

DOT HS 813 600

August 2024

School-Transportation-Related Traffic Crashes

In this fact sheet 10 years of data from 2013 to 2022 are presented as follows.

- <u>Overview</u>
- <u>All-Age Fatalities</u>
 - Person Type
 - <u>School Bus</u>
 <u>Occupants and</u>
 <u>Pedestrians</u>
- School-Age Fatalities
 - Location
 - Time of Day
 - <u>Vehicle Maneuver</u> and Pedestrians

A school-transportation-related motor vehicle traffic crash directly or indirectly involves a school transportation vehicle that is either a school bus body type or a non-school-bus functioning as a school bus, transporting children to and from school or school-related activities. For the purposes of this fact sheet, school-age children are defined as 18 and younger. Although ages 5 to 18 are typically considered school-age, the data show there are some school transportation occupant fatalities under age 5.

Key Findings

- From 2013 to 2022 there were 976 fatal school-transportation-related traffic crashes, and 1,082 people of all ages were killed in those crashes—an average of 108 fatalities per year.
- Most (71%) of the people killed in school-transportation-related traffic crashes were occupants of other vehicles involved in the crashes. From 2013 to 2022 there were 111 occupants killed in school transportation vehicles; 50 were drivers, and 61 were passengers.
- There were 1.5 times more fatalities among pedestrians (169) than occupants of school transportation vehicles (111) in school-transportation-related traffic crashes from 2013 to 2022.
- From 2013 to 2022 among all school bus occupants killed, 14 percent were 5 to 10 years old, and 68 percent were 19 and older. Among all pedestrians killed in school-transportation-related traffic crashes, 25 percent were 5 to 10 years old, and 54 percent were 19 and older.
- Impacts to the fronts of school transportation vehicles were involved in the most occupant fatalities from 2013 to 2022.
- From 2013 to 2022 there were 198 school-age children who died in school-transportation-related traffic crashes; 35 were occupants of school transportation vehicles, 80 were occupants of other vehicles, 76 were pedestrians, 5 were pedalcyclists, and 2 were "other" nonoccupants.
- Over half (55%) of the school-age pedestrians killed in schooltransportation-related traffic crashes from 2013 to 2022 were 5 to 10 years old.
- More school-age pedestrians were killed from 3 p.m. to 3:59 p.m. than during any other hours of the day from 2013 to 2022.
- From 2013 to 2022 of all school-age pedestrians killed in schooltransportation-related traffic crashes, one-fifth (20%) were struck by school transportation vehicles that were going straight.

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.

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

From 2013 to 2022 there were 344,451 fatal motor vehicle traffic crashes. Of those crashes, 976 (0.3%) were classified as school-transportation-related. Less than half (47%) of school-transportation-related traffic crashes from 2013 to 2022 occurred in rural areas.

In the 10-year period from 2013 to 2022 there have been 1,082 people killed in school-transportation-related traffic crashes—an average of 108 fatalities per year. Eighteen percent (198) of these fatalities were of school-age (18 and younger).

Occupants of school transportation vehicles accounted for 10 percent of these fatalities, and nonoccupants (pedestrians, pedalcyclists, and other nonoccupants) accounted for 19 percent of these fatalities. Most (71%) of the people who died in these traffic crashes were occupants of other vehicles involved (Table 1).

All-Age Fatalities

Person Type

Table 1 shows fatalities by person type in school-transportation-related traffic crashes from 2013 to 2022. During this time 1,082 people were killed in school-transportation-related traffic crashes; 763 (71%) were occupants of other vehicles.

Among the 111 occupants of school transportation vehicles killed, 50 were drivers and 61 were passengers. Among the 169 pedestrians killed in school-transportation-related traffic crashes, 120 were struck by school transportation vehicles and 49 were struck by other vehicles.

	Occupants of School			Pe	edestrians				
		ransportation Vehicles*		Struck by School	Struck by Other		Other	Occupants of Other	
Year	Drivers	Passengers	Total	Vehicle*	Vehicle	Total	Nonoccupants**	Vehicles	Total
2013	5	6	11	16	6	22	5	93	131
2014	4	7	11	21	7	28	4	77	120
2015	8	5	13	11	0	11	4	87	115
2016	5	9	14	15	5	20	6	85	125
2017	8	4	12	3	7	10	3	72	97
2018	4	10	14	12	11	23	2	78	117
2019	5	5	10	12	3	15	6	80	111
2020	1	2	3	4	2	6	4	41	54
2021	6	5	11	16	5	21	2	74	108
2022	4	8	12	10	3	13	3***	76	104
Ten-Year Total	50	61	111	120	49	169	39	763	1,082
Percentage of Total	5%	6%	10%	11%	5%	16%	4%	71%	100%
Ten-Year Average	5	6	11	12	5	17	4	76	108

Table 1. Fatalities (All Ages) in School-Transportation-Related Traffic Crashes, by Person Type,2013–2022

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

Notes: In 2020 schools were disrupted because of the COVID-19 pandemic. Most schools switched to virtual learning for a large proportion of 2020.

*Includes school bus body type and non-school bus body type functioning as a school bus.

**Includes bicyclists, other cyclists, and people on personal conveyances such as skateboards, scooters, wheelchairs, etc.

***Starting in 2022, pedalcyclists include people on motorized bicycles.

School Bus Occupants and Pedestrians

There were 1.5 times more fatalities among pedestrians (169) than among occupants of school transportation vehicles (111), as shown in Table 1. Figure 1 presents the total number of school transportation vehicle occupant and pedestrian fatalities in school-transportation-related traffic crashes by age group from 2013 to 2022. Among all school bus occupants killed, 15 (14%) were 5 to 10 years old, 13 (12%) were 14 to 18 years old, and 76 (68%) were 19 and older. Among all pedestrians killed in school-transportation-related traffic crashes, 42 (25%) were 5 to 10 years old, 19 (11%) were 14 to 18 years old, and 92 (54%) were 19 and older.





Source: FARS 2013-2021 Final File, 2022 ARF

Notes: Excludes people with unknown age. Occupant fatalities include both occupants of school buses and occupants of non-school buses functioning as school buses.

Table 2 shows the number of school transportation vehicle occupant fatalities in school-transportation-related traffic crashes by rollover status or initial impact point on the school transportation vehicle from 2013 to 2022. There were 87 vehicles used as school buses in traffic crashes in which at least one occupant in the vehicle died. Impacts to the fronts of school transportation vehicles were the most frequent initial impact point for vehicles used as school buses, and the fronts of those vehicles were involved in the most fatalities.

				-	31 7					
	Large School Buses			d Vehicles hool Buses	Other Vehic School		Total			
Rollover/Initial Impact Point	Fatal Vehicles	Occupant Fatalities	Fatal Vehicles	Occupant Fatalities	Fatal Vehicles	Occupant Fatalities	Fatal Vehicles	Occupant Fatalities		
Rollover	14	26	3	4	1	1	18	31		
Front	28	31	4	4	7	8	39	43		
Right Side	2	3	1	1	2	7	5	11		
Left Side	4	4	3	3	1	1	8	8		
Rear	4	4	1	1	1	1	6	6		
Other/Unknown*	11	12	0	0	0	0	11	12		
Total	63	80	12	13	12	18	87	111		

 Table 2. School Transportation Vehicles With an Occupant Fatality and Number of Occupant

 Fatalities in Those Vehicles, by Rollover/Initial Impact Point and Vehicle Type, 2013–2022

Source: FARS 2013–2021 Final File, 2022 ARF

*Includes non-collision, top, and undercarriage.

Notes: Fatal vehicles are vehicles with at least one occupant fatality. Rollover status and initial impact point data are mutually exclusive. Large school buses are over 10,000 lbs, and van-based vehicles used as school buses are 10,000 lbs or less.

Table 3 provides information on school-transportation-related traffic crashes involving fatalities of occupants of school transportation vehicles. In the 33 single-vehicle crashes, 41 occupants—16 drivers and 25 passengers—were killed. In the 54 multi-vehicle crashes, 70 occupants—34 drivers and 36 passengers—died in the school transportation vehicles. In those single-vehicle crashes, the most prevalent first harmful events were as follows: collision with a fixed object (21 crashes), a person falling/jumping from the vehicle (4 crashes), rollover/overturn (3 crashes), railway vehicle (2), and 3 other types of crashes (fire/explosion, live animal, and thrown or falling object).

					Van_B	Van-Based and Other Vehicles						
	Large School Bus Body Types				Used as School Buses				Total			
	Single-Vehicle		Multi-Vehicle		Single-Vehicle		Multi-Vehicle		Single-Vehicle		Multi-Vehicle	
Year	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities
2013	5	6	3	3	0	0	1	2	5	6	4	5
2014	2	2	3	8	0	0	1	1	2	2	4	9
2015	2	3	5	6	1	1	3	3	3	4	8	9
2016	2	7	3	3	0	0	4	4	2	7	7	7
2017	6	7	2	2	0	0	3	3	6	7	5	5
2018	4	4	5	6	1	1	2	3	5	5	7	9
2019	4	4	5	5	0	0	1	1	4	4	6	6
2020	0	0	1	2	1	1	0	0	1	1	1	2
2021	3	3	2	3	1	1	3	4	4	4	5	7
2022	1	1	5	5	0	0	2	6	1	1	7	11
Ten-Year Total	29	37	34	43	4	4	20	27	33	41	54	70
Ten-Year Average	3	4	3	4	<1	<1	2	3	3	4	5	7

Table 3. School-Transportation-Related Traffic Crashes Involving School Bus OccupantFatalities (All Ages), by Vehicle Type Occupied and Crash Type, 2013–2022

Source: FARS 2013-2021 Final File, 2022 ARF

Notes: Large school buses are over 10,000 lbs, and van-based vehicles used as school buses are 10,000 lbs or less. Excludes occupants of other vehicles in school-transportation-related traffic crashes. In 2020 schools were disrupted because of the COVID-19 pandemic. Most schools switched to virtual learning for a large proportion of 2020.

School-Age Fatalities

From 2013 to 2022 there were 198 school-age children 18 and younger who died in school-transportation-related traffic crashes; 35 were occupants of school transportation vehicles, 80 were occupants of other vehicles, 76 were pedestrians, 5 were pedalcyclists, and 2 were "other" nonoccupants (Table 4).

Over half (55%) of the school-age pedestrians killed in school-transportation-related traffic crashes from 2013 to 2022 were 5 to 10 years old, and a quarter (25%) were 14 to 18 years old.

Location

As shown in Figure 2, nearly three-fourths (72%) of school-age pedestrians killed in school-transportation-related traffic crashes from 2013 to 2022 were not at intersections.

Time of Day

Table 4 provides school-age (18 and younger) fatalities in school-transportation-related traffic crashes by time of day. Among the 198 school-age fatalities from 2013 to 2022, more occupants of large school buses and pedestrians were killed from 3 to 3:59 p.m. than any other hours of the day. There were more than twice as many fatalities among occupants of other vehicles (80) than occupants of school transportation vehicles (35).

Figure 2. School-Age (18 and Younger) Pedestrians Killed in School-Transportation-Related Traffic Crashes, by Location, 2013–2022



Source: FARS 2013-2021 Final File, 2022 ARF

Table 4. School-Age (18 and Younger) Fatalities in School-Transportation-Related Traffic Crashes, by Time of Day and Person Type, 2013–2022

		Occupants of Vehicles Used as School Buses						
Time of Day	Large School Buses	Van- Based Vehicles	Other Vehicles	Occupants of Other Vehicles	Pedestrians	Pedalcyclists	Other Nonoccupants*	Total
Midnight– 5:59 a.m.	0	1	0	0	2	0	0	3
6–6:59 a.m.	2	0	0	7	16	0	1	26
7–7:59 a.m.	4	1	0	17	15	0	0	37
8–8:59 a.m.	0	0	0	4	2	0	0	6
9–9:59 a.m.	1	0	1	3	1	0	0	6
10–10:59 a.m.	1	0	0	3	0	0	0	4
11–11:59 a.m.	0	1	0	3	2	0	0	6
Noon– 12:59 p.m.	0	0	0	2	0	0	0	2
1–1:59 p.m.	0	0	0	5	1	0	0	6
2–2:59 p.m.	3	0	0	4	3	1	1	12
3–3:59 p.m.	14	0	0	14	20	4	0	52
4–4:59 p.m.	4	0	0	12	12	0	0	28
5–11:59 p.m.	2	0	0	6	2	0	0	10
Total	31	3	1	80	76	5	2	198

Source: FARS 2013-2021 Final File, 2022 ARF

*Includes other nonoccupants such as people on personal conveyances (for example skateboards, scooters, or wheelchairs). Note: Large school buses are over 10,000 lbs, and van-based vehicles used as school buses are 10,000 lbs or less.

Vehicle Maneuver and Pedestrians

Table 5 presents the number of school-age pedestrians killed in school-transportation-related traffic crashes by vehicle maneuver and vehicle type. From 2013 to 2022 over half (51%) of the school-age pedestrians killed in traffic crashes were struck by school buses or vehicles functioning as school buses, while less than half (49%) were struck by vehicles of other body types. Of school-age pedestrians killed in school-transportation-related traffic crashes, one-fifth (20%) were struck by school transportation vehicles that were going straight.

Table 5. School-Age (18 and Younger) Pedestrians Killed in School-Transportation-Related Traffic Crashes, by Vehicle Maneuver and Striking Vehicle Type, 2013–2022

Vehicle Maneuver	School Bus Body Type	Vehicle Used as School Bus	Other Body Type	Total
Going Straight	14	1	32	47
Slowing in Road	1	0	0	1
Accelerating in Road	0	0	1	1
Starting in Road	10	0	1	11
Passing or Overtaking Another Vehicle	0	0	2	2
Leaving/Entering a Parked Position	1	0	0	1
Turning Right	7	0	0	7
Turning Left	4	0	0	4
Negotiating a Curve	1	0	0	1
Other/Unknown	0	0	1	1
Total	38	1	37	76

Source: FARS 2013-2021 Final File, 2022 ARF

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 school-transportation-related fatalities from the 2021 Final File was 108, which was unchanged from the 2021 ARF.

Important Change for Motorized Bicycles

Prior to 2022, motorized bicycles were collected as motor vehicles in FARS, and their operators and passengers were captured as motorists. Beginning in 2022, FARS is no longer collecting motorized bicycles as motor vehicles. Consequently, operators and passengers of motorized bicycles will be captured as pedalcyclists when involved in a motor vehicle traffic crash. Any traffic crash involving only motorized bicycle(s) will no longer be captured in FARS.

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. Vehicle-related analysis for 2020 and later years are 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 https://vpic.nhtsa.dot.gov/.

The suggested APA format citation for this document is:

National Center for Statistics and Analysis. (2024, August). *School-transportation-related traffic crashes: 2013–2022 data* (Traffic Safety Facts. Report No. DOT HS 813 600). 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
- Occupant Protection in Passenger Vehicles
- Older Population
- Passenger Vehicles
- Pedestrians
- Race and Ethnicity
- Rural/Urban Traffic Fatalities
- 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 <u>https://crashstats.nhtsa.dot.gov/</u>.





U.S. Department of Transportation

Traffic Safety

Administration

National Highway