased by 2 percent from 1.92 in 2012 to 1.95 in 2021.

<sup>1</sup> Centers for Disease Control and Prevention (2021), Mortality Multiple Cause-of-Death, FARS

Child Traffic Fatalities Child Fatality Rates 1.400 5.00 1,244 1,184 1,173 1,158 1,152 1,144 1.200 1,101 1,073 1,064 1,049 4.00 Child Traffic Fatalities 1,000 3.00 800 600 2.00 2.04 1.95 1.92 1.90 1.89 400 1.87 1.80 1.76 1.76 1.72 1.00 200 0 0.00 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

Figure 2. Child Traffic Fatalities and Fatality Rates per 100,000 Child Population, 2012–2021

Sources: FARS 2012-2020 Final File, 2021 ARF; Population - Census Bureau

Figure 3 displays the child traffic fatality trends of five age groups from 2012 to 2021.

### From 2012 to 2021:

- Under-1 age group 52-percent increase from 60 to 91
- 1-to-3 age group 31-percent decrease from 269 to 186
- 4-to-7 age group 9-percent increase from 295 to 321
- 8-to-12 age group 3-percent decrease from 334 to 324
- 13-and-14 age group 22-percent increase from 215 to 262

### From 2020 to 2021:

- Under-1 age group 54-percent increase from 59 to 91
- 1-to-3 age group remained at 186 for 2020 and 2021
- 4-to-7 age group 15-percent increase from 278 to 321
- 8-to-12 age group 1-percent decrease from 327 to 324
- 13-and-14 age group 4-percent increase from 251 to 262

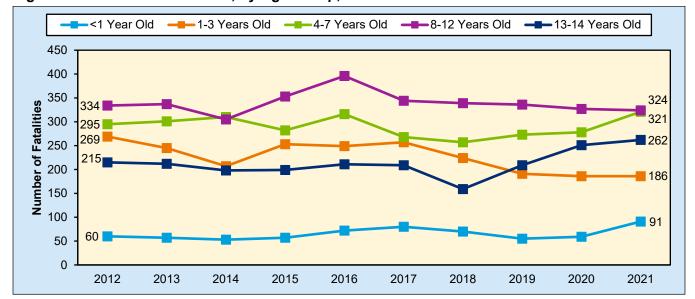


Figure 3. Child Traffic Fatalities, by Age Group, 2012-2021

Source: FARS 2012-2020 Final File, 2021 ARF

### **Restraint Use and Effectiveness**

Child safety seats have been shown to reduce fatal injury by 71 percent for infants under 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.<sup>2</sup>

Analysis has also shown that lap/shoulder seat belts, when used correctly, reduce the risk of fatal injury to front-seat occupants 5 and older of passenger cars by 45 percent and the risk of moderate-to-critical injury by 50 percent. For light-truck occupants, seat belts reduce the risk of fatal injury by 60 percent and the risk of moderate-to-critical injury by 65 percent.<sup>3</sup>

Table 1 provides the number and percentage of passenger vehicle (passenger cars and light trucks) occupants involved in fatal crashes, by survival status (killed or survived), age group, and restraint use (seat belts or child restraints).

#### In 2021:

• Of the 70,075 passenger vehicle occupants *involved* in fatal crashes, 5,554 (8%) were children.

- Of these 5,554 child passenger vehicle occupants *involved* in fatal crashes, restraint use was known for 5,134, of whom 889 (17%) were unrestrained. This percentage (17%) was lower compared to all ages (28%).
- Of the 26,325 passenger vehicle occupants killed in traffic crashes, 863 (3%) were children.
  - Of these 863 child passenger vehicle occupants *killed* in traffic crashes, restraint use was known for 769, of whom 308 (40%) were unrestrained. This percentage (40%) was lower compared to all ages (50%).

<sup>&</sup>lt;sup>2</sup> Hertz, E. (1996, December). Revised estimates of child restraint effectiveness (Report No. DOT HS 96 855). National Highway Traffic Safety Administration. <a href="https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/96855">https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/96855</a>

<sup>&</sup>lt;sup>3</sup> Kahane, C. J. (2000, December). Fatality reduction by safety belts for front-seat occupants of cars and light trucks (Report No. DOT HS 809 199). National Highway Traffic Safety Administration. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/809199

• Of the 43,750 passenger vehicle occupants who *survived* in fatal crashes, 4,691 (11%) were children.

Of these 4,691 child passenger vehicle occupants who *survived* in fatal crashes, restraint use was known for 4,365, of whom 581 (13%) were unrestrained. This percentage (13%) was lower compared to all ages (15%).

Based on known restraint use, children 13 to 14 years old had the highest percentages out of the child age groups of unrestrained passenger vehicle occupants for those *involved* (26%), *killed* (59%), and *survived* (19%). In some instances, these percentages were higher than for occupants 15 and older.

Table 1. Passenger Vehicle Occupants Involved in Fatal Traffic Crashes, by Survival Status, Age Group, and Restraint Use, 2021

Survival				Restrai	nt Use			Percent	Based on		
Status		Restr	ained	Unrest	rained	Unkr	nown	То	tal	Known Restraint Use	
Group		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Restrained	Unrestrained
	<1	51	61%	26	31%	7	8%	84	100%	66%	34%
	1–3	94	68%	35	25%	10	7%	139	100%	73%	27%
	4–7	127	52%	89	36%	30	12%	246	100%	59%	41%
	8–12	133	55%	76	31%	33	14%	242	100%	64%	36%
Killed	13–14	56	37%	82	54%	14	9%	152	100%	41%	59%
	<15	461	53%	308	36%	94	11%	863	100%	60%	40%
	15–20	1,081	38%	1,377	49%	350	12%	2,808	100%	44%	56%
	21+	10,253	45%	10,102	45%	2,218	10%	22,573	100%	50%	50%
	Total*	11,820	45%	11,813	45%	2,692	10%	26,325	100%	50%	50%
	<1	216	89%	16	7%	12	5%	244	100%	93%	7%
	1–3	839	87%	86	9%	37	4%	962	100%	91%	9%
	4–7	970	79%	158	13%	93	8%	1,221	100%	86%	14%
	8–12	1,205	79%	190	13%	122	8%	1,517	100%	86%	14%
Survived	13–14	554	74%	131	18%	62	8%	747	100%	81%	19%
	<15	3,784	81%	581	12%	326	7%	4,691	100%	87%	13%
	15–20	4,241	68%	1,307	21%	676	11%	6,224	100%	76%	24%
	21+	25,112	79%	3,950	12%	2,676	8%	31,738	100%	86%	14%
	Total*	33,364	76%	5,922	14%	4,464	10%	43,750	100%	85%	15%
	<1	267	81%	42	13%	19	6%	328	100%	86%	14%
	1–3	933	85%	121	11%	47	4%	1,101	100%	89%	11%
	4–7	1,097	75%	247	17%	123	8%	1,467	100%	82%	18%
Tatal	8–12	1,338	76%	266	15%	155	9%	1,759	100%	83%	17%
Total Involved	13–14	610	68%	213	24%	76	8%	899	100%	74%	26%
mvorved	<15	4,245	76%	889	16%	420	8%	5,554	100%	83%	17%
	15–20	5,322	59%	2,684	30%	1,026	11%	9,032	100%	66%	34%
	21+	35,365	65%	14,052	26%	4,894	9%	54,311	100%	72%	28%
	Total*	45,184	64%	17,735	25%	7,156	10%	70,075	100%	72%	28%

Source: FARS 2021 ARF

Table 2 presents the restraint use of child passengers killed in passenger vehicles and their respective drivers (killed or survived) in 2021.

Based on known restraint use:

- When the drivers were restrained, 74 percent of the children were restrained.
- When the drivers were unrestrained, 69 percent of the children were also unrestrained.

<sup>\*</sup>Includes occupants of unknown age.

Table 2. Child Passengers Killed in Passenger Vehicles in Traffic Crashes, by Their Restraint Use and Their Driver's Restraint Use, 2021

Driver			Child Res	traint Use	)			Percent Base	Based on Known	
Restraint	Restrained		Unrestrained		Unknown		Total		Child Restraint Use	
Use	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Restrained	Unrestrained
Restrained	371	68%	132	24%	39	7%	542	100%	74%	26%
Unrestrained	62	30%	140	67%	8	4%	210	100%	31%	69%
Unknown	25	27%	21	23%	46	50%	92	100%	54%	46%
Total	458	54%	293	35%	93	11%	844	100%	61%	39%

Source: FARS 2021 ARF

Note: Excludes child passengers with no driver present in the vehicle.

Table 3 contains the number of children killed in passenger vehicles by type of restraint and age group.

#### In 2021:

• Of the 863 child passenger vehicle occupants killed, restraint use was known for 769, of whom 308 (40%) were unrestrained.

- Of the 84 infants under 1 year old killed, restraint use was known for 77, of whom 26 (34%) were unrestrained.
- Of the 139 children 1 to 3 years old killed, restraint use was known for 129, of whom 35 (27%) were unrestrained.
- Of the 246 children 4 to 7 years old killed, restraint use was known for 216, of whom 89 (41%) were unrestrained.
- Of the 242 children 8 to 12 years old killed, restraint use was known for 209, of whom 76 (36%) were unrestrained.
- Of the 152 children 13 to 14 years old killed, restraint use was known for 138, of whom 82 (59%) were unrestrained.

Table 3. Children Killed in Passenger Vehicles in Traffic Crashes, by Type of Restraint and Age Group, 2021

	Age Group												
Type of	<1		1–3		4-	4–7		8–12		13–14		Total	
Restraint	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
None	26	31%	35	25%	89	36%	76	31%	82	54%	308	36%	
Child Restraint	51	61%	88	63%	75	30%	10	4%	0	0%	224	26%	
Forward Facing	8	10%	45	32%	25	10%	1	0%	0	0%	79	9%	
Rear Facing	22	26%	9	6%	0	0%	0	0%	0	0%	31	4%	
Booster Seat	1	1%	8	6%	27	11%	5	2%	0	0%	41	5%	
Unknown Child Restraint	20	24%	26	19%	23	9%	4	2%	0	0%	73	8%	
Seat Belt	0	0%	5	4%	51	21%	121	50%	54	36%	231	27%	
Shoulder Belt Only	0	0%	0	0%	1	0%	2	1%	1	1%	4	0%	
Lap Belt Only	0	0%	0	0%	14	6%	11	5%	3	2%	28	3%	
Shoulder and Lap Belt	0	0%	5	4%	36	15%	108	45%	50	33%	199	23%	
Restraint Used - Type Unknown	0	0%	1	1%	1	0%	2	1%	2	1%	6	1%	
Unknown	7	8%	10	7%	30	12%	33	14%	14	9%	94	11%	
Total	84	100%	139	100%	246	100%	242	100%	152	100%	863	100%	

Source: FARS 2021 ARF

Analysis has shown that among children 4 and younger, an estimated 325 lives were saved in 2017 by restraint use. Of these 325 lives saved, an estimated 312 were associated with the use of child safety seats and 14 with the use of adult seat belts. At 100-percent child safety seat use for those 4 and younger, an estimated 371 lives (that is, an additional 46) could have been saved in 2017.

From 1975 to 2017 an estimated 11,606 lives were saved by child restraints (child safety seats or adult seat belts) for children 4 and younger in passenger vehicles (latest data available).

NHTSA conducted the National Survey of the Use of Booster Seats (NSUBS) from July to August 2021 and produced a technical report, *The 2021 National Survey of the Use of Booster Seats*.<sup>5</sup>

Table 4 provides data on the use of child restraints by age group and race/ethnicity for those 12 and younger in 2021. Child restraints include child safety seats, seat belts, and booster seats.

Table 4. Observed Child (Age 12 and Younger) Restraint Use, by Race/Ethnicity and Age Group, 2021

	Age Group						
Race/Ethnicity	<1	1–3	4–7	8–12			
Hispanic	100%	93.0%	85.3%	83.0%			
Black Non-Hispanic	98.9%	83.6%	78.9%	73.6%			
White Non-Hispanic	100%	97.7%	93.4%	91.9%			
Asian Non-Hispanic	N/A	94.1%	95.9%	90.7%			
Other Non-Hispanic	N/A	91.9%	86.7%	82.9%			

Source: Boyle, L. (2023, March). *The 2021 National Survey of the Use of Booster Seats* (Report No. DOT HS 813 396). National Highway Traffic Safety Administration. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813396

N/A: Data not sufficient to produce a reliable estimate.

# **Children in Alcohol-Impaired-Driving Crashes**

Drivers are considered to be alcohol-impaired when their blood alcohol concentrations (BACs) are .08 grams per deciliter (g/dL) or higher. Thus, any fatal crash involving at least one driver with a BAC of .08 g/dL or higher is considered to be an alcohol-impaired-driving crash.

In 2021, of the 1,184 children killed in traffic crashes, an estimated 294 children (25%) were killed in alcohol-impaired-driving crashes. Of these 294 deaths:

- 162 (55%) were passengers of vehicles with alcohol-impaired drivers;
- 100 (34%) were occupants of other vehicles;
- 28 (10%) were nonoccupants; and
- 4 (1%) were child drivers.

Table 5 presents the restraint use of child passengers killed in passenger vehicles and their respective driver's BAC in 2021.

Based on known restraint use:

- When the drivers had no alcohol, 38 percent of the children were unrestrained.
- When the drivers were alcohol-impaired, 43 percent of the children were unrestrained.

<sup>&</sup>lt;sup>4</sup> 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. <a href="https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812683">https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812683</a>

<sup>&</sup>lt;sup>5</sup> Boyle, L. (2023, March). *The 2021 National Survey of the Use of Booster Seats* (Report No. DOT HS 813 396). National Highway Traffic Safety Administration. <a href="https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813396">https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813396</a>.

Table 5. Child Passengers Killed in Passenger Vehicles in Traffic Crashes, by Their Restraint Use and Their Driver's BAC, 2021

		C	child Restraint Use						Percent Based on Known Child Restraint		
	Restrained		Unrestrained		Unknown		Total		Use		
Driver's BAC	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Restrained	Unrestrained	
BAC=.00 g/dL	364	55%	224	34%	70	11%	658	100%	62%	38%	
BAC=.0107 g/dL	14	53%	11	39%	2	8%	27	100%	57%	43%	
BAC=.08+ g/dL	79	50%	59	37%	21	13%	159	100%	57%	43%	
BAC=.01+ g/dL	94	50%	70	37%	23	12%	186	100%	57%	43%	
Total	458	54%	293	35%	93	11%	844	100%	61%	39%	

Source: FARS 2021 ARF

Notes: Percentages are computed based on unrounded estimates. NHTSA estimates BACs when alcohol test results are unknown.

### **Pedestrians**

Pedestrians are any people on foot, walking, running, jogging, hiking, sitting, or lying down, who are involved in traffic crashes. These exclude people on personal conveyances like roller skates, in-line skates, skateboards, skates, baby strollers, scooters, toy wagons, motorized skateboards, motorized toy cars, motorized kick scooters, Segway-style devices, motorized and non-motorized wheelchairs, and scooters for those with disabilities.

#### In 2021:

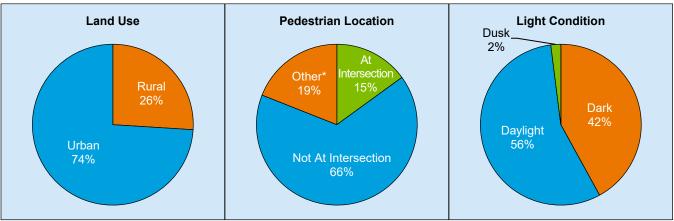
- There were 176 child pedestrians killed in traffic crashes.
  - o Fifteen percent (176) of the 1,184 children killed in traffic crashes were pedestrians.
  - o Two percent (176) of the 7,388 pedestrians killed in traffic crashes were children.
- Of the 176 child pedestrian fatalities in traffic crashes, 57 percent (100) were males.
- Of the 176 child pedestrians killed, 93 percent (164) were killed in single-vehicle crashes and 7 percent (12) were killed in multiple-vehicle crashes.
- Of the 164 child pedestrians killed in single-vehicle crashes, 98 percent (160) were killed in crashes where the first harmful event was collision with a pedestrian. Of these 160 fatalities:
  - o Eighty-two percent (131) were struck by the front of the vehicles;
  - Two percent (3) were struck by the right side of the vehicles;
  - Two percent (3) were struck by the left side of the vehicles;
  - o Four percent (7) were struck by the rear of the vehicles; and
  - o Ten percent (16) had impact points on the vehicles that were unknown.
- Of the 176 child pedestrians killed, 19 percent (34) were struck by hit-and-run drivers.
- Of the estimated 60,577 injured pedestrians in traffic crashes, 8 percent (5,106) were children.
- Of the estimated 5,106 injured child pedestrians in traffic crashes, 57 percent (2,905) were males.

Figure 4 contains information on three crash characteristics (land use, pedestrian location, and light condition) where/when child pedestrian fatalities in traffic crashes occurred in 2021:

- Seventy-four percent (127) of the child pedestrian fatalities occurred in urban areas and 26 percent (44) in rural areas.
- Sixty-six percent (115) of the child pedestrian fatalities occurred at non-intersection locations as compared to 15 percent (26) at intersections and 19 percent (34) at other locations (13 on shoulder/roadside, 10 on sidewalk, 6 on driveway access, 4 on non-trafficway area, and 1 on shared-use path).

• Fifty-six percent (98) of the child pedestrian fatalities occurred during daylight compared to 42 percent (74) in the dark, and 2 percent (3) during dusk. When compared to adult pedestrians, more child pedestrians were killed during daylight hours.

Figure 4. Percentage of Child Pedestrian Fatalities in Traffic Crashes in Relation to Land Use, Pedestrian Location, and Light Condition, 2021



Source: FARS 2021 ARF

Notes: Percentages may not add up to 100 percent due to independent rounding. Unknowns were removed before calculating percentages.

Sixty-four percent (112) of the child pedestrians in traffic crashes were killed during the weekday (6 a.m. Monday to 5:59 p.m. Friday) and 36 percent (64) were killed during the weekend (6 p.m. Friday to 5:59 a.m. Monday) in 2021. In Figure 5, time of day is divided into eight 3-hour intervals starting at midnight, and day of week is defined as weekday or weekend. To summarize the 2021 child pedestrian fatalities in traffic crashes:

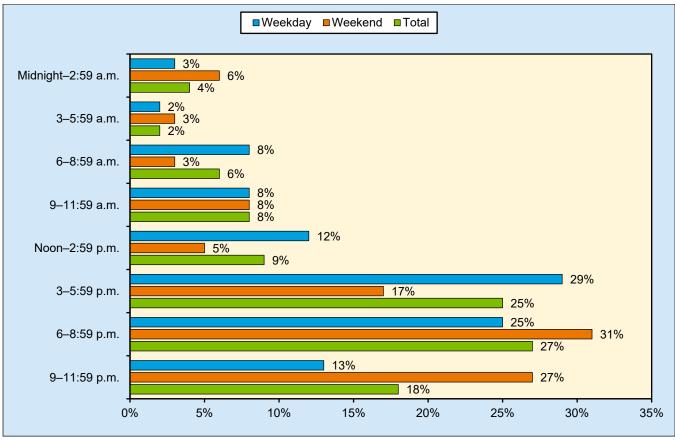
- The highest total percentage (27%) occurred from 6 to 8:59 p.m., followed by 25 percent from 3 to 5:59 p.m. and 18 percent from 9 to 11:59 p.m.
- The highest weekday percentage (29%) occurred from 3 to 5:59 p.m., followed by 25 percent from 6 to 8:59 p.m. and 13 percent from 9 to 11:59 p.m.
- The highest weekend percentage (31%) occurred from 6 to 8:59 p.m., followed by 27 percent from 9 to 11:59 p.m. and 17 percent from 3 to 5:59 p.m.

Figure 6 contains the child pedestrian fatality trends of five age groups from 2012 to 2021:

- The number of child pedestrian fatalities in traffic crashes decreased by 31 percent, from 256 fatalities to 176.
  - O Under-1 age group increased from 1 to 6.
  - 1-to-3 age group 34-percent decrease from 64 to 42.
  - 4-to-7 age group 31-percent decrease from 75 to 52.
  - o 8-to-12 age group 43-percent decrease from 68 to 39.
  - o 13-and-14 age group 23-percent decrease from 48 to 37.

<sup>\*</sup>Based on location of pedestrian struck at the time of the crash. "Other" includes sidewalk, bicycle lane, median/crossing island, parking lane/zone, shoulder/roadside, driveway access, shared-use path, and non-traffic area, which may or may not have been at intersection, but were not distinguished by collected data. Thus, "At Intersection" and "Not At Intersection" do not include those in the "Other" category that were at intersection or not at intersection.

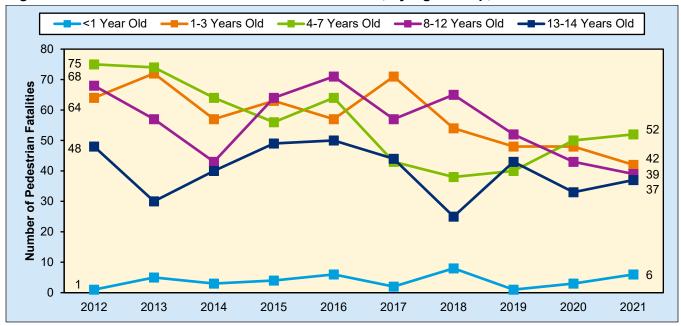
Figure 5. Percentage of Child Pedestrian Fatalities in Traffic Crashes, by Time of Day and Day of Week, 2021



Source: FARS 2021 ARF

Weekday – Monday 6 a.m. to Friday 5:59 p.m. (4.5 days) Weekend – Friday 6 p.m. to Monday 5:59 a.m. (2.5 days) Note: Unknowns were removed before calculating percentages.

Figure 6. Child Pedestrian Fatalities in Traffic Crashes, by Age Group, 2012–2021



Source: FARS 2012-2020 Final File, 2021 ARF

# **Pedalcyclists**

Pedalcyclists are riders of bicycles (two-wheel, nonmotorized cycles) and other cycles (tricycles and unicycles) powered solely by pedals, who are involved in traffic crashes.

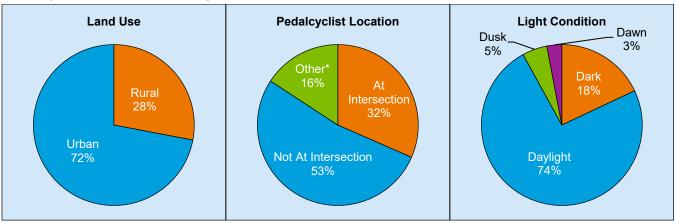
#### In 2021:

- There were 38 child pedalcyclists killed in traffic crashes.
  - o Three percent (38) of the 1,184 children killed in traffic crashes were pedalcyclists.
  - o Four percent (38) of the 966 pedalcyclists killed in traffic crashes were children.
- Of the 38 child pedalcyclists killed in traffic crashes, 79 percent (30) were males.
- Of the 38 child pedalcyclists killed in traffic crashes, 68 percent (26) were helmeted, 13 percent (5) were unhelmeted, and 18 percent (7) were unknown.
- Of the 38 child pedalcyclists killed, 97 percent (37) were killed in single-vehicle crashes and 3 percent (1) killed in a multiple-vehicle crash.
- Of the 37 child pedalcyclists killed in single-vehicle crashes, 100 percent were killed in crashes where the first harmful event was collision with a pedalcyclist. Of these 37 fatalities:
  - o Seventy-eight percent (29) were struck by the front of the vehicles;
  - o Five percent (2) were struck by the right side of the vehicles;
  - o Eleven percent (4) were struck by the rear of the vehicles; and
  - o Five percent (2) had impact points on the vehicles that were unknown.
- Of the 38 child pedalcyclists killed, 32 percent (12) were struck by hit-and-run drivers.
- Of the estimated 41,615 injured pedalcyclists in traffic crashes, 12 percent (5,137) were children.
- Of the estimated 5,137 injured child pedalcyclists in traffic crashes, 77 percent (3,947) were males.

Figure 7 contains information on three crash characteristics (land use, pedalcyclist location, and light condition) where/when child pedalcyclist fatalities in traffic crashes occurred in 2021:

- Seventy-two percent (26) of the child pedalcyclist fatalities occurred in urban areas and 28 percent (10) in rural areas.
- Fifty-three percent (20) of the child pedalcyclist fatalities occurred at non-intersection locations as compared to 32 percent (12) at intersections and 16 percent (6) at other locations (3 on shoulder/roadside and 3 on driveway access).
- Seventy-four percent (28) of the child pedalcyclist fatalities occurred during daylight compared to 18 percent (7) in the dark, 5 percent (2) during dusk, and 3 percent (1) during dawn. When compared to adult pedalcyclists, more child pedalcyclists were killed during daylight hours.

Figure 7. Percentage of Child Pedalcyclist Fatalities in Traffic Crashes in Relation to Land Use, Pedalcyclist Location, and Light Condition, 2021



Source: FARS 2021 ARF

\*Based on location of pedalcyclist struck at the time of the crash. "Other" includes sidewalk, bicycle lane, median/crossing island, parking lane/zone, shoulder/roadside, driveway access, shared-use path, and non-traffic area, which may or may not have been at intersection, but were not distinguished by collected data. Thus, "At Intersection" and "Not At Intersection" do not include those in the "Other" category that were at intersection or not at intersection.

Notes: Percentages may not add up to 100 percent due to independent rounding. Unknowns were removed before calculating percentages.

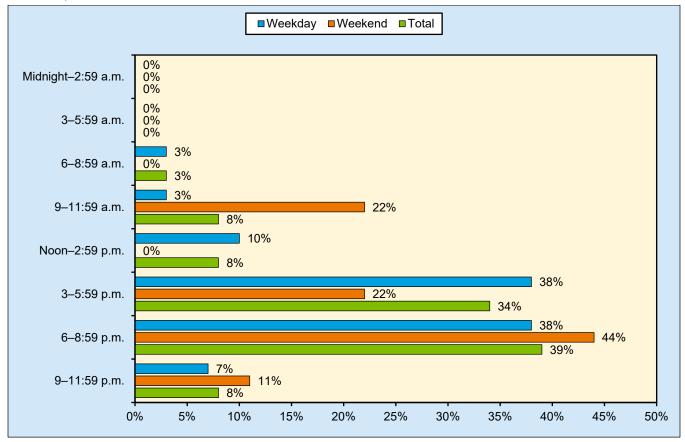
Seventy-six percent (29) of the child pedalcyclists in traffic crashes were killed during the weekday and 24 percent (9) were killed during the weekend in 2021. Figure 8 provides time of day and day of week information for the 2021 child pedalcyclist fatalities in traffic crashes:

- The highest total percentage (39%) occurred from 6 to 8:59 p.m., followed by 34 percent from 3 to 5:59 p.m.
- The highest weekday percentage (38%) occurred from 3 to 5:59 p.m. and during 6 to 8:59 p.m.
- The highest weekend percentage (44%) occurred from 6 to 8:59 p.m., followed by 22 percent during 9 to 11:59 a.m. and 3 to 5:59 p.m.

Figure 9 contains the child pedalcyclist fatality trends of five age groups from 2012 to 2021:

- The number of child pedalcyclist traffic fatalities in traffic crashes decreased by 34 percent, from 58 fatalities to 38.
  - O Under-1 age group remained at 0 for 2012 and 2021.
  - o 1-to-3 age group increased from 1 to 4.
  - o 4-to-7 age group 36-percent decrease from 11 to 7.
  - o 8-to-12 age group 59-percent decrease from 29 to 12.
  - 13-and-14 age group 12-percent decrease from 17 to 15.

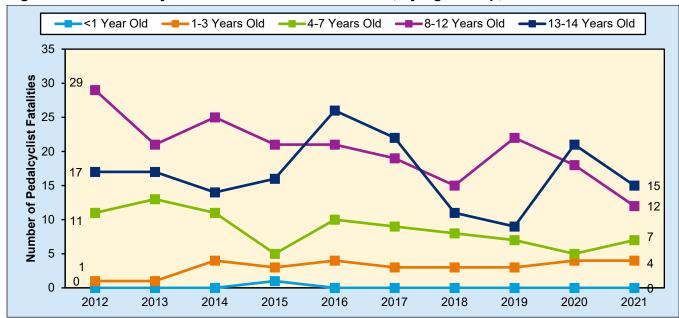
Figure 8. Percentage of Child Pedalcyclist Fatalities in Traffic Crashes, by Time of Day and Day of Week, 2021



Source: FARS 2021 ARF

Weekday – Monday 6 a.m. to Friday 5:59 p.m. (4.5 days) Weekend – Friday 6 p.m. to Monday 5:59 a.m. (2.5 days) Note: Unknowns were removed before calculating percentages.

Figure 9. Child Pedalcyclist Fatalities in Traffic Crashes, by Age Group, 2012–2021



Source: FARS 2012-2020 Final File, 2021 ARF

#### **State**

Figure 10 contains a color-coded map of the percentage of child fatalities by State in 2021. Table 6 contains the child traffic fatalities by State and age group in 2021. For each State in 2021, Table 7 contains the total traffic fatalities, child traffic fatalities, percentage of child traffic fatalities divided by total traffic fatalities, child population, and child fatality rate (child traffic fatalities per 100,000 child population). Included in these tables is Puerto Rico, which is not included in the overall U.S. total.

#### In 2021:

- Among all States, child traffic fatalities ranged from 0 (Rhode Island) to 143 (Texas).
- Texas had the highest number of child traffic fatalities (143), followed by California (99), Florida (93), North Carolina (51), Georgia (47), and Illinois (41).
- The State with the highest percentage of child traffic fatalities was North Dakota (5.9%), followed by District of Columbia (4.9%) and New Mexico (4.4%). The national percentage of child traffic fatalities was 2.8 percent.
- The State with the highest child traffic fatality rate was New Mexico (5.42), followed by Mississippi (4.75) and Alabama (4.00). The national child traffic fatality rate was 1.95.

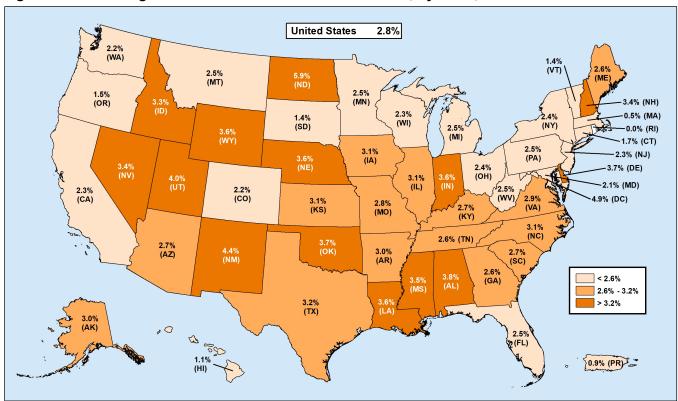


Figure 10. Percentage of Child Fatalities in Traffic Crashes, by State, 2021

Source: FARS 2021 ARF

Table 6. Child Fatalities in Traffic Crashes, by State and Age Group, 2021

			Age Group			
State	<1	1–3	4–7	8–12	13–14	Total
Alabama	2	11	10	8	6	37
Alaska	0	1	0	1	0	2
Arizona	1	3	9	11	8	32
Arkansas	0	2	8	6	5	21
California	6	14	24	39	16	99
Colorado	1	4	3	5	2	15
Connecticut	0	0	1	1	3	5
Delaware	0	1	1	0	3	5
District of Columbia	0	0	2	0	0	2
Florida	7	11	19	21	35	93
Georgia	3	8	12	16	8	47
Hawaii	0	0	0	0	1	1
daho	2	2	2	1	2	9
Illinois	5	5	11	9	11	41
Indiana	7	5	7	10	5	34
Iowa	0	1	1	5	4	11
Kansas	1	0	7	2	3	13
Kentucky	0	5	5	5	7	22
Louisiana	1	10	8	9	7	35
Maine	0	2	1	1	0	4
Maryland	2	4	1	4	1	12
Massachusetts	0	1	1	0	0	2
Michigan	1	3	12	6	6	28
Minnesota	1	3	1	4	3	12
Mississippi	5	6	7	5	4	27
Missouri	2	5	7	9	5	28
Montana	0	1	0	3	2	6
Nebraska	1	0	4	3	0	8
Nevada	0	1	7	4	1	13
New Hampshire	0	0	3	1	0	4
New Jersey	2	1	4	7	2	16
New Mexico	2	3	7	6	3	21
New York	2	5	10	7	4	28
North Carolina	3	8	14	12	14	51
North Dakota	1	1	2	2	0	6
Ohio	1	4	11	6	10	32
Oklahoma	2	2	11	7	6	28
Oregon	2	0	2	3	2	9
Pennsylvania	4	4	7	11	5	31
Rhode Island	0	0	0	0	0	0
South Carolina	0	4	11	8	9	32
South Dakota	0	0	0	1	1	2
Tennessee	3	9	10	6	7	35
Гехаѕ	17	23	37	36	30	143
Jtah	1	1	4	4	3	13
/ermont	0	1	0	0	0	1
/irginia	1	4	6	8	9	28
Washington	0	4	5	3	3	15
West Virginia	0	1	3	1	2	7
Visconsin	2	1	3	5	3	14
Nyoming	0	1	0	2	1	4
J.S. Total	91	186	321	324	262	1,184
Puerto Rico	0	0	2	0	1	3

Source: FARS 2021 ARF

Table 7. Child Fatalities and Fatality Rates in Traffic Crashes, by State, 2021

		Ch	ild Fatalities		Child Fatality Rate	
	Total		Percentage of	Child	per 100,000 Child	
State	Fatalities	Number	Total Fatalities	Population	Population	
Alabama	983	37	3.8%	926,030	4.00	
Alaska	67	2	3.0%	150,476	1.33	
Arizona	1,180	32	2.7%	1,324,477	2.42	
Arkansas	693	21	3.0%	579,755	3.62	
California	4,285	99	2.3%	7,219,302	1.37	
Colorado	691	15	2.2%	1,019,647	1.47	
Connecticut	298	5	1.7%	590,491	0.85	
Delaware	136	5	3.7%	171,428	2.92	
District of Columbia	41	2	4.9%	110,047	1.82	
Florida	3,738	93	2.5%	3,531,785	2.63	
Georgia	1,797	47	2.6%	2,068,562	2.27	
Hawaii	94	1	1.1%	256,465	0.39	
Idaho	271	9	3.3%	384,272	2.34	
Illinois	1,334	41	3.1%	2,293,909	1.79	
Indiana	932	34	3.6%	1,306,094	2.60	
Iowa	356	11	3.1%	606,480	1.81	
Kansas	424	13	3.1%	579,423	2.24	
Kentucky	806	22	2.7%	837,847	2.63	
Louisiana	972	35	3.6%	898,296	3.90	
Maine	153	4	2.6%	204,604	1.95	
Maryland	561	12	2.1%	1,126,416	1.07	
Massachusetts	417	2	0.5%	1,112,512	0.18	
Michigan	1,136	28	2.5%	1,763,645	1.59	
Minnesota		12	2.5%			
	488 772	27	3.5%	1,086,519	1.10 4.75	
Mississippi			2.8%	568,331		
Missouri	1,016	28		1,141,125	2.45	
Montana	239 221	6	2.5%	193,732	3.10	
Nebraska Nevada		8	3.6%	399,736	2.00	
Nevada	385	13	3.4%	577,395	2.25	
New Hampshire	118	4	3.4%	207,532	1.93	
New Jersey	699	16	2.3%	1,660,953	0.96	
New Mexico	481	21	4.4%	387,165	5.42	
New York	1,157	28	2.4%	3,402,470	0.82	
North Carolina	1,663	51	3.1%	1,891,796	2.70	
North Dakota	101	6	5.9%	156,239	3.84	
Ohio	1,354	32	2.4%	2,143,706	1.49	
Oklahoma	762	28	3.7%	796,111	3.52	
Oregon	599	9	1.5%	708,386	1.27	
Pennsylvania	1,230	31	2.5%	2,194,480	1.41	
Rhode Island	63	0	0.0%	170,556	0.00	
South Carolina	1,198	32	2.7%	920,165	3.48	
South Dakota	148	2	1.4%	183,415	1.09	
Tennessee	1,327	35	2.6%	1,270,854	2.75	
Texas	4,498	143	3.2%	6,175,300	2.32	
Utah	328	13	4.0%	778,983	1.67	
Vermont	74	1	1.4%	95,052	1.05	
Virginia	973	28	2.9%	1,555,569	1.80	
Washington	670	15	2.2%	1,392,465	1.08	
West Virginia	280	7	2.5%	294,323	2.38	
Wisconsin	620	14	2.3%	1,043,620	1.34	
Wyoming	110	4	3.6%	108,729	3.68	
U.S. Total	42,939	1,184	2.8%	60,566,670	1.95	
Puerto Rico	337	3	0.9%	429,611	0.70	

Sources: FARS 2021 ARF; Population – Census Bureau

# **Important Safety Reminders**

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 <a href="https://www.nhtsa.gov/equipment/car-seats-and-booster-seats">www.nhtsa.gov/equipment/car-seats-and-booster-seats</a>.

- Every car and every car seat or booster seat has different installation instructions, so make sure you read both the car seat instructions and the vehicle owner's manual.
- Remember that children in rear-facing seats should never be placed in front of an active passenger air bag.
- Use either the lower anchors and tether, or the seat belt and tether when installing forward-facing seats.
- To get assistance with installation, find a certified child passenger safety technician (CPST) at a location near you using NHTSA's Inspection Station locator: <a href="www.nhtsa.gov/equipment/car-seats-and-booster-seats#installation-help-inspection">www.nhtsa.gov/equipment/car-seats-and-booster-seats#installation-help-inspection</a>
- 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, reference the "Car Seat Recommendations for Children" located at: <a href="https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/carseat-recommendations-for-children-by-age-size.pdf">www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/carseat-recommendations-for-children-by-age-size.pdf</a>. 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.

— NHTSA's Research and Program Development

# **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 <a href="www.nhtsa.gov/crash-data-systems/fatality-analysis-reporting-system">www.nhtsa.gov/crash-data-systems/fatality-analysis-reporting-system</a>.

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 2021 ARF, the 2020 Final File was released to replace the 2020 ARF. The final fatality count in motor vehicle traffic crashes for 2020 was 39,007, which was updated from 38,824 in the 2020 ARF. The number of children traffic fatalities from the 2020 Final File was 1,101, which was updated from 1,093 from the 2020 ARF.

# **Crash Report Sampling System**

NHTSA's National Center for Statistics and Analysis (NCSA) redesigned the nationally representative sample of police-reported traffic crashes, which estimates the number of police-reported injury and property-damage-only crashes in the United States. CRSS replaced the National Automotive Sampling System (NASS) General Estimates System (GES) in 2016. More information on CRSS can be found at <a href="https://www.nhtsa.gov/crash-data-systems/crash-report-sampling-system-crss">www.nhtsa.gov/crash-data-systems/crash-report-sampling-system-crss</a>.

# 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, NASS GES, and CRSS 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 and CRSS data files. Starting with the release of 2021 FARS and CRSS data, 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:

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### 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 <a href="https://ncsa.gov/center-ncsa.gov/data">NCSARequests@dot.gov</a> or 800-934-8517. NCSA programs can be found at <a href="https://www.nhtsa.gov/data">www.nhtsa.gov/data</a>. To report a motor vehicle safety-related problem or to inquire about safety information, contact the Vehicle Safety Hotline at 888-327-4236 or <a href="https://www.nhtsa.gov/report-a-safety-problem">www.nhtsa.gov/report-a-safety-problem</a>.

The following data tools and resources can be found at <a href="https://cdan.nhtsa.gov/">https://cdan.nhtsa.gov/</a>.

- 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
- Large Trucks
- Motorcycles
- Occupant Protection in Passenger Vehicles
- Older Population
- Passenger Vehicles
- Pedestrians
- Rural/Urban Comparison of Motor Vehicle Traffic Fatalities
- School-Transportation-Related 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